

5-2021

Sound Healing

Devina L. Pulido

California State University, Monterey Bay

Follow this and additional works at: https://digitalcommons.csumb.edu/caps_thes_all



Part of the [Ethnomusicology Commons](#), [Musicology Commons](#), [Music Practice Commons](#), [Music Therapy Commons](#), and the [Other Music Commons](#)

Recommended Citation

Pulido, Devina L., "Sound Healing" (2021). *Capstone Projects and Master's Theses*. 1079.
https://digitalcommons.csumb.edu/caps_thes_all/1079

This Capstone Project (Open Access) is brought to you for free and open access by the Capstone Projects and Master's Theses at Digital Commons @ CSUMB. It has been accepted for inclusion in Capstone Projects and Master's Theses by an authorized administrator of Digital Commons @ CSUMB. For more information, please contact digitalcommons@csumb.edu.

Sound Healing

Devina Louise Pulido

Department of Music and Performing Arts

Cal State University Monterey Bay

MPA 475: Capstone

Lanier Sammons

May 21, 2021

Abstract

Most people would imply that music is used for solely entertainment, artistic expression, celebration, ceremony, or communication. Whether we are musically inclined or not, music is the one thing that genuinely connects humans from all cultures and corners of the earth. Another application of music is sound healing, a therapeutic practice that utilizes different signals and vibrations to improve the physical and emotional health of individuals, groups, and cultures. This can entail listening to various musical experiences (such as a concert), singing along to a favorite song or chant, dancing to the beats of other music, meditating, or playing an instrument. Specific instruction from a specialized practitioner might incorporate a one-on-one or an in-group type of session. Usually, sessions involve sitting or lying down while listening to formulated music or sounds played through a monitor either from special instruments that have been around for centuries or incorporating frequency and sound vibrations applied using special instrumental tools, such as a tuning fork. This research paper will describe what sound is, how sound can travel from a physiological standpoint, and the components used to identify a sound. In addition, the author will touch on the origins of sound healing from ancient times, different types of sound therapies based upon performance, specific instruments and tools, and the science, psychological theories, and methods of these applied practices. This research aims to examine, educate, and discuss sources of overall well-being for potential healing through sound as medicine for the past, present, and future. However, scientists, physicians, professors, and licensed therapists have yet to partake in adequate healthcare-related research on this topic, leaving further room for evidence to support these claims.

Sound as we know it is projected as a particular auditory impression. It is defined as a “mechanical radiant energy that is transmitted by longitudinal pressure waves in a material medium (such as air, water, or solid) and is the objective cause of hearing” (“Sound”). A sound can be described as audible, inaudible, unpleasant, pleasant, soft, or loud. For example, a listener is most likely to find the sounds produced by a talented violinist soft, audible, and musical. In contrast, the sound of road construction in the morning is also audible, although most of the time, it wouldn't be considered pleasant to the human ear of an individual sleeping in the early hours of the morning. Other sounds, for example, a dog whistle, can be inaudible to the human ear. Dog whistles produce sound waves above the human hearing range of 20 Hz to 20,000 Hz. Waves below 20 Hz are known as infrasonic waves, while higher frequencies above 20,000 Hz are ultrasonic waves (“Sound Waves”).

Infrasonic sound waves, for example, are typically utilized and studied by physicians or scientists when detecting and documenting earthquakes or volcanic eruptions and diagnostic purposes when examining the activity of a human heart. In addition, many animals in nature, such as hippos, giraffes, and elephants, also use these waves to communicate via infrasonic sound across vast distances. Along with infrasonic waves, ultrasonic sound waves are most commonly used by medical specialists working with sonograms to visualize an individual's internal organs or a baby in utero. Whereas bats emit ultrasonic waves to locate prey and avoid obstacles while flying through the night. Very high frequencies from 20-100 kHz are reflected in the environment but are unable to be heard by the human ear (Maele).

