


**Interdisciplinary Society for Quantitative Research in Music and Medicine
2017 Conference**

Abstracts

NAVIGATING EMOUCHURE FOCAL DYSTONIA: A CASE STUDY

Dr. Joseph Carucci, Eastern Kentucky University, KY

Abstract:

Focal dystonia is a neurological disorder characterized by involuntary muscle contractions. In musicians, it is most often located in the arms, hands, face or lips (embouchure). Involuntary tremors occur when the musician is engaged in a musical task, and often pose challenges to performing music. Because there is no known cure for dystonia, musicians who have been diagnosed must search for ways to compensate for the disorder.

The purpose of this study was to investigate whether an individual with severe embouchure focal dystonia could navigate the adjustment from performing on a brass to a woodwind instrument. The participant was a skilled trombonist who had battled for the latter part of his career with focal dystonia. After struggling with this condition, and ultimately surrendering his ability to perform on the trombone, he made a decision to embark on learning the saxophone. This case study documents a year of private saxophone lessons and the switch from one performance medium to another. Data was collected through observation, field notes, practice journals, and communication artifacts between the researcher and participant, and was coded for emerging themes.

Following a year of study, results indicate that the participant was able to redefine himself as a performing musician. His dystonia did not reappear with the use of a saxophone embouchure, and his identity as a saxophonist flourished. The results of this study will offer musicians diagnosed with focal dystonia another option for maintaining a musical voice.

RE-EXAMINING THE STANDARD TUNING AND ITS EFFECTS ON HUMANS

L. Elise Carter, Montclair State University

Abstract:

Most musicians take out their tuner and tune to a=440 without thinking. However, this standard of tuning was not universally used until after World War II. During the year 1859 was the first time that a standard of tuning was set, this was set for a=435 in Paris. "At a time when the turning fork was vibrating to the 435 Hz frequency in Paris by ministerial decision; and to 439 Hz in London by royal decree, the renowned Italian composer Giuseppe Verdi adopted himself the 432 Hz frequency." (Comte, E., 2013 para.7) Before then there were various turnings ranging from 417 to 460. Some composers had their preferred turnings, Mozart liked a= 422 and Haydn a=423. (Comte, 2013) A tuning fork used by the manufacturer of Mozart's pianofortes, was tested to be A = 421.6 Hz. (Gioia, 2008) Does the frequency that we are tuning to matter? Many people think it does, and many of those people do not like a=440. There is a whole society devoted to reviving Verdi's tuning, the Schillier Society. There is another movement initiated by a man named Leonard Horowitz who feels that a=444 is a sacred tuning that promotes miracles and love. To find out if there is any scientific evidence that one tuning is better than another the author did a full brain map on herself to look at changes in brain waves. She looked at Delta, Beta, Alpha and Theta waves while listening to a single tone of C. This tone was played on the flute and tuned to each of the three above mentioned tunings. A=440, A=444 and A=432. A

baseline reading was taken and was compared to each of the three tunings. All four brain waves were examined and the locations where these brainwaves were most concentrated. This poster details the findings of the author.

Exploring the Ancient Chinese Numerology in Music and Medicine

Dena Gold, M.Ac., L.Ac.
Bridgeport, CT

Abstract

The ancient Chinese worldview contains a complex series of interrelated ideas that weave their way throughout a diverse array of sciences and arts. The ancient Chinese numerology is one such idea. While not often explicitly discussed, it can be seen manifest in many fields including music and medicine. The specific numbers that are most prominent between these two are five (the five phases), six (the six joists), ten (the celestial stems), and twelve (earthly branches). There is an implicit interaction here between heaven, earth and man. The 5/6 differential being that of the inner and outer world and the 10/12 being the differential between heaven and earth. This paper will seek to explore some of the ways these numbers appear in ancient Chinese music theory and will look to further understand the relationships of the 12 rules, 5 notes, etc. It will also seek to find any comparative aspects between the Chinese system and other ancient music traditions.

