Interdisciplinary Society for Quantitative Research in Music and Medicine
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Abstracts

An assessment tool for participant groupings for human neuroimaging research: Measuring musical training

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Abstract
The purpose of this study was to develop an assessment tool to measure musical training and experiences for grouping participants in human neuroimaging research studies. To fulfill the purpose of this study, the researcher: 1. Completed a comprehensive review of the research literature to establish the essential content of the assessment tool; 2. Developed an assessment tool to survey subjects about their musical training and experiences; 3. Pilot tested the assessment tool, and revised the tool according to the preliminary analyses of the validity, reliability, and usefulness of the assessment tool; 4. Established the content validity and reliability of the assessment tool with subjects participating in a neuroimaging study designed to analyze the influences of musical training and experiences on brain structures and functions, and 5. Determined if the assessment tool functioned effectively in the selection and grouping of musically trained and musically untrained subjects for neuroimaging studies. The assessment tool was administered to a purposive sample (N = 42) in the southeastern region of the United States. Participants were recruited on the basis of musical training, both the existence and lack thereof. The assessment was completed via the web-based platform, Qualtrics. Coding of survey responses indicated differences in the participant pool that resulted in two groups: Musicians and Non-musicians. Further investigation yielded two subgroups within the Musician participant group: Moderate and Advanced. Validity of the assessment tool was established using a three-step construction process, (a) development of a draft based on the existing literature and the musical training knowledge of the researcher, (b) a review of the assessment tool by five music educators and performers, and (c) administration to a pilot group of five additional people with varying levels of musicianship. Additional content validity was completed by external reviewers by rating each assessment item using a Likert-type scale: 1 – Not important, 2 – Slightly important, 3 – Fairly important, 4 – Important, and 5 – Very important. Reliability was established using interrater reliability and was determined to be 88.9%. A discussion was presented that included the differences among participants that made their musical training and experiences unique compared with other participants. Implications were discussed regarding the usage possibilities for the survey, as well as the potential effects of the survey on human neuroimaging research.

Sacred Sounds of the Chinese Tradition

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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.

Therapeutic effects of Indian Classical Music by Raga's in Human Health

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Abstract
Background: Indian Classical Music has been used as a therapeutic agent from the ancient times. Music psychological effect may be regarded as scientific research about human health. It is a field of research with practical relevance for music performance, music composition, music education, music medicine, and music therapy.
Objective: The aim of this study is focuses on an aspect of treating much mental and physical health and further evaluated its psychological effectiveness in therapy by ragas of Indian classical music.
Methods and Discussion: Many ragas can be cured with vocal and instrumental music i.e., Raga Bhairavi, Raga Malhar, Raga Jaijayvanti are used to get rid of mental stress. Raga Darbari improves heart condition. Darbari Kanhada, Kamaj and Pooriya are found to help in defusing mental tension, particularly in the case of hysterics. For those who suffer from hypertension, ragas such as Kalyan (Yaman) Bhairav, and Todi are prescribed. Deepak (acidity), Malkauns or Hindolam (intestinal gas and for controlling fevers). Malaria are also said to be controlled by the ragas like Marva. For headaches, relaxing with the ragas like Darbari Kanada, Shivranjani and Sohni and others is said to be beneficial.
Conclusions: This study is focuses on the ragas of Indian classical music is being used to affect miraculous cures, for quicker post operative recovery, treating many illnesses in new-born, youth and children.
Keywords: Ragas, Indian Classical Music, Music Therapy

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Middle School Music Ensemble Participation, Homophobic Name-Calling, and Mental Health

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Abstract
Homophobic name-calling is commonplace in middle schools and is emerging as an antecedent to more serious, deleterious concerns including depressive or anxious symptoms among youth. While evidence in music education suggests that youth enrolled in music ensembles are targets for homophobic epitaphs, little is known about how experiencing homophobic teasing during early adolescence relates to self-reported mental health.
Purpose and Research Questions: This study was conducted to compare the prevalence of homophobic name-calling and self-reported perceptions of mental health between youth enrolled in middle school music ensembles and those who are not. Specifically, our research questions included (a) What are the prevalence rates of homophobic name-calling and is there a difference between youth in middle school ensembles and those who are not?; (b) What are the self-reported perceptions of mental health and is there a difference between students who participate in middle school ensembles and those who do not?; and (c) If we control for the possible effect of school building attendance, is our set of variables (HCAT-p and HCAT-v) still able to predict a significant amount of variance in perceptions of mental health?
Design[1]**:** Data secured for this investigation are part of a large-scale, two-year randomized trial funded by the Centers for Disease Control & Prevention (# CE3240). Participants ($N = 463$)[i] volunteered to complete the questionnaire for an overall response rate of 54.9%. Students enrolled in a school-based music ensemble (band, orchestra, choir) ($n = 176$) and not enrolled in a school-based ensemble ($n = 287$) comprise the total sample for this study.

