

MIND BODY THERAPIES IN TRAUMA THROUGH THE LENS OF BIOENERGETICS

“Everything in Life is Vibration” – Albert Einstein

Our mind-body system allows us to feel a sense of vitality, aliveness and belonging in the world. Our quantum energy system, also commonly known as our bioenergetic system, is part of our life force and is thus an integral part of the mind body system.

In the past, quantum energy healing and in a broader sense, mind body healing modalities, were often seen as elusive, misunderstood, and ineffective methods of healing which sat on the outer fringes of acceptability in conventional medicine. This fact made practitioners hesitant to even consider using it as a tool for addressing trauma. But that view is changing rapidly as our knowledge of what drives biology is deepening and as greater evidence-based research is being done to explain it in a scientific manner. The intention of this paper is to introduce you to the research and to allow you to become familiar with overarching aspects of bioenergetics so that you as a practitioner can begin to broaden your understanding of how it can be applied in a simple way into your practice regardless of what modality you engage for the wellbeing of your clients.

In this paper, we will examine

- The mind-body modalities connection in trauma.
- What is Bioenergetics? What is our life force and the energy of emotion?
- We will look at bioenergetics as being the common thread that runs through all modalities, including mind body therapies, where we are exchanging quantum information with the body
- We will focus on 4 key aspects of quantum information transfer namely coherence, touch, intention and belief which are fundamental to the effectiveness and efficacy of these modalities.

By applying a bioenergetic lens to mind body modalities when addressing trauma in a holistic manner, we gain a better understanding of how to be more effective in our work with clients by helping them access simple tools that can often be self-administered with minimal cost and is freely available. The knowledge of how bioenergetics works is easy to pass on to clients when we construct a simple framework to explain it using the 4 key aspects that we will discuss in this paper.

This bioenergetic approach to trauma healing also creates an opportunity to explore the ability to reduce use of long-term medications and in most cases, it can augment commonly expected results when used alongside conventional modalities.

It also helps to expand our views and perspectives on what is needed for our clients to truly achieve wellbeing.

THE MIND BODY CONNECTION IN TRAUMA

Traditionally, when addressing trauma, the primary focus of the conventional medical model was to either, impact the body via biochemistry with medications, or impact the mind with

talk therapy. There was a strong reluctance to recognise the role that adjunct, alternative therapies played in facilitating the healing process in the body and relegated them to the “untested and unknown” category even though some of these practices had been in use since ancient times to heal the mind, body and spirit.

We now recognise that conventional medicine alone cannot address the full picture of what has happened in the trauma process. Research has shown that the results from adding an adjunct therapy to the conventional model showed far greater results than just using conventional medicine alone. [1]

The mind-body connection in trauma has gained substantial importance with the well-known work put forward by the likes of Peter Levine, Stephen Porges, Richard Schwartz and Bessel Van Der Kolk and many others, who pioneered an expanded understanding of trauma. This work continues to help practitioners find a point of reference for addressing trauma in its totality.

“The single most important issue for traumatised people is to find a sense of safety in their own bodies.” Bessel Van Der Kolk

Mind-body modalities by its very nature connects the separate elements of the mind, body and spirit to affect change and to heal.

When trauma is viewed from a wholistic viewpoint - ***Overwhelm of the mind-body system's capacity to address perceived stressors, thus interrupting its ability to adapt and thrive***- it is easy to understand why there is an important place for mind-body therapies in assisting the system to repair, heal and come back into balance, so that the body can move away from surviving to thriving.

Using mind body therapies and specifically bioenergetics, to tap into the interrupted processes of trauma can often be gentler on the client because you are placing *positive correctional information* into the information pathways thus allowing energy to flow, and for the body to tap into its own innate wisdom. We will discuss how releasing stuck emotional energy signatures using the aspects of coherence, touch, intention and belief can often initiate a silent cascade of innate processes that enables the body to adapt to the new energetic information it received.

What is bioenergetics and how does that relate to life and our bodies?

QUANTUM PARTICLES & OUR BIOENERGETIC FIELDS-A PARADIGM SHIFT

We are not just biological or chemical beings but are also quantum in nature.