DE-ALLERGINIZING FROM ENVIRONMENTAL, FOOD AND OTHER SENSITIVITIES WITH INDIVIDUALIZED PRESCRIPTIVE MUSIC

Michael Legge, The Music Apothecary, Wyndmoor, PA

Abstract:

A qualitative study, drawn from actual case histories, will be presented. Through individualized music, clients experiencing physical, emotional and/or mental distress are brought into a state of homeostasis. A sense of wholeness is achieved through rebalancing and/or the neutralization of energetic irritants. The Prescription Generator and energetic response are brought into play in order to determine and treat instabilities. Various protocols have been successfully developed but essentially the client holds the ampoule, from an Applied Kinesiology (AK) Test Kit, containing the vibrational signature of a healthy organ, tissue or meridian while listening to the prescriptive music. Thus, stuck energy becomes unblocked and equilibrium is restored.

Harmonized melodies are composed from the 7 healing modes: Ionian, Dorian, Phrygian, Lydian, Mixolydian, Aeolian & Locrian which have equivalency to the meridians. The ordinary meridians are 12 energetic pathways within the body used by doctors of Oriental medicine in order to bring about balance. It is further hypothesized that the two-octave mode, used for the bass and melody lines, covers the two meridians, Yin and Yang, by element i.e., the Ionian mode equates to the Earth mode (spleen/stomach meridians). Besides the Earth, Metal, Wood, 2 Fires and Water meridians the two extraordinary meridians, Governing Vessel and Conception Vessel will also be correlated.

The second dimension, that will be unpacked, is the utilization of non-harmonic tones correlated to the Five Elements of Traditional Chinese Medicine and the 64 hexagrams of the Yi Jing. The interface of the seven modes with the five elements (including the two fires), generates 84 templates of musical composition (42 in 3/4 time and 42 in 4/4 time). The 7 modes can be sequenced in 5,040 different ways with the Prescription Generator, prescribing Key Signature, Time Signature and the optimal modal sequence for any one treatment as well as what non-harmonic tones to use in Modal observations 1,2,3,5,6 and 7; bass and melody. Observation 4 is intentionally tonal.

Debilitating illnesses, such as Irritable Bowel Syndrome, Leaky Gut, Food Sensitivity, Adrenal Fatigue, Gastro-Intestinal Disorder, Fibromyalgia, Addictions and Neurological Disorders as well as other diagnoses not mentioned respond to this unique energy medicine. Besides the Healthy Organs, Tissues and Meridians AK Kits, Food Irritants such as Lectins, Gluten plus additional food toxins, Environmental Allergens, Digestive Enzymes, Amino Acids and Nutrition AK kits are also utilized in order to obtain a more complete profile of sensitivities that need to be neutralized.

The same process of listening, as mentioned above, is used for neutralization where the energetic system is instructed to no longer associate the “irritant” with a dysfunctional systemic response.

TONING: THE HUMAN VOICE AS AN INSTRUMENT FOR NEUROMODULATION

Lynn Miller MA MT
Expressive Therapy Concepts

Abstract

Neuromodulation is the “the ability to change the nervous system through an externally, or internally applied modality”. (Evans, 2017). Vocal toning will be reviewed as a modality for internal Neuromodulation. Toning can be considered one of the most natural and direct tools for neuromodulation since it uses the voice, an instrument of the body. Toning is intentional vocal sounding for the purposes of relaxation, meditation, prayer, self-expression, emotional release and/or pain reduction. This research review finds some evidence for beneficial effects of toning, humming, and Om chanting. A single study brain map, of the presenter, will reveal changes in brain wave patterns while toning. The trauma work of Dr. Porges, “The Polyvagal Theory”, will be discussed with findings of vagal nerve stimulation through toning. There will also be confirmation of neuromodulation through the increase of Nitric Oxide through humming. In this interactive workshop, vocal toning techniques will be demonstrated for the participant to notice their own direct experience of physiological responses or psycho-spiritual awareness.

MUSIC IN SPECIAL EDUCATION AND CEREBRAL PALSY; MOTOR DEVELOPMENT, MEMORY AND EMOTION

Dr. Emma Rodriguez Suarez, Syracuse University, NY
Kaleb Santana, Kaleb Musical Project, Puerto Rico

Abstract:

Cerebral Palsy (CP) is a condition caused by an injury to the immature brain that can occur before childbirth until the age of three. This condition is non-progressive and define according to muscular tone (high and/or low) and the area of the body affected. Moreover, this diagnose could cause different brain and cognitive disorders such as learning disabilities, attention deficit, emotional impairments, behavioral disorders, hydrocephaly, epilepsy, and visual impairments, among others. As it can be expected, these cognitive and pathological deficiencies limit the acquisition of proper skills, making it difficult for a person with CP to learn how to play a percussion instrument. The impetus for this study rests on the lack of data on the impact of music education as part of the special education program specifically on the development of memory, emotion and motor skills offered to students with CP.