[1] Additional details about the participants, measures, data collection, and analysis appear in the full paper.

Results[2]: Results indicate that a moderate significant association between chronic agent status and ensemble participation, χ^2 (3, n = 339) = 11.03, p = .012, V = .18 exists with the sample of youth with 23 chronic agents of homophobic name-calling do not participate in a music ensemble and 11 chronic agents participate in a music ensemble. Hierarchical regression analyses were computed to test for the significance of Agent and Target scores in predicting mental health after controlling for school building attendance. As hypothesized, ensemble membership differences emerged in the predictive significance of Target scores for mental health. After controlling for school building attendance, Target scores significantly predicted current levels of mental health for youth in middle school ensembles (β = .22; f^2 = .05) and those who are not (β = .28; f^2 = .06). According to Cohen's (1988) guidelines, effect sizes are interpreted as moderately small.

An Unsculpted Block of Time: A Humanistic Approach to Using Music Therapy with Acute, Adult Psychiatric Groups – Literature Review

Jon Reichert
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Abstract
A key feature of the acute psychiatric care environment is the relatively rapid patient turnover. Due to the frequent admissions and discharges, the patients attending a facility's groups can vary daily. Additionally, the mental state of individual group members can vary each day. Given the fluctuating group membership and the evolving mental states of the group's members, each group session is truly a unique experience. The questions arise: How does a music therapist prepare for a session where the composition and mental status of the membership is unknown? What type of conceptual framework does a music therapist use in determining which methods will provide the potentially greatest therapeutic benefit to the group?

Three psychotherapeutic levels of music therapy practice have previously been delineated (activity, reeducative, and reconstructive), based partly on a framework for types of psychotherapies that include supportive, reeducative, and reconstructive levels of therapy. The supportive level of therapy is particularly applicable to acute psychiatric patients. To date, the supportive/activity level of music therapy has been portrayed in the literature primarily as a means of achieving patient behavior modification. This presentation/article provides an alternative lens for viewing and implementing the supportive/activity level of therapy with groups of acute, adult psychiatric patients that is based on a humanistic theoretical orientation. The presenter/author also proposes that within the supportive/activity level there are three levels of possible patient engagement.

Music and Art to Build Posttraumatic Growth with Women in the Psychiatric Forensic Mental Health Setting: A Pilot Study

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Abstract
Trauma treatment for women with severe and persistent mental illness often is not addressed due to the fear of psychological decompensation (Sanders, n.d.). Traumatic memories are often stored in the unconscious and in the body; therefore, when activated these memories can move quickly into automatic perceptions, feeling and behaviors (Sareen, 2014). When this cycle repeats itself, women may associate their symptoms and their maladaptive behavior with negative core beliefs about themselves. Through music, art and psycho-education these women can learn to differentiate sensations, imagery, and responses connected to past traumatic events from their current realities. Re-processing traumatic memories through structured creative arts therapy groups encourages women to reconsider, even challenge, their existing assumptions about themselves and about the world around them. The purpose of this study was to determine whether the Empowerment Guide improves post- traumatic growth for women with severe and persistent

[2] Additional results appear in the full paper.