Sound waves fit within three different categories of waves: longitudinal, mechanical, and pressure. Waves make it possible for sound to travel through a medium in a vibrational motion. For example, a wave in air or fluid is longitudinal because the particles that transport the sound vibrate parallel to the sound wave's travel direction, such as guitar strings. When the guitar strings vibrate back and forth, the vibrating air particles pass the energy of the vibrations away from the strings, thus entering the ear through those sound waves. Examples of mechanical waves in nature include water waves, sound waves, seismic waves, and internal water waves, resulting in density changes in a body of water ("Sound Waves"). Pressure waves, or compression waves, consist of compressions and rarefactions, making their regions fluctuate between low- and high-pressure patterns. For this reason, sound waves are pressure waves. The human ear receives sound waves from the surrounding environment, and it detects rarefactions as low-pressure periods and compressions as high-pressure periods ("Sound Waves").

The important matter, in this case, is to realize that when the sound travels through a medium, the molecules become energized and move from their original positions. After a molecule passes its energy to nearby molecules, the molecule's motion diminishes until it is affected by another passing wave. Sound waves lose energy when they travel through a medium, which can be explained when an individual cannot hear others talking at a higher volume at a far distance but can hear whispering nearby (Woodford).

Sound has four main properties that help auditory listeners distinguish between different sounds: pitch, dynamics, timbre, and duration. Pitch is a musical attribute that

appears to have a higher or lower sound. Pitch can only be determined if the sound being heard is clear and has a steady frequency. Fabiani and Friberg evaluated a previous listening experiment where they asked three professional musicians to identify the dynamics using their instruments. They hypothesized that both loudness and timbre strongly contribute to the perception of dynamics, while pitch is less important. The dynamics aspect of sound determines its relative loudness (Fabiani and Friberg).

The term timbre refers to the tone color, or “feel,” of the sound. Sounds with various timbres produce different shapes, which affect our interpretation of the sound. For example, a sounding trumpet versus hearing the tone of a saxophone. This refers to the timbre of a sound because it allows humans to differentiate and identify unique sounds, for example, a dog bark, doorbell, or the sound of a friend’s voice (Fabiani and Friberg). The fourth property of sound is called duration, which is when a pitch or tone can last. This can be described as long, short, or as taking some amount of time. The duration of a note or tone influences the timbre and rhythm of the sound and begins once the sound registers and ends after it cannot be detected (“Sounds Waves”). Although these terms are more recently defined and better understood in today’s music theory, these aspects of sound can be dated back to ancient times.

In biblical times, instruments were also used to defeat evil spirits from human souls. An example of this comes from the Holy Bible:

And it came to pass, when the *evil* spirit from God was upon Saul, that David took a harp, and played with his hand: so Saul was refreshed and was well, and the evil spirit departed from him. (*King James Bible*, 1 Sam. 16.23)

In *The Healing Forces of Music: History, Theory, and Practice*, Randall McClellan discusses many examples of different cultures that have placed music in the power of sound to sustain life and effect change that our ancestors held. The author mentions biblical applications, Greek mythology, and current applications in the United States (2). The prophets in the ancient Hebrews were known to foretell the future through practices like chanting as well as Moses' sister, Miriam, who was able to portray visionary powers through this ritual. The book of Psalms was also known to have songs with healing power (McClellan 5). These historical applications of sound demonstrate the strength of the healing process that many cultures and individuals continue to utilize today.

In Greek mythology, many gods and goddesses utilized sound and music for healing remedies. They often used songs, poetry, and medicine as gifts for remedies for the soul. It was believed that music had a substantial effect on the soul and emotions and was trusted by many. Pythagoras, known as the "Father of Music," was the first to utilize music and sound as medicine. He believed in the healing powers of music intervals and harmonics and was known to apply each to every aspect of his life (Hopkins).

In ancient Egypt, music therapy was a staple in temples. Musicologist Henry Farmer concluded that Egyptian music was a two-fold influence on man. One type of influence was a sensation experienced physically, and the second was sustained by a power studied as *heka*, which is similar to what is more commonly known today as a spell (McClellan 2). Plutarch, a Greek historian, mentioned, "All through the history of music in ancient Egypt, modulated sound itself was an arcanum (a secret of mysteries).

The name for sounds was *herw* (voice), and the word had an esoteric import in the Cults" (2). The same evaluation was found within the ancient Chinese and their concept of music. Lawrence Picken, another musicologist, stated:

The belief in the power of music to sustain (or if improperly used, to destroy) Universal Harmony was but a further extension of the belief in the magic power of sounds. As a manifestation of a state of the soul, a single sound had the power of influencing other souls for good or ill. (qtd. In McClellan 2)

These cultural examples demonstrate the belief that musicians hold the intentions behind the music they produce, whether it contributes to overall health and wellbeing that is good, bad, or evil.