This research builds from continued work with students with CP. A previous qualitative, longitudinal case study focused on the study of changes in fine and gross motor development as well as the changes in psychological affect of one student. At the end of the analysis changes were observed in both aspects studied; a significant increase in speed and endurance of continued performance (motor), as well as significant changes in relation to the music, music education and the student’s future in the field of music (affective psychological). A comparative study of two cases are presented here: 1) a student (muscular condition, spastic hemiparesis), after five and a half years of individual lessons on the drum set; and 2) another student (muscular condition, spastic quadriplegic) after two years of individual lessons on the Latin timbales. In order to collect data for this research several instruments of observations were selected: pedagogical diary, digital video recordings, interview to each student’s mothers, live performances, television performances and presentations, education institutions, YouTube videos, newspapers interviews, magazine interviews, and exposure to live performance videos on internet pages. These instruments were deliberately used to gather data and compare differences and similarities between both students on these three aspects: 1) the increase in repertoire (memory), 2) music education and the student’s future in the field of music (emotion), and 3) changes in general performance’s speed and endurance during practice and live performances (motor skills).

After two and a half years the conclusions of this study are still in progress. The instruments were used as in the previous research study to analyze but a strong emphasis was placed on the differences and similarities between these

two students. The data gathered and compared are initially showing similarities in all three aspects: memory, emotion and motor skills but at different rates; differences are based on the particularities of their condition. One of the goals of this research study was to have both of these students play together in live performances with a Latin Rock band which was achieved successfully. This musical experience has led to a beautiful friendship between these two students.

SOUND AS A FORMATIVE FORCE THAT TRANSFORMS AND ORGANIZES CONSCIOUSNESS AND MATTER

Dr. Timothy Klemt, DACM, L.Ac.
Tim Klemt Acupuncture, New York, NY

Abstract:

This is part of a larger, ongoing project exploring the idea of sound as a formative force that transforms and organizes consciousness and matter. The ancient Indians spoke of Nada Brahma, which in Sanskrit means “sound as the creator God”, the ancient Chinese spoke of Huang Zhong, the Yellow Bell, a fundamental pitch of cosmic origin responsible for cosmic regularity, harmony, growth and development, and the ancient Greeks spoke of Musica Universalis, also referred to as Music of the Spheres or Harmony of the Spheres, which is the imperceptible tenor of celestial sounds produced by the planets and their orbital revolutions of which earthly life is a reflection. These related ancient ideas arguably are made manifest in the more recently discovered phenomenon called cymatics, a term coined in the mid-20th Century by Hans Jenny, an anthroposophist. This phenomenon occurs when sound vibrations are induced into the surface of a plate or membrane that has resting on it a thin coating of particles, paste or liquid in which there results the formation of geometric shapes. In the early 20th Century Rudolf Steiner, the founder of anthroposophy, discussed in significant depth the relation between sound, musical principles and human physiological development. This paper will briefly explore the ideas of Nada Brahma, Huang Zhong, and Musica Universalis and will explore in greater detail the phenomenon of cymatics and anthroposophical concepts that elaborate on the relationship between sound, musical principles and human physiological development and what this might mean for the field of sound and music therapy.

ANY SONG CAN BE A LULLABY: ADAPTING SONGS FOR COMFORT, RELAXATION AND SPIRITUAL SUPPORT END OF LIFE

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Complementary & Creative Arts Therapy
Keystone Hospice, Wyndmoor, PA

Abstract:

Music can be uniquely comforting at end of life, it can be used to transform the energy of a hospital room, masking unwanted beeps, noises and voices, creating a cocoon of sound, a holding space for a patient to rest comfortably in the liminal state of the dying process.