The quantum aspect of our body is commonly referred to by many names - human body field, subtle energy system, the body electric, and the energy body -all of which encompass quantum biology or the bioenergetics of living organisms. [2]

The **quantum energy system** is made of invisible fields. These fields are created by the interaction of light and electrons, and by interactions of energy between particles. As these infinitely and endless interactions take place, they do so they create a field within our body-

a quantum field [3]. Thus, it brings quantum theory into the human biology conversation, hence the term **Bioenergetics**. [4]

So we have a shift in our perspective of our bodies as being solid matter, to instead of having spaces with ions, biophotons, neutrons, electrons whirling inside us. Furthermore, this invisible, quantum energy field does not just end at the barriers of our skin but extends beyond our physical barriers. [5] Our quantum fields overlap and interact and engage with other fields in a continuous manner.

Due to the primary focus of conventional medicine being on tangible biology, the biochemistry of life and all its constructs, it does require a large paradigm shift to think of the human body in terms of intangible, invisible fields. It requires an even greater shift in our thinking to apply this same perspective to all living organisms and systems. [6]

Trillions of cells in our body, our organs and all our multitude of complex systems are ever monitoring, communicating, responding and providing feedback instantaneously to changes happening both inside and outside of us [7]. As living organisms, we are constantly changing, adapting and attempting to come into balance with our internal and external environment. The constant exchange information is endless till life itself ceases.

We have made amazing advances in mapping and decoding the biochemical body, but we are still in the infancy of doing the same for our “energy body” or the human body field. We are yet to fully understand the influence of quantum energy on the body and the role it plays in the biology of a living organism. [8]

We currently have more questions than answers regarding the quantum nature of our being. But the answers are coming in, albeit slowly, and they are based on science. [9]

OUR LIFE FORCE- THE QUANTUM ENERGY WITHIN

We are all wired for connection – not just physically but in every conceivable way. We are all connected internally and externally by an unseen force- our **life force**, which is both fragile and delicate while being powerful at the same time. It has been given many different names chi, prana, subtle energy, biofield but they all refer to that invisible, intangible spark that gives us life. This life force also gives rise to the quantum energy system within us. The intricate, myriad of connected ecosystems within us, our connections to each other and then on a larger scale – to every living organism around us are all governed by quantum energy systems.

For thousands of years ancient cultures made references to these invisible energy systems and actively utilised aspects of the life force energy within us for healing the body, mind and spirit. It was viewed as a connected inseparable whole unit, not as separate parts existing independently, which was how conventional medicine compartmentalised these aspects of our bodies in the past. Our natural curiosity has driven us to move beyond this viewpoint and has allowed us to continue to constantly examine, understand and explain what it means to be alive and thriving.

Furthermore, incredible innovations and advances in technology have given us the ability to capture and view images in real time and processes happening in living organisms, which is shifting us away from the past study of “dead” matter to now studying “living” matter- that which still has the spark of life, its life force still intact. This unique perspective has allowed researchers to reframe their inquiries into the mechanisms of living structures while at the same time expanding our options for healing and affecting change in the body [10]

When we move away from deconstruction of the body and instead to having a more cohesive integrated view of mind, body and spirit, we can access a larger body of knowledge and expand on the tools available to offer our clients to help them heal. Interestingly, many of these foundational tools have been around in many different cultures, in one form or another - they are not entirely new. What is new though, is the advanced technology that we employ in a bid to understand and validate them at scientific level.

For example, with our current technology, we can view the brain activity of meditators in real time using fMRI scans. We can view microscopic images of elements exposed to the power of intention or prayer. Recently scientists have recorded in real time, cellular autofluorescence in response to cell exposure to magnetic fields. We can now transform the energy of our emotions into energies of light and sound with the use of technology. We have discovered particles that previously existed only in theory and are able to produce single particle images- the list is endless of the leaps we are making in decoding our world. As new discoveries take place, the models defining life and the universe are refined and re-shaped.