Like the many other cultures listed above, Native Americans used rituals including songs and dances to heal the sick while practicing with instruments such as a wooden flute. Traditions of sacred songs were thought to sing the world into existence (Davis 3). Many Native American tribes believe in the healing properties of a medicine wheel. This wheel symbolizes the connection to specific beliefs, direction, emotion, and life cycles of each tribe (3). The connection of the four aspects of the wheel is worshipped by all tribes, but it is known to be the responsibility of each individual to maintain the balance of the whole. Tribe members often used sound in many different forms to restore and sustain the harmony of the medicine wheel (3).

Several sound healing therapies can help maintain a sense of well-being and harmony today. The Bonny Method, also known as Guided Imagery and Music, was

developed by Helen Bonny, a music therapist from the United States. She utilized this method to form psychotherapy for clients who have struggled with a wide range of psychological and emotional difficulties. This included those actively suffering from anxiety and depression, work-related stress, history of abuse, addiction, and those with life-limiting conditions such as cancer. Bonny Method therapist Elaine Abbott, for example, narrates clients' positive and negative experiences within the music during this practice and how those experiences have affected them. Her second approach to this example was to systematically analyze the narrations in order to describe any possible similarities that were related and to be able to distinguish between positive and negative music experiences. And ultimately to experiment the impact on the clients' therapeutic processes in a non-directive way (Abbott 38).

Practitioners utilizing the Bonny Method work with a client during a 30-45 minute classical music program in a relaxed state, lying down with their eyes closed. The client's imagery experience emerges as a manifestation of his or her inner process as this unfolds in response to the music. Abbott describes this directly as, "when the music holds the client's experience, therapists report that it can take on various support functions. It may 'match and create an auditory mirror of the client's internal state' so that he or she 'feels understood and held by the music' (38). She then observes from a therapist's perspective that if they report that the client's encounter with the music being played transforms the clients' experiences the client then experiences alternate options such as they might hear the changes that they themselves are striving or wishing to make, with an even greater possibility that the client follows through and experiences the necessary change until the end of the session. When this occurs, the music may

help clients integrate all of their senses into experiences of change and may help them heal from past heartaches and despair (38).

Although the first therapy method involves more of a guided imagery state of being, the Dalcroze Method is another listed practice that can boost and improve awareness in a student's music theory skills. Dalcroze centers on the concept that the synthesis of the mind, body, and emotion is essential to understanding this method. The three related components consist of ear training, improvisation, and eurythmics. First, Dalcroze believes that students should learn sophisticated auditory skills and develop "inner hearing" so that they would be able to identify what they write and write what they hear (Frego). Students would then develop a sensitivity to pitches, their relation to each other, and their style of musical inclination (Frego). The second component is improvisation, where an instructor plays the piano while students improvise movement or react spontaneously to verbal instructions. Students will then develop skills to be able to improvise musically and expressively on their instruments. These spontaneous performance activities are designed to communicate musical intent and to improve response time (Frego). The third component is eurythmics which is defined as "a process of education in music that engages the whole body in response to music" (McCoy 21). Eurythmics and the two previously stated components enhance the approach of symmetry, balance, and rhythmic movement. These components help students establish skills for their general education, in theory, providing a balanced and complete musical education and understanding of music as a whole (21). A harmonious body movement is a form of expression, which was the last component to be developed but is equally as important as the other components.

Neurologic Music Therapy, which is another form of sound healing, has gone through some extensive shifts as well as insights into music and brain function by neuroscience professor Michael Thaut, Scientific Director at the Center for Biomedical Research in Music, at Colorado State University. Thaut states that, "Treatment techniques are standardized in terminology and application, and are applied as therapeutic music exercises which are adaptable to the patient's needs." These techniques are illustrated and tied into behaviors such as control of movement, attention, speech production, learning, memory, which can help assist in recovering functions of an injured or diseased brain (Thaut and Volker 2).