Many studies cite the efficacy of music therapy to promote relaxation, feelings of comfort and reduce anxiety and terminal agitation at end of life. It is common in hospice music therapy to utilize hymns or favorite songs with or without words for patients in an active dying process. Tempo is slowed to match the respiratory and heart rhythms of the patient but within the course of a terminal illness there is also a role for the use of lullabies. In the same way lullabies are used to comfort infants a lullaby structured song can be used to promote a feeling of peace, support and induce a state of relaxation for hospice patients. Many patients approaching death ask for music they find beautiful and comforting, this offers a unique opportunity to the music therapist to adapt these preferred songs as lullabies. At end of life less is more and by scaling a song down to its bones, creating a melodic and verbal phrase that serves as a lullaby can provide comfort and be utilized for relaxation and entrainment and yet still hold meaning for the patient.

In this experiential workshop the form and function of end of life lullabies will be explored through case stories and song examples of lullaby songs used with patients at varying stages of the dying process. The group will have the opportunity to learn, sing and experience a deconstructed song as a lullaby.

BIO-GUIDED MUSIC THERAPY: UTILIZING NATIVE FLUTE BIOFEEDBACK

Eric B. Miller, Ph.D. MT-BC BCB,
Music Therapy David Ott Laboratory
Montclair University, NJ

Abstract:

Fundamental concepts of Bio-guided Music Therapy are introduced with a focus on utilizing real-time physiological data driven music therapy and Native Flute biofeedback. Target disorders: anxiety, high blood pressure, ADHD, Autism, depression, and addictions. While traditional biofeedback typically uses synthesized tones to feedback physiological response, Native Flute biofeedback feeds back short melodic phrases that were actually played by Dr. Goss on a real native American flute. As the human response fluctuates so do the flute phrases such that the body is producing melodies with the flute. Via demonstration, we will create musical environments with Native Flute melodies triggered by real-time physiologic heart-rate, GSR and EEG brainwaves.

Toning Language of Light, an experiential observation study

Janey Butterworth MSSW, LCSW

Abstract

Language of Light is sacred soul language. The soul does not communicate in a linear manner, its communicates symbolically. The Language of light comes from a clear part of our being, it is a spontaneous non-verbal language which bypasses our linear mind and ego. In a healing practice it may appear as toning or a means of expressing pain, grief, beauty or emotion for clients. LOL may also reveal information hidden in the auric and physical bodies. This information can lead to the resolution of spiritual, psychological and physical issues as it is brought to conscious awareness. In this presentation listeners will get a greater understanding of the use of Language of Light in an energy work session with clients. The presenter will recreate some of the sounds used in sessions. Listeners will be encouraged to consider this spontaneous language in a variety of practices.

THE EFFECTS OF MUSIC ON PAIN PERCEPTION IN PATIENTS WITH SICKLE CELL DISEASE

¹Dr. Kristie Lipford
²Dr. Wendy Thompson
²Dr. David Akombo

¹Emory University School of Medicine
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Abstract:

Sickle cell disease (SCD) is categorized by episodes of severe pain that mainly affect the chest, back, and legs of diagnosed individuals. It comprises a group of inherited blood disorders in which the hemoglobin of red blood cells (RBCs) is abnormal, causing RBCs to be sickle-shaped, and causing severe pain. Although the effects of music on pain have recently been examined, very few studies have examined the effects of music on pain perception in patients living with SCD. This research examined the effects of music on pain perception on patients with SCD. The study patient population consisted of 21 adult men and women who had an SCD diagnosis. The control group consisted of nine patients, and the experimental group included 12 patients. Participants were included in the study if they were over 18 years of age, had a diagnosis of SCD, and had a history of SCD-derived pain. Patients were excluded if they had no English fluency or had a mental handicap that prevented them from consenting and/or completing the procedures required for the study. This study was approved by Jackson State University Institutional Review Board and University

of Mississippi Medical Center (UMMC) External Review Committee. Patients were recruited from the UMMC Sickle Cell Clinic during normal clinic hours.

Using the Five Nodal Sounds of Chinese Medicine to Treat Hypertension in Humans: A Preliminary N=10 Study

Michael Ishii, MSTOM, L.Ac.
University of Bridgeport

Abstract:

A preliminary study was conducted to investigate use of the five nodal sounds of Chinese medicine as described in the *Su Wen* of the *Yellow Thearch's Cannon*, to treat hypertension in humans.