“For the possible to arise, the impossible must be attempted again and again.” - Hermann Hesse, 1960 – Poet & Novelist

THE QUANTUM ENERGY OF EMOTION

When we feel an emotion, it creates a quantum energy signature. These quantum signatures have been recorded in real time, using fMRI machines -which employ quantum mechanics and magnetism to record scans. Using scans such as these we can make the connection between emotions and fields that are created by emotions. A published study found that emotions recorded in fMRI scans of the brain correlated back to childhood trauma. [11]. Emotions are quantum in nature.

The mind-body connection in the trauma process recognises the energy of an emotion as getting stuck in the body, due to the inability of the nervous system to cope with a perceived stressor and thus creating a halt to the process that discharges that energy naturally. This interrupted process can then play out in a loop or remain encapsulated until an intervention allows it to finally complete its full expression of the process in the way it was meant to play out. This stuck emotional energy is thus retained in the body till such time it is discharged. [12]

The bioenergetic aspect of mind body therapies have huge implications for healing trauma. We are speaking about the ability to package information within quantum energy fields and

delivering it in whichever method that modality uses. It's all about the exchange of information at a quantum level because emotions happen at a quantum level.

It is possible to access and release these pockets of stuck energy by using bioenergetic modalities as shown in the study conducted by Muehsam D and Ventura C [13] where vibration of sound and electromagnetic energy actually modulated gene expression for healing. This research is quite profound as we now know that quantum energy can affect our very DNA.

Let's now look at a few elements of bioenergetics, its impact on information and energy exchange in the mind body system and their relationship to myriads of therapies that are being used to address trauma. There is a common thread that runs through all modalities-coherence, touch, intention and beliefs.

Coherence, touch, intention and beliefs are four elements that are bioenergetic in nature. Our states of being (sense of coherence), our tactile connections (touch), our thoughts (intentions) and our core beliefs are all capable of producing, transmitting, and receiving quantum information. In many therapies one or more of these aspects are naturally combined thus allowing them to be powerful tools to aid trauma healing.

COHERENCE AND THE BIOENERGETICS OF NATURE

Coherence is about alignment of waves in space that create standing waves. When there is coherence, you are in sync, there is connection, rapport and alignment at a quantum level. It must be noted though that connection does not always give rise to coherence. We know that happens even in our day-to-day lives. We make connections with people all the time but occasionally you meet someone who truly understands and resonates with us- you are on the same wavelength. That is like coherence in the quantum world.

Space is full of waves, light, particles and fields -we live in a universe of quantum elements constantly interacting with it. Whether is it man-made or natural, our fields come into contact and interact with all kinds of other fields. But we have a special affinity for the natural world. Humans are hardwired to benefit from connecting with nature. The bioenergetic exchange of information that occurs between humans and the natural world is invisible, but the effects are deep and tangible [14] There is coherence between us and the natural world.

In the same way that our bodies have subtle energy systems, so do our surroundings, especially natural environments. The rhythms of nature that we commonly take for granted are all around us- the magnetic polars, the seemingly constant gravitational pull of the earth, night and day, the seasons, the phases of the moon, the cycles of birth and death are all part of the rhythms of nature. We are affected by these rhythms because our fields exist in, and interact with, the larger fields of the universe. There are micro-systems, sub-systems and macro-systems within all these fields. It is like ecosystems within ecosystems much like Russian babushka dolls. Scientist have found that the low frequency waves of the earth's fields support the imprinting process of quantum information of other fields which is why

we feel so good when we are in natural environments- the earth's fields provide a larger coherent field for quantum information exchange and flow. The natural world is full of phenomena that can be explained using the field theory- flocks of birds flying in perfect formation, schools of fish moving as one, bees find their hive having flown hundreds of miles by detecting and responding to the magnetic fields of the earth and using it as a compass. Even trees have their own communication system via the mycelium network which is like the nervous system of the underground ecosystem. [15] Studies have shown that trees are able to pass information between each other without even being in close proximity in a remarkable way.

The bioenergetic systems of nature are older than time itself and humans have been in harmony and in tune with nature longer than we care to remember. Ancient healing practises that prevail to this day place a high importance on being one with nature for a very valid reason. It affects our physical and mental wellbeing. Coherence is not just about being in nature. It is about being in tune with yourself, the people around you and your surroundings. Coherence can be applied to everything, at an atomic level to a cosmic level.