A more popular and standard sound healing today is singing bowl sound meditation. Instruments such as a Tibetan bowl, gongs, and bells have been around for centuries and are used in parallel to this practice. An observational study stated that the physics of these instruments include sonic and wave elements. The authors of the study made an attempt to utilize deep breathing, visualization, and loving-kindness meditation with these bowls as a form of emotional healing used in a psychotherapy model for high-risk youth. It was reported that this combination of healing methods might be a catalyst for emotional and psychological healing in counseling sessions (Goldsby et al. 401). When used for therapy, the vibration that the bowl emits will react with the physical body and essentially work with our nervous centers, circulatory systems, and cells that work with parts of the brain. Medical researchers have examined the possible effects of utilizing singing bowls and sound healing on mood, anxiety, physical pain, spiritual well-being and laid a foundation for a future and more formal control trial (402).

For this meditation protocol, singing bowls were the primary instrument being played, while there were also Tibetan singing bowls, gongs, and other cymbals and bells being used in this session (Goldsby et al. 402). The primary method of creating sound and vibration from these bowls was by tapping or striking them with a mallet. Each participant had two Tibetan bowls near their heads. The instructor then gave direction to observe any sensations the participants felt in the body without judgment and encouraged them to relax while laying down (403). After analyzing the results, there were significant differences between pre- and post-treatment on the profile of mood states (403). Individuals between the ages of 20 to 39 years displayed the most significant change in tension after meditation. Another critical finding was those participants who were experiencing physical pain before the sound meditation. If they were experiencing pain, they were asked to rate their pain on a scale of one to five, including the location on the body, with the rating of one being slight discomfort and five being extremely painful. The ages of 40 to 59 had the most statistically significant reduction of physical pain post-meditation (Goldsby et al. 403).

Tuning fork therapy is a gentle and non-invasive acoustic therapy that can help with balancing the energy in the body. Some non-accredited practitioners have also claimed that this principle is based on the fact that everything vibrates in the universe and that the vibration of the human body can align with tools such as a tuning fork. Hence, making sound waves travel deeply into the body along the energy pathways can bring about a sense of well-being and healing if used correctly (Carter). Professor Daniele Masala, from the Department of Human, Social, and Health Sciences at the University of Cassino and Southern Lazio, Italy, states:

At this point, we can affirm that the “tuning fork therapy” is a holistic matter, in which “energetic activations” of specific parts of the body are carried out through the usage of “therapeutic tuning forks.” Moreover, the tuning fork therapy is partially called “sound therapy,” defined in this way: “treatment based either on the discovery that human blood cells react to voiced frequencies, modifying their own shape and color and on the hypothesis that sick or in mutation phase’s cells can be healed and harmonized by the sound. This therapy has been developed and supported by the French Fabien Maman, a musician, acupuncture doctor, composer, researcher, and bio-energetic, who could be considered the father of “sound vibrational therapy.” (23)

During a tuning fork session, a practitioner will place the stem of the activated tuning fork on the articulations and bones to restore flexibility and movement and aid in the development of the connective tissue. They achieve this by stimulating the flow of blood and lymph to the application area, which helps improve certain aspects of healing. This could be psychological or physical: “It is much like acupuncture, without the needles, and helps to release tension, move stagnant energy and promote emotional balance” (Hauf). Reiki Master Practitioner Julie Hauf gives a perfect example by comparing the different root chakras to specific keys and its pinpoint as emotional states:

The tuning forks of C and G, for example, are known as the Perfect Fifth, or the sound of “Universal Harmony” and the force between Yin and Yang, the space between two notes. C and G are known to connect the Root Chakra with the Throat Chakra energy centers. The Root Chakra is an expression of grounding,

safety, foundation, survival, basic needs, and self-identity. The Throat Chakra is an expression of communication, creativity, expression, projecting ideas, and realizing one's potential. Tuning fork therapy is also similar to another therapy called vibroacoustic therapy. Vibroacoustic therapy is a treatment method that uses sinusoidal low-frequencies in sound and music. This kind of therapy reduces the signs and symptoms associated with cerebral palsy's neurological disorder, which affects movement, posture, and the musculoskeletal system.

From this, instruments such as tuning forks are crucial and of utter importance for detecting the performance during these meditations above. There are many instruments used during sound healing sessions to provide the most effective psychological and healing process. These instruments offer different kinds of interactions when utilized in a session. For example, following the course of using a tuning fork, once struck, the air that is around the fork vibrates, sending out solid vibrating impulses heard as one singular or identified sound. The forks are milled of fine steel and visually appear to be two-pronged like metal sticks that were initially used to tune instruments and conduct hearing loss (Bickerton). Michele Averard, the founder and co-director of the Association of Sound Therapy, discusses that tuning forks are practical tools for optimal use in sound therapy and medicine along with the claims of using this tool in bio-energetic fields such as aligning chakras around the body, Shiatsu, foot, and hand reflexology.