An N=5 study was conducted using a therapeutic protocol utilizing specific combinations and patterns of the five nodal sounds. Blood pressure readings were taken on subjects before and after the protocol was conducted to determine if the nodal sounds would effect a clinically significant change in blood pressure readings.

This paper will discuss these preliminary findings and future research initiatives using nodal sound therapy and acupuncture for the treatment of hypertension.

Sacred Sounds of the Chinese Tradition

Yuanming Zhang

Abstract:

This workshop will introduce the traditional Chinese methods of internally resonant sounds known as zhou (咒) and cosmically resonant sounds known as nian (念). The internally resonant sounds are considered to spontaneously emit from the organs, meridians, and dantian (丹田 centers of power). Through chanting these sounds, the traditional Chinese believed we can improve the strength and functions of our bodies and promote health in ourselves and others. Further, the use of the cosmically resonant sounds is considered to improve the more rarefied aspects of our minds and spirit and help in the elevation of consciousness toward spiritual development. These techniques are an example of the long tradition of Chinese medical methods that utilized sound as healing. Broadly called zhuyou (祝由) these methods have been documented in texts that date back several thousands of years such as the Yellow Thearch's Inner Canon (Huangdi Neijing 黄帝内经). This workshop will present a method of using these sounds for healing and personal development that can be integrated with other therapeutic modalities. No prior experience with this method is required to learn practical skills for clinical application.

HEALING MOMENTS: FACILITATING SELF-EXPRESSION THROUGH MUSIC IMPROVISATION IN PSYCHOTHERAPY

Lynn J. Saltiel, MSSW, LCSW
Move To Your Groove-Psychotherapy and Consultation Services, NJ

Abstract:

The arts, humanities and social sciences teach us both to look outside of ourselves and to look within; to explore, assess and record what it means to be human. What do health, wellness, illness, suffering and healing mean? What is the experience of exhaustion, loss and grief? What is caring? Such inquiries assist us to think critically about what we do, what we say, how we affect others, and how we choose to live. Creativity in the arts can open up pathways to wellness, offer an inquiry into social justice and access and an opportunity to explore ourselves in relation to others.

This interactive presentation offers a humanistic belief that musical self-expression is a joyful and healthy means of communication available to absolutely everyone. Participants will be introduced to using music improvisation techniques that support clients' transitions to states of healing, well-being and empowerment. Through honoring world musical traditions and creating "music in the moment", participants will have opportunities to explore practical skills using music as a medium for self-expression, processing emotions, interpersonal communication and creativity. Easy to

play world instruments, the voice and gentle movement will be used to create a safe and supportive environment for creative expression. Additional methods include power point presentation and case example discussion.

Story Songs: Using Poetry and Music to Build Community and Heal

JoAnne Spies
Remo Drum Health Rhythms facilitator

Abstract

Sixteen years bringing music to six healthcare settings in the Berkshires of western MA with a special focus on memory care and clients with Alzheimer's. Presenter will share songs written in collaboration with elders as well as ways to collaborate with other teaching artists and activities assistants. **Healing examples will include but not limited to:** music on dulcimer helped person with challenges swallowing, playing tank drum to help persons with Alzheimer's become more verbal.

A NEW HOLISTIC APPROACH FOR HEALING WITH MUSIC: LOVE BASED, POSITIVE LYRICS WITH IMPROVISED MUSIC

Carla Rose Kelly,
SACRED SCALE Music, Ontario, CANADA

Julia MacKinley, MSc,
Ontario, CANADA

Abstract:

This workshop outlines 2 main foundational components of a new holistic approach to using improvised music as a tool for healing anxiety, depression and pain. The holistic method includes mind, body, and spiritual considerations. The first foundation is based on the spiritual teachings that all healing comes from love. Therefore, the practitioner uses a mindful and meditative approach by ensuring every breath is from a place of love, and the mind is 100% focused for the duration of the music healing session. Latest research on mindfulness combined with neuroscience will be presented: "Where attention goes, neuro-filing flows, and neuro connection grows."