Ancient practises aside, even allopathic doctors have long recognised the healing and restorative powers of seaside towns and mountain air for convalescing patients. We know is that, due to the Lenard Effect, [16] these environments have higher levels of ionized particles in the air that have therapeutic benefits including mental health. Countless studies have shown the benefits of being outdoors for mental wellbeing.

Ecopsychology has demonstrated that doing activities that are nature based such as surfing, horseback riding, trekking, hiking, walking and if nothing else, just sitting on real grass in the sun confer benefits that go way beyond just mental wellbeing and specifically help to regulate the amygdala response in our brain to stressors that affect not just our physical health but cognitive function. [17] It has also been found that even small exposures to nature is beneficial. It is one of the best tools at hand to recommend to client healing from trauma. Some of the benefits listed are better attention, concentration, clarity, creativity and increased Vitamin D levels, improved mood, empathy and cooperation, it lowers stress and pain levels, it helps reset your circadian rhythms and with sleep. According to the University of Pittsburgh- you heal faster! [18]

In fact, you don't even have to physically be in nature to benefit, even looking out into nature while indoors or being in a sunny room still has a positive effect on your health. A "nature prescription" is a simple, no cost, effective bioenergetic tool that has no negative side effects. And if all you can see from the window is a bare, leafless tree in the middle of winter, it will still be beneficial. [19]

THE ENERGY OF TOUCH- OUR HEALING HANDS

Touch is so much more than just skin to skin contact even though this somatic aspect of touch is critical for trauma work. It is also a mode of direct transfer of quantum information. This is the reason why touch is universally recognised and acknowledged as a powerful tool for mind body healing work. [20]

In 2018, Time magazine announced to the world that scientists “discovered” a new organ system – the interstitium, citing the study that was published in *Scientific Reports*. [21] This system is partly solid and partly liquid and covers our whole body like a web. In reality, mind body therapies have been utilising the interstitium since ancient times. It was just that science just caught up and we could finally view it in real time.

Researchers have mapped the information pathways that were previously referred to as meridians and called them “primo-vascular systems”. [22] It was demonstrated that these pathways lay under the skin, in blood vessels, the lymphatic system and on the surface of organs conducting a flow of energetic information in the form of biophotons which are electromagnetic waves of light along the same pathways that traditional Chinese medicine practitioners have been using for centuries. [23]

More recently EFT- Emotional Freedom Technique also known as “tapping” has gained more widespread popularity allowing the gentle release of stored emotional energy held in the physical body. [32] EFT has its roots in acupuncture and was patented by Dr. Roger Callahan under Thought Field Therapy. Because EFT also uses the energy pathway points it may explain how the activation of these points helps to release stored emotion. Research has shown that it helps with psychological conditions such as depression and PTSD, it also has been shown to reduce heart rate, blood pressure and lowered cortisol. [33]

Another study found that the fascia has an innate “awareness” which is not biochemical in nature.[24]

The notion that the fascia, the extracellular matrix, microtubules, cleavage planes and connective tissue sites etc which in bioenergetics is referred to as the living matrix, holding memories in the form of information strings helps us understand how the energetic imprint of an event can be held by the body when a traumatic event is not processed properly. It also allows us to explore the possibility of using manual manipulation to access this information string to release it. [25]

Manual therapies such as acupuncture, osteopathy, strain-counterstrain, Rolfing etc work with the structural mechanism of the body accessing quantum information pathways as well as restoring the body field integrity. By opening up circulation, you create movement which in turn creates energy and we know that energy creates fields. [26] The easing of the web of the fascia allows mobility of the body to be restored physically but also energetically and this enables the body to be able to tap into the stuck emotions to release it. [27] Acupuncture in particular works specifically on the meridian systems identified by Chinese medicine and acupuncture points have been imaged using photoluminescent Bioceramic material and even CT scans. [28] There are many techniques that effectively identify the nervous system dysfunction that occurs in trauma and can bring back it back into balance and proper function via the fascial systems of the body. [29] Thus touch is a powerful bioenergetic tool for connecting with and accessing stored trauma.