Singing bowls and Tibetan bowls are standard instruments used in these practices, such as singing bowl therapy. Buddhist monks have used these bronze metal

instruments for centuries in religious contexts, which are now used for more therapeutic purposes. Although these bowls might not look like instruments, no two bowls have the same pitch. The size and thickness of these glass or metal bowls determine the resonated sound from the device and what type of beater the practitioner uses — for example, drumsticks with felt, wood, or rubber heads (Huyser). Researcher Kathleen Humphries discusses the ontology of what promotes the change of healing in a person, which has shown striking evolution from just a singing bowl. She mentions the shamanistic rituals from the past and how the healer used music as a medium to portray and diagnose the patient's state and spirit. She compares this with contemporary “therapists [who] use music as the healing device, and the therapist is the channel through which the music is played” (Humphries).

Gongs are constructed of hammered metal, and most are made out of bronze or brass but with an amalgam of other metals. Although many gongs are made in China, they are not mass-produced like televisions or toys; these precise instruments are handmade. Many gongs are flat, but some have a central dome, also called a nipple. The outside rim of the gong is usually turned down and isn't very sharp-edged like a cymbal. Generally, gongs have two basic styles: suspended and bowl. Suspended gongs are more or less flat and hung vertically using a chord passed through holes close to the rim. The suspended gongs are also played with a mallet or bamboo stick. Bowl gongs can rest on the ground or unique cushions and can be played in several different manners. A musician can bang a bowl gong with a mallet but might also rub the rim with his or her finger to elicit a whole other sound. The gong is one of the oldest musical instruments globally, and archaeologists have unearthed gongs built almost four thousand years ago (Borakove). Gongs are also known to be used during singing bowl therapy. Albinica Pesek and Bratina Tomaz have studied gongs

for many years as he writes that sound alters a state of consciousness, and its effects have been confirmed by modern science. As they describe, “the desire to learn about our inner life energies and nature has led people to play the gongs in China, to use Himalayan singing bowls in Nepal, India, and Tibet, and playing on various percussion instruments across the globe.”

The djembe is one of West Africa's best-known instruments, which is incorporated in tradition and celebration. This hourglass-shaped drum is traditionally carved from a single piece of African hardwood and topped with an animal skin as a drumhead. The belief is that the djembe drum contains the spirit of the tree from which it was made, the spirit of the animal whose skin is played, and the spirit of the carver or the one who cut the tree (Tauber). Alan Tauber has studied the djembe drum for many years in African culture. Given that this drum doesn't have a central melodic component, including this instrument in sound therapy allows the patient to freely express and connect with their emotions as well as be more open to the therapist (Tauber). As noted by Kim Atkinson, “to play djembe means to stay true to the history of the djembe; That includes the traditions of magic, knowledge, and an open heart. If one of those is absent, the music will not sound correct to village-people of the seeding countries of the djembe” (qtd. in Tauber). The djembe as an instrument is used in an ancient approach to promoting healing and self-expression. The therapeutic rhythm techniques help maintain a deeper self-awareness and spiritual health dating back to the shamans of Mongolia and healers of Africa (Drake). According to Michael Thaut, director of Colorado State University's Center of Biomedical Research in Music, “Rhythmic cues can help retrain the brain after a stroke or other neurological impairment, as with Parkinson's patients.”

The last instrument used to promote healing is the wooden flute derived mainly from the Native Americans. Within Native American spirituality, this instrument is most appreciated due to it being made from a living thing, hence, made out of wood. Specifically, aromatic cedar symbolizes healing and renewal. Another contributing factor to the wooden flute is the awareness of breath related to wind and represents spirit as “the wind which gives the flute its voice” (Hill). Paula Conlon, a professor of Ethnomusicology at the University of Oklahoma, mentions that playing the Native American flute is “very liberating and free. There is a spiritual awakening inside you when you play it. That’s what attracts you. There’s nothing artificial about it” (qtd. in Hill). Researchers found that our physical responses improve when we hear the music of a Native American flute reducing our rate to a resting state. Playing this instrument in a therapy session can also mediate the brain increasing alpha and theta brainwave patterns (Miller and Goss).