The mind-body connection will be discussed through modern research in multi-disciplinary fields, bridging neuroscience, psychology, neurotheology, music and medicine. This introduces the second foundational aspect of this new methodology in the exclusive use of positive words for lyrics. Modern research in neuroscience and psychology show how words can change our brain and influence our behavior and emotions. One important brain area involved in this process is the amygdala - the area involved in processing of emotional stimuli, memorizing these reactions and activating responses such as anger. Deficits in amygdala function have been associated with depression, anxiety and post-traumatic stress disorder among many others. This important brain area is affected when we are exposed to negative words. The researchers will also present findings from their qualitative and quantitative data in regards to 120 participants exposed to positive affirmations for a set of 3 one-hour music sessions with significant results.

This experiential workshop will offer participants an opportunity to experience as well as participate in the mindful focus of a love-based breath as well as using positive affirmations with music. Discussion will follow sharing feedback on participant experiences with words, music and emotions as well as any awareness of affects in the mind, body and spirit.

MIND, MEMORY, AND MANTRA

Eve Kodiak, The Lydian Center for Innovative Health Care, Cambridge, MA

Abstract:

What is “mantra?” In Sanskrit, “man” means “mind,” and “tra” is an tool, or vehicle. So the word “mantra” literally means “a vehicle of mind.”

This vehicle is powered by repetition. Many meditative practices involve training one’s awareness on some sort of repeating pattern. In mantra meditation, this pattern is created by the sound – voiced or imagined – of the human voice, chanting syllables.

During the last few decades, we have seen an ever-increasing interest in the health benefits of meditation, including mantra. Since 2000, the Alzheimer’s Research and Prevention Foundation <http://alzheimersprevention.org/research/discussion/> has been conducting studies on the effects of “The Kirtan Kriya.” ARPF has found that practicing this mantra meditation for 12 minutes a day has had a wide-ranging effect on mental, emotional, and physical health – from reversing memory loss to reducing inflammation, increasing focus and concentration and reducing depression. They have even shown results on the genetic level, documenting a 43% increase in telomeres activity – an indicator of health and longevity.

In this workshop, we will conduct our own informal study of the effects of the Kirtan Kriya. Following the protocol of a Brain Gym “balance,” we’ll set a personal goal, and check our levels of personal integration through a simple activity we can repeat after the process.

We will then explore the various aspects of the Kirtan Kriya:

- the mantra itself, both in terms of its meaning and its physical effect (both in the cranium and throughout the body)
 - the mudras, or hand positions and movements that coordinate with the chanting, and their meanings and their effects on the brain
 - the visualization and its relationship to energy systems in the body
 - posture – finding tensegrity for the practice
 - vocalization – including experimenting with different sounding techniques
- We’ll also discuss any questions that come up.

Then we’ll do the meditation for the full twelve minutes together.

We’ll repeat the “test” activity, and notice any changes.

We’ll also discuss the experience as a whole, and talk about ways to maintain the practice in daily life.

THE EFFECTS OF MUSIC THERAPY TECHNIQUES ON THE SPEAKING SKILLS OF ADULT ENGLISH-AS-A-SECOND LANGUAGE (ESL) STUDENTS

Dr. Roy Kennedy, University of Georgia, Athens, GA

Abstract:

The purpose of this research was to conduct a pilot study to investigate the effects of music therapy techniques on the speaking skills of adult English-as-a-Second Language (ESL) students. Research in this area is especially pertinent for adult ESL students because many ESL students need to achieve proficiency in English in order to pass the USA Citizenship test. Interesting and engaging means of instruction are important in ESL instruction as the affect of ESL learners has been cited as a predictor of success. In other words, ESL learners that are engaged and display enthusiasm in class tend to be more successful in acquiring a second language.