Many modalities tap into the “touch” aspect of bioenergetics for healing trauma. Meta-Analysis studies in Yoga, Tai chi, EFT, reflexology, functional relaxation, massage therapy, dance/movement therapy and acupuncture have been shown to reduce stress, pain,

depression, anxiety thus helping to integrate the self (whole body concept) with sensory and emotional experience. [34] In addition, modalities such as NLP, hypnosis, biofeedback, meditation, psychoacoustics (sound therapy), light therapy, ultrasound, pulsed light, radio frequency treatment, visualization and prayer also use aspects of quantum energy that relate to transference of quantum information via frequency, light, sound waves, intention, beliefs where there is no physical contact. The information is transferred none the less and changes occur at a mental and physiological level.

INVISIBLE FIELDS OF INTENTIONS

Intention, within the context of the provider-client relationship is twofold. On one hand, it is how the provider shows up for the client to affect change- an altruistic, caring service for a positive outcome and on the other, it is how the client shows up-grateful acceptance of the help and support to affect change in themselves. Both aspects have an influence on the outcome of the interaction. [30]

HeartMath is now commonly regarded as a science-based globally recognised practise. They have conducted numerous research into the energetics of the heart and its fields. Quantum medicine considers the heart field as one of three major fields that create the body field (the others being the Morphic field and the Matrix). HeartMath studies using SQUID (superconducting quantum interference device) in the 1970s and other subsequent studies, show that the magnetic field of the heart which extends 3 feet out from the body uses energetic communication within the field. This field is stronger than that of the brain and is the strongest field in the body. The heart field is so powerful that it can communicate without touching, synchronising with another heart field and it can influence the brainwaves of another via energetic communication. These studies demonstrate the significance of, and confirmation of, the impact of intention alone at a psychological, biological and physical level for providers and for clients alike. [31]

Our heart fields have the power to be conduits of our intentions in a very profound manner. Even in the simple acts of daily life we are communicating with our bodies, intentionally or unintentionally. Our heart field when we know how to harness it, can be a strong communicator of love, gratitude, support, compassion, kindness, understanding, service and gift. These emotions create fields that are recognised internally within us and externally by others.

As practitioners we can communicate our passion, dedication and beliefs about our modalities without us even uttering a word. Our clients will feel it. Intention is invisible but its effects are tangible- the silent transfer of quantum information.

BELIEFS AFFECT BIOLOGY

Our beliefs and perceptions of ourselves and the world around us affects the internal environment of our being. Bruce Lipton, the well-known stem cell biologist, demonstrated how the placebo effect is the result of our thoughts and beliefs powerfully affecting our biology. The placebo effect continues to be unintentionally proven repeatedly in clinical trials and is a scientifically recognised phenomenon. What we believe is transmuted into our

cells and genes. He also demonstrated that molecular function and cell health can be positively affected by energy fields including the intention of prayer. [35] Our thoughts affect our biology.

This last aspect of bioenergetics- Belief- is so important as it encompasses the whole process of helping our clients heal. The potential of using our belief system whether as a client or as a practitioner, is only limited, ironically, by our beliefs. Firstly, a client's internal belief will ultimately govern the outcome. Secondly, our beliefs, as practitioners, also have just as much bearing on the outcome. Our resilience and faith in ability to help others has the power to impact their resilience and faith in themselves to heal. Even if they don't have the necessary beliefs and perceptions required to heal and thrive, we have the power to build their resilience through our intentions and beliefs which can be wordlessly communicated to their biofield.

We don't have a definitive code yet for all the complexities of what it means to be human. Nor do we know to what true extent trauma can affect us other than what manifests outwardly. But what we do know is that given the right conditions and support our bodies know how to heal. Acknowledging this innate healing power of the human body allows us to tap into that very power. As practitioners, we can help those in our care in a natural, gentle and sustainable way by incorporating bioenergetics to empower our clients to regain control of their minds, bodies and lives. Unlike medications or intrusive medical procedures, we are working with mechanisms in the body that are already attempting to do what we as providers, are striving to achieve- to help our clients come into homeostasis where the mind, body and spirit can thrive. Bioenergetics is one pathway, amongst many, that can contribute to achieving that goal.