mental illness, substance abuse and trauma histories; also defined as co-occurring disorders. The Guide is a 4-week module developed by the presenters for women with severe and persistent mental illness in the forensic mental health setting. The guide is a synthesis of relational and gender responsive theory that addresses addictions, mental health, trauma recovery, and evidence from neuroscience to establish safety and reality orientation, moving towards an emphasis on resilience and self-regulation using music and art therapy. The group participants perceptions of positive change prior to, and following, their participation in the Empowerment Guide groups were assessed using The Post-traumatic Growth Inventory (PTGI), an instrument designed to assess positive outcomes reported by individuals who have experienced traumatic events (Tedeschi & Calhoun, 1996). The study was a single-subject quasi-experimental design. A combination of music and art therapy interventions were used for this study. Improvisation, lyric analysis and receptive techniques such as music relaxation and listening were used in conjunction with cognitive re-structuring imagery and projective drawings. Purposeful sampling was used to gain understanding of specific cases within their own right instead of generalizing the results to a population, meaning to provide information rich cases for comprehensive knowledge of the sample (Isaac and Michael (1995) and Patton (2002). Four out of ten eligible participants consented to participate in the study. The participants met the following criterion: (1) severe and persistent mental illness, (2) trauma history, (3) minimum age of 18 years old and (4) currently housed on a long-term unit to allow opportunity for more psychological stability. Attrition factors lead to only 2 participants completing the pre-& posttest. The limitations of the design approach and the unique qualities of this population restricted our ability to determine whether the empowerment guide improved post-traumatic growth in women with co-occurring disorders. The results of this study inform music and art therapy clinicians of the need for a mixed methods design to better inform gender specific treatment. Due to the sensitive and unique needs of this population, having a qualitative component would provide additional context and better inform the effectiveness of the Empowerment Guide. Although, there were confines to the design approach, participants expressed the skills that were gained, self-awareness to enhance autonomy and self-regulation, as well as an awareness of any growth after traumatic experiences.

HEALING FREQUENCIES 174hz-963hz DECODED FROM THE BIBLE

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Abstract
Secret healing frequencies that were hidden in the Book of Numbers of the Bible for over 2000 years have recently been decoded by Dr. Puleo. There is also a Biblical story from the Book of Samuel describing David playing the harp to heal King Saul's madness, but the exact frequencies and number of strings were unknown. Are these newly discovered healing numbers, the frequencies on the miraculous harp that David used to heal King Saul's madness? There is no evidence to know for sure. Modern day, patented musical instruments have been made with the healing frequencies decoded from the Bible: 174hz, 285hz, 396hz, 417hz, 528hz, 639hz, 741hz, 852hz, 963hz. They have been used as music for medicine, in a clinical setting in London Ontario, Canada for the past 10 years, treating clients with depression, anxiety and pain. The researchers will present findings from their qualitative and quantitative data in regards to 120 participants exposed to the 9 healing frequencies for a set of 3 one-hour music sessions with significant results. This experiential workshop will also offer participants an opportunity to experience music as medicine created with the 9 healing frequencies. Discussion will follow sharing feedback on participant experiences with the 9 frequencies, as well as any awareness of affects in the mind, body and spirit. Participants will also be given an opportunity to play these instruments as well. No musical background is necessary, as all 9 notes are in tune with each other, so dissonance is impossible.

Live Healing Musical Experience Crystal Singing Bowls, Voice and Angel Harp: Music Relaxation Session

Eluv (Elise Zotos)
Eluv's Music & Guided meditations, Florida, USA

Abstract
The live sound is designed to increase balance in the left and right hemispheres, lower stress response, calm the nervous system and induce an Alpha (meditative) state of relaxation. (The state in which the body's natural healing occurs). Additionally, the sound is spontaneously created based on the energetic response to the group, and is unique to the

duration of time in which it is created. In this Live Healing Musical Experience Crystal Singing Bowls, Voice & Angel Harp presentation, participants will directly experience a live Sound Healing Session first hand. This provides a reference and exposure to specifically designed live sound for relaxation and healing.

A Clinical Case of Insomnia due to Tinnitus Treated with Music Integrative Neurotherapy

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Abstract
Tinnitus is defined as the perception of sound in the absence of an acoustic stimulus and as a subjective experience of the patient. It is a symptom in nearly all ear disorders and has an obscure, still unknown mechanism of install and development. The actual methods of treatment employed mainly a "sound mask" aimed to cover in loudness the audio volume of tinnitus. Music it is often implied in the process by producing play lists according to the personal preferences and musical cultural background of the patient or the therapist, trying to offer an alternative to the usually unpleasant and permanent sound heard by the patient. But music it is not implied in treating the tinnitus itself. The medical treatment of the presumed causes involved consists usually in lowering blood pressure medication, hearing aids, a.s.o. The clinical case presented in this paper is quite different, because the patient's otolaryngology and audiology tests shown a physiologically intact hearing apparatus, a normal SRT (speech reception threshold), with no modifications of the hearing capacity or ear disorders in act. No medication was undergone which could allow the suspect of influencing the tinnitus phenomenon (hyper/hypo tension medications, for example). The tinnitus appears after a Radiation Therapy applied locally in the parietal zone as a treatment for a malign skin tumour, and generated a sleep deprivation symptom which affected the personal and social life of the patient. The role of Music Integrative Neurotherapy™ in this clinical case had multiple finalities. First of all: to reduce the impact of the tinnitus on the mind's processes. Second: to allow the mind to produce a pattern recognition path which brings to the assimilation of the tinnitus with other known body sounds; in this case with the heart beat sound. Then to help to store this information at the level of long term memory data bank. Third, to allow the therapeutic intervention on the sleep disorder (insomnia) produced by the tinnitus. The novelty of this therapeutic application consists both in the approach to the patient's problems and in the technique implied in therapy. This is the first time Music is used as a science, by composing it based on the medical data of the patient and aiming to specific regions of the brain in order to help the organism to create by itself the defence mechanisms. There is no precedent published material describing similar clinical case, approach to it or a similar therapy method, as by author knowledge.
Key Words: tinnitus, insomnia, music integrative neurotherapy, graur, neuroscience