The last portion of this research will discuss the scientific, psychological theories, and methods that correspond with these practices’ physical and mental benefits. Although not all claims have been proven, they still offer insight into this field of interest. Music therapy and sound healing are very similar in some ways but are more a component of tertiary music therapy courses. Sound therapy can be described as the belief that our bodies contain “energy frequencies” and that sonic frequency can be used to reattune these energies when off-key, thus attempting to rebalance the body’s energy (Keneally).

Joseph J. Moreno, an emeritus professor of Music Therapy at Maryville University and director of the Moreno Institute for the Creative Arts Therapies in Santa Fe, New Mexico, has explored many connections between music therapy practices,

musical psychodrama, and traditional healing. Moreno has been intrigued by many traditional cultures and states that “healing rituals frequently involve the integration of all arts” (qtd. in Chiang). He then tried to apply those types of techniques to his music therapy workshops and musical psychodrama (Chiang).

In Moreno’s example of a psychodrama workshop, he used the piece “The Enchanted Lake,” an orchestral piece by the twentieth-century Russian composer Anatol Liadov, as a warm-up. This piece showcases a slow, mystical, sustained, and shimmering character approximately ten minutes long. As the piece plays, he gives instructions for his participants to close their eyes, stimulating their imagination by prompting them to view a magic boat on a magical lake that would then take them anywhere they wanted to go. When the piece was finished, he asked the group where they went and what might have happened. One woman mentioned that she could see her ex-boyfriend, who she had not seen for quite some time, and she stated to the group that he had left her for another woman. He broke her heart so badly that she felt that she could not establish a new relationship because of his actions because she was too traumatized that it would occur again. Moreno then gave her instructions to pick someone from the group and “act” as if they were her ex-boyfriend. This practice of musical psychodrama allowed her to be vulnerable and speak to the person from the group as if it were her ex-boyfriend. She then told him whatever she felt she should have when she found out he cheated and what she would have said to him if she saw him in person today. Whatever had troubled the woman before she had walked into that workshop was partially resolved through psychodrama, where a music therapist uses improvised music and other people from the group. Moreno said: “I use improvised

music created by other people in the group...to enhance the drama, to help the clients find their feelings more deeply, so that all of those kinds of situations are connected through music and drama in traditional healing, although it is not like trying to replicate it but to draw from the power of those rituals” (Chiang 54).

Scholars such as Gregory Barz, Tore Tvarnø Lind, Michael Bakan, Michael Rohrbacher, Dale Olsen, Marina Roseman, and Steven Friedson have contributed research and thoughts on medical ethnomusicology. Tore Lind, Associate Professor at The University of Copenhagen, Denmark, for example, discusses his dedication and interest in the reactions of hospitalized patients to MusiCure. This includes original compositions of soundscape instrumentals for the healthcare sector and evidence-based stimulation on reducing anxiety and depression. Lind’s case study of the medicinal music MusiCure has shown recorded and commercial music applications that facilitate healing in private homes, hospitals, and nursing homes. As a result of 25 years of research, Lind’s findings have led to Denmark implementing this in medicinal care. MusiCure has altered the healing space of hospital wards and private homes taking part in constructing a “metaphysical space” where it communicates with patients’ own “potential to heal” (Lind). This example goes to show the tangible impact that sound therapy can carry towards the future.

Fabien Maman, acupuncture doctor, composer, and researcher, has been considered to be the father of “sound vibrational therapy” (qtd. in Masala 24). He has done many experiments with incorporating tuning forks into his acupuncture practices as an alternative to applying needles. His research has found that any kind of musical system utilized with the applications of the tuning fork has to be based on a coherent

music scale: “The coherence between the notes leads to harmony; the incoherence leads to chaos” (Masala 29). From this, he relates the mathematical affiliation between each note on the piano that is tuned from the chromatic scale starting at “A” with 220 Hz through “G#” at 415 Hz. Maman claims that for each level of hertz, the frequency can pair with an internal organ and healing can happen through these levels of sound. To support this, he then gives an example where he uses a tuning fork at 128 Hz to help heal contractures and more painful areas of the body such as bone aches as well as a tuning fork set at 136.1 Hz (between a C and C#), to “re-equilibrate the internal organs, stimulating the reflected points and their correspondents mapped by the Chinese traditional medicine” (Masala 30). Although acupuncture and Chinese traditional medicine has been credible for many years, these fundamental practices such as incorporating tools like the tuning fork above, are still reaching to the surface for future examinations.