SUMMARY

Countless mind body modalities use aspects of bioenergetics and quantum energy systems for healing and is especially useful for trauma healing.

We know that biochemistry alone does not govern health and wellbeing. Healing a living organism is a complex and multi-dimensional process that sits within a system that is in continuous flux because there is life within that organism.

Trauma healing requires a mind body approach for lasting change. Utilising mind body modalities to facilitate deeper healing is gathering greater credibility as technological advances are made and research becomes more widely known.

When we go beyond the cell and get down to the level of particles, we move into the domain of bioenergetics. The biofields, which are electromagnetic, electric, magnetic, quantum and photonic in nature, are created by the actions of atoms and particles. We effect and are affected by all the fields around us. Quantum energy medicine or bioenergetics is an evolving field of healing and is not comprehended easily by everyone. Bioenergetics is about information transfer at a quantum level. Coherence, touch, intention and beliefs all affect information transfer.

Coherence is being connected and being in tune within a field.

Touch creates direct connection in the fascia which is a web of superconductive material that covers our entire body where information is stored, transferred and transported.

Our beliefs and intentions can hinder or promote the results of our actions as they are silently communicated and exchanged, received and decoded.

When we use the bioenergetic lens to examine mind body therapies from the viewpoint of coherence, touch, intention and belief, we can see the common thread that runs through them all. Working with concepts that we can understand can be very helpful in facilitating a more open-minded enquiry into how our bodies work, so that it can be applied meaningfully and confidently to healing. This enables new theories, observations, measurements, collection of data which then provide newer insights and explanations for the mechanisms of healing trauma.

REFERENCES:

1. Helene B, Ford P. Mind-body innovations--an integrative care approach. *Psychiatry Q.* 2000 Spring;71(1):47-58. doi: 10.1023/a:1004614717641. PMID: 10736816. <https://pubmed.ncbi.nlm.nih.gov/10736816/>
2. Rubik B. The biofield hypothesis: its biophysical basis and role in medicine. *J Altern Complement Med.* 2002 Dec;8(6):703-17. doi: 10.1089/10755530260511711. PMID: 12614524.
3. Rein G. Bioinformation within the biofield: beyond bioelectromagnetics. *J Altern Complement Med.* 2004 Feb;10(1):59-68. doi: 10.1089/107555304322848968. PMID: 15025879.
4. Quantum physics meets biology. Markus Arndt,¹ Thomas Juffmann,¹ and Vlatko Vedral^{2,3} Faculty of Physics, University of Vienna, Boltzmannngasse 5, 1090 Vienna, Austria²Atomic and Laser Physics, Clarendon Laboratory, University of Oxford, Parks Road, Oxford OX1 3PU, United Kingdom³Department of Physics and Centre for Quantum Technologies, National University of Singapore, 2 Science Drive 3, Singapore 117543, Singapore
_Received 2 July 2009; accepted 17 September 2009; published online 9 November 2009)
5. Pokorný J, Vrba J. Generation of Electromagnetic Field by Microtubules. *Int J Mol Sci.* 2021 Jul 30;22(15):8215. doi: 10.3390/ijms22158215. PMID: 34360980; PMCID: PMC8348406.
6. Hammerschlag R, Levin M, McCraty R, Bat N, Ives JA, Lutgendorf SK, Oschman JL. Biofield Physiology: A Framework for an Emerging Discipline. *Glob Adv Health Med.* 2015 Nov;4(Suppl):35-41. doi: 10.7453/gahmj.2015.015.suppl. Epub 2015 Nov 1. PMID: 26665040; PMCID: PMC4654783.
7. Ford BJ. Cellular intelligence: Microphenomenology and the realities of being. *Prog Biophys Mol Biol.* 2017 Dec;131:273-287. doi: 10.1016/j.pbiomolbio.2017.08.012. Epub 2017 Aug 26. PMID: 28847611.
8. Tyner, K. M., Kopelman, R., & Philbert, M. A. (2007). "Nanosized voltmeter" enables cellular-wide electric field mapping. *Biophysical journal*, 93(4), 1163–1174. <https://doi.org/10.1529/biophysj.106.092452>
9. Clinical Studies of Biofield Therapies: Summary, Methodological Challenges, and Recommendations Shamini Jain, PhD; Richard Hammerschlag, PhD; Paul Mills, PhD; Lorenzo Cohen, PhD; Richard Krieger, MD; Cassandra Vieten, PhD; Susan Lutgendorf, PhD
10. Marvi M, Ghadiri M. A Mathematical Model for Vibration Behavior Analysis of DNA and Using a Resonant Frequency of DNA for Genome Engineering. *Sci Rep.* 2020 Feb 26;10(1):3439. doi: 10.1038/s41598-020-60105-3. Erratum in: *Sci Rep.* 2021 Aug 31;11(1):17700. PMID: 32103036; PMCID: PMC7044233.
11. Ross MC, Heilicher M, Cisler JM. Functional imaging correlates of childhood trauma: A qualitative review of past research and emerging trends. *Pharmacol Biochem Behav.* 2021 Dec;211:173297. doi: 10.1016/j.pbb.2021.173297. Epub 2021 Nov 12. PMID: 34780877; PMCID: PMC8675038.