Navigating Embouchure Focal Dystonia: A Case Study

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Abstract
Background: Of the various therapies used to relax the body & mind, music is an integral part of our lives. Scientific evidences are now being created for western music (Mozart, Beethoven etc.). Unfortunately, evidence regarding the health benefits of Indian music is extremely meagre. In this era of translational research, we started to study the effect of Indian music on health with special reference to electrophysiological parameters. As a part of *Sama Veda*, *Gandharva Veda* enlists the various *ragas* & their health benefits.
Objectives: To evaluate the acute effect of 3 selected ragas of Indian music on, electrophysiological parameters [Heart rate variability (HRV) and Electroencephalography (EEG)] and to assess the relaxation effect of these ragas on Blood pressure (BP), salivary stress markers and stress.
Material & Methods/Procedure: After ethical clearance from institutional committee, an randomized control triple blind trial with 3 ragas to 3 intervention groups (A,B &C - n=35 in each) and a control group (n=35) was conducted. EEG, Electrocardiography (ECG), BP & stress were tested prior to, during & after music intervention & results computed & analyzed using SPSS software. P≤0.05 was considered statistically significant.
Results: Stress, BP and HRV reduced (increased parasympathetic activity) and music exposure was significantly associated with increase in theta, alpha and beta bands that persisted after music stopped (p<0.001). Between conditions

effects in theta, alpha, beta and gamma bands were observed which got restricted to only alpha band at right frontal region. After collapsing the conditions (post Music-pre Music). Group A showed a significant reduction in alpha frequency band in right frontal region (greater increase in right frontal activity), whereas Group C showed significant increase in that region.
Conclusion/implications: Music had an effect on electrophysiological parameters. Indian music relaxes the body and mind, as evident by the parasympathetic increase during music. Alpha increase after music exposure, may be related to internal attention, creative ideation and mental imagery. Beta increase may relate to the improved arousal & mood. EEG showed significant hemispheric differences with each raga. This seems important in understanding emotional behaviour during exposure to different ragas of Indian music, and is in line with the model of hemispheric specialisation concerning perceived positive or negative emotions proposed by Heilman.

Keywords: Music, electroencephalogram, heart rate variability, stress, STAI, blood pressure
Mode of presentation preferred: Oral presentation

Importance of Family in Pediatric Medical Music Therapy

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Abstract
Illness, hospitalization, and pain all take a toll on childhood development, psychosocial health, and the family unit. When providing services to children, the treatment team includes medical staff, therapists, and family members. There is a growing evidence base supporting the role of music therapy in aiding children and their families through the hospital experience. This workshop will reflect on music therapy clinical practice and provide interactive music experiences specific to pediatric medical care and the significance of the family, touching on five areas: acute care, chronic hospitalization, rehabilitation, NICU, and palliative care. The patient conditions highlighted will include: surgical (acute care), abuse and neglect (chronic hospitalization), traumatic brain injury (rehabilitation), premature birth (NICU) and life limiting illness (palliative care). For each area, a music therapy intervention will be shared. Music therapy treatment and the role of family members in such care will be explored and discussed, including the significance of the parent experience, the absence of a parent or caregiver, sibling involvement, benefits to the family as well as the patient, and the pivotal role of the therapist-patient relationship within the music.