In closing, music is the one thing that genuinely connects humans from all cultures and corners of the earth. Sound healing is considered a therapeutic practice that utilizes different frequencies and vibrations to improve the physical and emotional health of individuals, groups, and cultures. Understanding sound and how sound waves such as longitudinal, mechanical, and pressure operate through a medium are the underlying physics to comprehend its scientific existence. In parallel to the underlying physics the four properties of sound as timbre, duration, dynamics, and pitch also go hand in hand to help establish a more transparent and clear perspective on how humans can identify these music fundamentals as sound. In addition, the discussion of traditional beliefs and rituals of ancient times gives the reader a historical background of

cultural aspects dating back to biblical times, Greek mythology, the Native American tribes, Egyptians, and of Asian descent. This also includes identifying specific instruments and tools to support the significance of music on the body and the human brain. Furthermore, the evidence discussed has revealed its physical and mental benefits when applying these therapeutic practices.

Upon this review we can create a substantial outlook as to what may lead to more evidence in the future as well the evidence behind these methods and psychological theories. Not only can these practices create new insights for the way we utilize music and theory but through instruments made by our past ancestors as well. Music has always been a way to connect us to our true selves, from as simple as a song that takes us back to a heartfelt memory, discussing how a song was intentionally made, and meditating to instruments. This research aims to examine, educate, and discuss sources of overall well-being for healing through sound as medicine for the past, present, and future of this topic. However, scientists, physicians, professors, and licensed therapists have yet to partake in adequate healthcare-related research on this topic. This leaves potential for further evidence to support these claims.

Works Cited

- Abbott, Elaine. "Client Experiences With The Music in the Bonny Method of Guided Imagery and Music (BMGIM)." *Qualitative Inquiries in Music Therapy*, 2005, p. 38,
[https://www.barcelonapublishers.com/resources/QIMTV2/QIMT20052\(2\)Abbott.pdf](https://www.barcelonapublishers.com/resources/QIMTV2/QIMT20052(2)Abbott.pdf)
- Averard, Michele. "Association of Sound Therapy: Tuning Forks." *Harmonic Sounds*, 2021, <https://harmonicsounds.com/sound-healing/tuning-forks/>
- Bickerton, R.C. "The Origin of the Tuning Fork." *Journal of the Royal Society of Medicine*, vol. 80, 1987,
<https://journals.sagepub.com/doi/pdf/10.1177/014107688708001215>
- Borakove, Andrew. "Gong 101: Basics of Gongs." *Gongs Unlimited*, 2017,
<https://gongs-unlimited.com/blogs/unlimited-blog/gong-101-basics-of-gongs>
- Davis, Jennifer. "Good Vibrations: Native American Flute and Spiritual Healing." *Academia.edu*, 2011, www.academia.edu/6982654
- Drake, Michael. "Ancient Healing Approach: Drum Therapy." *Learn Religions*, 2019,
<https://www.learnreligions.com/drum-therapy-1729574>
- Chiang, May May. *Research on Music and Healing in Ethnomusicology and Music Therapy*, University of Maryland, PhD dissertation, 2008,
<http://hdl.handle.net/1903/8236>
- Carter, Elizabeth. "Tuning Forks." *New Leaf Natural Medicine*, 2020,
<https://newleafnaturalmedicine.com/tuning-forks/>
- Fabiani, Marco, and Anders Friberg. "Influence of Pitch, Loudness, and Timbre