Ten adult ESL students participated in a pretest/posttest design study. Measures were taken on the English Speaking Inventory and the Story Retelling Inventory. The English Speaking Inventory consisted of items such as “sticks to the topic” and “answers questions effectively” and were rated as occurring “always, sometimes or never.” The Story Retelling Inventory consists of items that measure how well ESL students are able to retell (verbalize) the contents of a story. For example, “the student “comprehensively retold the story” and “comprehended the story line and plot.” These items were rated on a Likert type scale with by the classroom ESL teacher with responses ranging from (1) weak to (4) superior. The English Speaking Checklist and the Story Retelling Inventory were used to evaluate the ESL students responses to questions about the lyrics of songs displayed on an overhead projector and in general how accurately the students responded to questions about the content of ESL information for all of the music therapy activities. Music therapy activities included singing, listening to music, moving to music, playing simple percussion instruments, and improvising musical phrases with ESL content set to the music. Although the results were not significant, the experimental group made a 45.8% mean increase from pretest to posttest on the English Speaking Checklist, whereas the control group made only a 7.4% mean increase in English Speaking Skills. Further research is needed, however, with larger numbers of subjects in order promote music therapy enhanced ESL instruction as a legitimate method of ESL instruction.

SPIRITUAL HEALING AND EXORCISM: MUSIC AS A CATALYST IN SACRED SPACE

D.Weldon Cochren, M.Div., Independent Scholar, NY

Abstract:

The focus of this paper is to explore the possibility of music and its causality in spiritual healing, and exorcism in the Pentecostal Church within the African Diaspora. The term “spiritual healing” as opposed to just “healing” is used to indicate 1) an event that would occur in the realm of the miraculous or super-natural; and 2) an event that should not be misconstrued as the result or process of Music Therapy, as some have perceived or concluded David’s musical encounter with King Saul to have been (1 Samuel 16:23). Biblically, there is no evidence of music being incorporated into the ministry of spiritual healing or exorcism of Jesus or the Apostles, yet music has become an integral component in Pentecostal churches throughout the African Diaspora (Continental Africa, North America, Brazil, United Kingdom, Caribbean and Virgin Islands). This paper will endeavor to answer the following questions:


Does a particular genre or style of music have a greater impact in the sacred space than others?

Is there a particular spiritual position or comprehension that musicians and singers should occupy or obtain to achieve the desired outcomes?

Does the cultural or worship community have an influence on the musical expression, e.g., instruments, lyrical content, language?

Does meter, tempo, key, or pitch affect the outcomes?

Does the “patient” have to be a Christian?

**Conclusion:**

The transporting of sicknesses associated with spiritual oppression, spiritual possession, physical ailments, or biological toxins from a human can be facilitated through or assisted by music, with certain exceptions and stipulations.

MUSIC THERAPY FOR INPATIENT PEDIATRIC PALLIATIVE AND HOSPICE CARE—UNIQUE CONSIDERATIONS FOR PATIENTS AND FAMILY MEMBERS

Pamela J. Carlton, MS, MT-BC, Hospice of New York, Molloy College, NY

Abstract:

Music Therapy is an important therapy intervention for pediatric patients and their families in end-of-life care, supporting overall goals of hospice and palliative care: to provide relief from pain and alleviate suffering; to offer spiritual, psychosocial, and emotional support; to provide music-based affirmation of life while also acknowledging the dying process; and to support families' bereavement processes. Depending on their developmental stage, children often are unable to understand their illness and the need for tests, procedures, and medications; music therapy can transform an alien environment, provide nonverbal support and comfort in many ways, while also offering opportunities for needed age-appropriate play. Emotional expression through music is encouraged with patients and with their families, who are often plagued with feelings of guilt, anxiety, and perceived helplessness at not being able to do more for their child. This presentation will demonstrate how a music therapist implements songwriting, singing, instrumental play, and other music therapy techniques to transform pathology into creativity, and to support the families of children in hospice care.

An examination of the Meridian System and the Bell Tree in the Treatment of Patients in the Traditional Chinese Medicine

Dr. Steve Jackowicz

The University of Bridgeport, Bridgeport, CT

Abstract

Chinese Bell (Bianzhong) were historically used as not only a musical standard for Confucian musical scales, but also for therapeutic intervention. The *Yellow Thearch's Inner Canon Spiritual Axis (Huangdi Neijing Lingshu)* Chapter 65 details a specific application of the bell system to address disorders of the meridian system used in Traditional Chinese Medicine. This workshop teaches the application of this system to the treatment of patients using a bell tree to create the appropriate sounds of the therapeutic system. Participants do not require any previous knowledge of the Chinese Bells to participate. Participants will gain a practical treatment approach that can be integrated into their current practice.