12. Decoding the Nature of Emotion in the Brain Philip A. Kragel¹ and Kevin S. LaBar^{1,*} Department of Psychology and Neuroscience, Duke University, Durham, NC 27708, USA
13. Muehsam D, Ventura C. Life rhythm as a symphony of oscillatory patterns: electromagnetic energy and sound vibration modulates gene expression for biological signaling and healing. *Glob Adv Health Med*. 2014;3(2):40-55. doi:10.7453/gahmj.2014.008
14. Keniger, L. E., Gaston, K. J., Irvine, K. N., & Fuller, R. A. (2013). What are the benefits of interacting with nature?. *International journal of environmental research and public health*, 10(3), 913–935. <https://doi.org/10.3390/ijerph10030913>
15. The hidden life of trees: what they feel, how they communicate- Discoveries from a secret world by Peter Wohlleben
16. Jiang, Shu-Ye et al. "Negative Air Ions and Their Effects on Human Health and Air Quality Improvement." *International journal of molecular sciences* vol. 19,10 2966. 28 Sep. 2018, doi:10.3390/ijms19102966
17. Kühn, S., Düzal, S., Eibich, P. et al. In search of features that constitute an "enriched environment" in humans: Associations between geographical properties and brain structure. *Sci Rep* 7, 11920 (2017). <https://doi.org/10.1038/s41598-017-12046-7>
18. Walch JM, Rabin BS, Day R, Williams JN, Choi K, Kang JD. The effect of sunlight on postoperative analgesic medication use: a prospective study of patients undergoing spinal surgery. *Psychosom Med*. 2005 Jan-Feb;67(1):156-63. doi: 10.1097/01.psy.0000149258.42508.70. PMID: 15673638.
19. Ernest Bielinis, Norimasa Takayama, Sergii Boiko, Aneta Omelan, Lidia Bielinis, The effect of winter forest bathing on psychological relaxation of young Polish adults, *Urban Forestry & Urban Greening*, Volume 29, 2018, Pages 276-283, ISSN 1618-8667, <https://doi.org/10.1016/j.ufug.2017.12.006>.
(<https://www.sciencedirect.com/science/article/pii/S1618866717304296>)
20. Tozzi P. A unifying neuro-fasciogenic model of somatic dysfunction - underlying mechanisms and treatment - Part I. *J Bodyw Mov Ther*. 2015 Apr;19(2):310-26. doi: 10.1016/j.jbmt.2015.01.001. Epub 2015 Jan 19. PMID: 25892388.
21. Benias, P.C., Wells, R.G., Sackey-Aboagye, B. et al. Structure and Distribution of an Unrecognized Interstitium in Human Tissues. *Sci Rep* 8, 4947 (2018). <https://doi.org/10.1038/s41598-018-23062-6>
22. Yang C, Du YK, Wu JB, Wang J, Luan P, Yang QL, Yuan L. Fascia and Primo Vascular System. *Evid Based Complement Alternat Med*. 2015;2015:303769. doi: 10.1155/2015/303769. Epub 2015 Aug 25. PMID: 26379741; PMCID: PMC4561979.
23. Chenglin, Liu, Wang Xiaohu, Xu Hua, Liu Fang, Dang Ruishan, Zhang Dongming, Zhang Xinyi, Xie Honglan, and Xiao Tiqiao. "X-ray phase-contrast CT imaging of the acupoints based on synchrotron radiation." *Journal of Electron Spectroscopy and Related Phenomena* (2013).
24. Bordoni, B., & Simonelli, M. (2018). The Awareness of the Fascial System. *Cureus*, 10(10), e3397. <https://doi.org/10.7759/cureus.3397>