- on the Perception of Instrument Dynamics.” *The Journal of the Acoustical Society of America*, vol. 30, no. 4, 2011, <https://doi.org/10.1121/1.3633687>
- Frego, David. “The Approach of Emile Jaques-Dalcroze.” *Alliance for Active Music Making*, 2000, <https://www.allianceamm.org/resources/dalcroze/>
- Goldsby, Tamara, et al. “Effects of Singing Bowl Sound Meditation on Mood, Tension, and Well-Being: An Observational Study.” *Journal of Evidence-Based Complementary & Alternative Medicine*, vol. 22, no. 3, 2017, p. 401-03, doi.org/10.1177/2156587216668109
- Hauf, Julie. “What are Tuning Forks and How Can They Help Me?” *Stratera Integrated*, 2020, <https://www.stateraintegrated.com/post/what-are-tuning-forks-and-how-can-they-help-me>
- Hill, Juniper. “The Oxford Handbook of Music Revival.” E-book Oxford UP, 2014, https://www.google.com/books/edition/The_Oxford_Handbook_of_Music_Revival/N8GiAwAAQBAJ?hl=en&gbpv=0
- Hopkins, James. “History of Sound Healing.” *Red Doors Studio*, <https://www.red-doors.com/sound-healing>
- Humphries, Kathleen. “Healing Sound: Contemporary Methods for Tibetan Singing Bowls.” *Undergraduate Library Research Awards. Vol. 2*, 2010, <https://digitalcommons.lmu.edu/ulra/awards/2010/2>
- Huyser, Anneke. “Singing Bowl Exercises for Health and Personal Harmony.” *New Age Books*, 2005,

https://www.google.com/books/edition/Singing_Bowl_Exercises_for_Health_and_Pe/-4G-X45qXjwC?hl=en&gbpv=0&kptab=overview

Keneally, Patrick. "Sound Therapy." *The Guardian*, 2008,

<https://www.theguardian.com/lifeandstyle/2008/jul/06/healthandwellbeing5>

Lind, Tore Tvarn. "Meaning, Power and Exoticism in Medicinal Music: A Case Study of Musicure in Denmark." *Ethnomusicology Forum*. Vol. 16. No. 2. Taylor & Francis Group, 2007, <https://doi.org/10.1080/17411910701554039>

Maele, Synne M. "How Bats Actually Fly to Find Their Prey." *Science Daily*, 2015,

www.sciencedaily.com/releases/2015/06/150619084612.htm

Masala, Daniele, and Valentina Merolle. "The Tuning Fork and the 'Sound Therapy.'" *Senses and Sciences*, vol. 4, no. 2, 2017, [23-30],

<https://sensesandsciences.com/index.php/Senses/article/download/111/102>

McClellan, Randall. "The Healing Forces of Music: History, Theory, and Practice."

iUniverse, 2000,

https://www.google.com/books/edition/The_Healing_Forces_of_Music/-nfV4QaL9VIC?hl=en&gbpv=1

McCoy, Claire W. "Eurythmics: Enhancing the Music-Body-Mind Connection in

Conductor Training." *Choral Journal*, vol. 35, no. 2, 1994, p. 21,

www.proquest.com/scholarly-journals/eurythmics-enhancing-music-body-mind-connection

Milford, Francine. "Tuning Fork Therapy: Using Tuning Forks in Water." *Francine*

Milford, 2006,

P.17,

https://www.google.com/books/edition/Tuning_Fork_Therapy/r4Y3_WlkwSIC?hl=en&gbpv=0&kptab=overview

Miller, Eric B., and Clinton Goss. "An Exploration of Physiological Responses to the Native American Flute." 2014, <https://arxiv.org/pdf/1401.6004.pdf>

Pesek, Albinca, and Bratina Tomaz. "Gong and Its Therapeutic Meaning." *Musicological Annual*, Vol. 52, no. 2, 2016, p. 138, <https://doi.org/10.4312/mz.52.2.137-161>

"Sound." *Merriam-Webster.com*, 2021, www.merriam-webster.com/dictionary/sound

"Sound Waves." *PASCO Scientific*, 2021,

www.pasco.com/products/guides/sound-waves

Tauber, Alan. "History of the Djembe." *The Drum Connection*, 2013,

<https://www.drumconnection.com/africa-connections/history-of-the-djembe/>

Thaut, Micheal, and Hoemberg Volker. *Handbook of Neurologic Music Therapy*.

Oxford UP, 2014,

https://www.google.com/books/edition/Handbook_of_Neurologic_Music_Therapy/5Gb0AwAAQBAJ?hl=en&gbpv=0

The Bible. Authorized King James Version, Oxford UP, 2008.

Woodford, Chris. "Sound." *Explain that Stuff!*, 2020,

www.explainthatstuff.com/sound.html