The Affective Cerebral Response to Music: Impact of Happy, Sad, and Angry Music

Chyi June Khoo,

Montclair State University, NJ

Abstract:

What is happening to the brain when music triggers emotions? This single subject pilot study examines the impact of different types of sounds on Electroencephalogram (EEG) brain wave patterns. The researcher is interested in the influence of different kinds of music associated with emotions, specifically in the form of happy, sad, and angry music on electrical activity of the brain. The subject listened to nature sounds (as a neutral control condition) followed by a sequence of 3 musical selections that may be perceived as happy, sad, or angry. EEG was used to study the hemispheric lateralization pattern of these sounds. EEG analyses revealed responses during different affective stimulations on distinct brain regions of the cerebral cortex. Theta Absolute Power increased significantly at sixteen electrode sites while listening to happy music and decreased significantly at ten electrode locations in sad music. During happy music, Theta/Beta ratio increased significantly at nine sites compared to neutral condition. Conversely, during sad music, Theta/Beta ratio decreased significantly at eight sites compared to control condition. Happy music, in this pilot study, seems to indicate increased relaxation the most compared to neutral, angry and sad music, which may support image-

based processing and spark creativity. On the other hand, sad music may improve language-based processing and enhance intellectual activity.

CORRELATION BETWEEN TRADITIONAL EAST ASIAN ACUPUNCTURE HOLOGRAM THEORY AND REPLICATIVE SELF-SYMMETRY IN MUSICAL SCALES

Raymond S. Hong

Abstract:

Recurrent self-symmetry is an observable phenomenon throughout nature, examples of which include the human body and many musical scales. The former has been used in what are called "microsystems" - mapping of the whole human body unto the smaller part, such as hands, feet, face, etc., independently by many cultures around the world for thousands of years. This self-replication of the whole unto the part is otherwise known as "hologram theory." Microsystems and hologram theory are the centerpiece to many systems of body-based traditional East Asian Medicine, including but not limited to massage, qigong (esoteric breathing exercises), general tool medicine now termed "acupuncture," and of course general body-based diagnosis (tongue/pulse/face/abdomen inspection). Recurrent self-symmetry also manifests in more than one way in music throughout many musical traditions. One of the most evident examples of self-symmetry in music is in the scales themselves, specifically the ratios between the frequencies of notes and intervals. Some ancient Greek traditions believed that the subjective idea of beauty was based in mathematical self-symmetry and replicative self-proportionality. It has been common belief and practice in many societies and eras that music can have beneficial properties for human health and human healing. It is my belief that there are shared actions upon the human audience or patient by manipulating the part to restore balance or equilibrium to the whole. Having all the scalar parts connected and unified with the greater whole creates an orthopathic state which is a hallmark of health and well-being.

A CORRELATIONAL STUDY OF PERFORMANCE ANXIETY OF NON-MUSICIANS

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Abstract:

Performance anxiety is a common problem among musicians, and can cause severe and debilitating effects, but these anxieties can be found in non-musicians. The experiment was designed to first examine the effects of performance stressors on state anxiety levels of a Midwestern University. The participants ($n=20$) ranged in age from 18 to 22, split between 4 male and 16 female subjects, and were divided evenly into a control and experimental set, and second to compare both group to a group of classically trained musicians ($n=10$) for awareness to perceived state anxiety.

While addressing the first question, the researcher examined the effect of an audience on perceived stress on the experimental group. All participants received basic instruction on sight-reading, singing, and keyboard skills, and were then asked to complete four musical tasks, and after completion, were asked to fill out a survey to assess perceived stress and performances success. These performances were recorded and evaluated by two judges (inter-judge reliability of .901 Cronbach Alpha Score) for performance anxiety and performance success. The second question explored the relationship between untrained and trained performers. The trained musicians were asked to perform music tasks, after completion, were asked to fill out a survey to assess perceived stress and performances success, and test their blood glucose level. A significant correlation was found between perceived stress and glucose levels. An ANOVA was performed for between groups comparison. The researcher found that there was no significant difference between experimental and control groups for perceived anxiety, but the standard deviation was larger in the experimental group, the judges' assessment did show a significant difference between the control and experimental group. ANOVA show a significant difference of means, and suggest a greater awareness of state anxiety amongst trained performers. The results support the antidotal evidence that trained musicians are aware of both the body and surroundings.