25. Oschman JL. Charge transfer in the living matrix. *J Bodyw Mov Ther.* 2009 Jul;13(3):215-28. doi: 10.1016/j.jbmt.2008.06.005. Epub 2008 Jul 30. PMID: 19524846.
26. Bordoni B, Marelli F, Morabito B, Sacconi B. Emission of Biophotons and Adjustable Sounds by the Fascial System: Review and Reflections for Manual Therapy. *Journal of Evidence-Based Integrative Medicine.* January 2018.doi:10.1177/2515690X17750750
27. Tozzi P. Does fascia hold memories? *J Bodyw Mov Ther.* 2014 Apr;18(2):259-65. doi: 10.1016/j.jbmt.2013.11.010. Epub 2013 Nov 9. PMID: 24725795.
28. Chen CW, Tai CJ, Choy CS, Hsu CY, Lin SL, Chan WP, Chiang HS, Chen CA, Leung TK. Wave-induced flow in meridians demonstrated using photoluminescent bioceramic material on acupuncture points. *Evid Based Complement Alternat Med.* 2013;2013:739293. doi: 10.1155/2013/739293. Epub 2013 Nov 7. PMID: 24307911; PMCID: PMC3838801.
29. Briggs JP, Shurtleff D. Acupuncture and the Complex Connections Between the Mind and the Body. *JAMA.* 2017 Jun 27;317(24):2489-2490. doi: 10.1001/jama.2017.7214. PMID: 28654992. <https://pubmed.ncbi.nlm.nih.gov/28654992/>
30. Marvi M, Ghadiri M. A Mathematical Model for Vibration Behavior Analysis of DNA and Using a Resonant Frequency of DNA for Genome Engineering. *Sci Rep.* 2020 Feb 26;10(1):3439. doi: 10.1038/s41598-020-60105-3. Erratum in: *Sci Rep.* 2021 Aug 31;11(1):17700. PMID: 32103036; PMCID: PMC7044233.
31. Buchanan TM, Reilly PM. The Impact of HeartMath Resiliency Training on Health Care Providers. *Dimens Crit Care Nurs.* 2019 Nov/Dec;38(6):328-336. doi: 10.1097/DCC.0000000000000384. PMID: 31593072.
32. Wells S, Polglase K, Andrews HB, Carrington P, Baker AH. Evaluation of a meridian-based intervention, Emotional Freedom Techniques (EFT), for reducing specific phobias of small animals. *J Clin Psychol.* 2003 Sep;59(9):943-66. doi: 10.1002/jclp.10189. PMID: 12945061.
33. Poli A, Gemignani A, Soldani F, Miccoli M. A Systematic Review of a Polyvagal Perspective on Embodied Contemplative Practices as Promoters of Cardiorespiratory Coupling and Traumatic Stress Recovery for PTSD and OCD: Research Methodologies and State of the Art. *Int J Environ Res Public Health.* 2021 Nov 10;18(22):11778. doi: 10.3390/ijerph182211778. PMID: 34831534; PMCID: PMC8619958.
34. Tarsha MS, Park S and Tortora S (2020) Body-Centered Interventions for Psychopathological Conditions: A Review. *Front. Psychol.* 10:2907. doi: 10.3389/fpsyg.2019.02907
35. Muehsam D, Chevalier G, Barsotti T, Gurfein BT. An Overview of Biofield Devices. *Glob Adv Health Med.* 2015 Nov;4(Suppl):42-51. doi: 10.7453/gahmj.2015.022.suppl. Epub 2015 Nov 1. PMID: 26665041; PMCID: PMC4654784.