Music and Mental Health: A systematic Review of Literature on Functional Music Medicine

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ISQRMM
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Abstract
Patients with mental illness show significant cognitive and emotional benefits when they sing, or listened to familiar songs. Depression is one of the most serious and frequent mental disorders worldwide. Thus, depression is one of the most common chronic diseases. This paper presentation focuses on a systematic review of published literature on the subject matter of facets of mental illness and how music is used to mitigate in the exacerbation of the illness. The first segment of this presentation will include studies on current causes of depression in selected regions of the world and the data-driven research on how music is being used to mitigate these factors. The other segment of the presentation will focus on neuro-physiological parameters that respond to syntactic musical stimuli with Cross-Domain Mappings in music. The final segment of this literature will entail identification of suggestions on how the public can use music to address the pandemic of mental illness and suicide especially among war veterans and victims of global catastrophes both human and natural. Overall, the paper will focus on benefits of music with ancillary topics on music perception, memory, and learning and their relation to the sensory, formal, and expressive properties of music.

The Effect of Instrumental performance on Diabetic Musicians vs. Non-Diabetic Musician

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Abstract
The study explored how blood glucose and anxiety affects a diabetic musician's health, and examines the relationship of each variable, and how each interacts within the realm of musical performance. As the number of people diagnosed with Type 1 and 2 diabetes, it becomes increasingly important to understand how this directly relates to instrumental performers at all levels. The researcher's hypothesis was that instrumental rehearsal has affected the blood glucose and cortisol on a diabetic musician. This relationship was explored through the examination of existing literature on anxiety and blood glucose as they relate to music, and through the mixed methods examination of 20 subjects. The blood glucose data was collected in a quasi-experimental method, and anxiety levels were gathered through Likert scale survey. All data was examined for correlation between variables, between subject classifications, and against historic predictive literature. The researcher also found significant correlations between perceived anxiety and glucose movement, and found a significant correlation between perceived anxiety and perceived performance success. The data suggested a difference between diabetic, pre-diabetic, and non-diabetic subjects. The analysis of these and relationship between variables and between participants suggest that diabetics and non-diabetics respond differently to instrumental playing at a biological level.

Influence of music on student's biopsychosocial well-being

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Dr. Jasna Valic, MD.
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Abstract

It is argued that student's satisfaction in the context of attending lectures and learning, can be indicator not only of his/her life quality, but also indicator of success in the present and in his/her academic future (Mihanović et al., 2016). Although there are various reasons and issues which can influence on the student's satisfaction, planned, active and well-structured leisure time will enrich his/her everyday life and provide many pleasure (Caldwell and Darling, 1999). Music, as part of a student's free-time is a great stimulus because various musical activities, the performing ones as well as the listening to music activity, impact on his/her emotional and social life (Pejić, Papak i Vidulin, 2016).

From the ancient civilizations music was used for treatments and for improving the so-called good state of mind (Vladimirovna, 2014), and this is still present today. The positive influence on the spiritual and physical health ascribed to music contributed to its recognition as very important element in everyday life. MacDonald et al. (2002) state that dealing with music will encourage the experiences of oneself, the connection with the world that surround us, giving the possibility for personal growing and the complete development.

The intention of the authors of this paper is to examine if listening to music of various genres (pop, rock, jazz, traditional, art), frequency and duration, increases the student's verbal memory, focused attention, cognitive functions and language skills, impacts faster rehabilitation after minor injuries, intensifies positive emotions and establishes peace of mind. Next task is to investigate the impact of music to the decreasing of minor pain of any origin, anxiety, agitation, fatigue, short breathing, chest pain, and depression, which can all be connected with the student's life.

A questionnaire will be proposed to students from the University of Pula (Music and Humanities departments) as well as from the University of Rijeka (Medicine department) and analyzed quantitatively and qualitatively. The results will be interpreted within musical, medicinal, historical, social and anthropological context.

Addressing Anxiety through the Sodershan Chakra Kriya

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Abstract

In 2017, I presented on using the Kirtan Kriya from Kundalini Yoga to address memory issues. The paper was just published in the ISQRMM journal. Some participants actually used the information with positive results. One psychologist related the story of a client who was terrified of an MRI. She used the Kirtan Kriya as she entered the claustrophobic tunnel and all her anxiety fell away. I became interested in how other Kundalini exercises might specifically address anxiety. There is a study currently going on with some of the same team that researched the Kirtan Kriya. One of the methods they are testing is "Sodershan Chakra Kriya." The research is ongoing and I plan to interview the instructors for their ongoing impressions of the work. My goal with the Kirtan Kriya workshop was to approach this complex exercise by reducing it to simple components and building to the complete experience from there.

In checking resources for this on the web, I came across a blog by Kelly Brogan MD that recommends using the Sodershan Chakra Kriya for depression and anxiety. But reading the responses to the blog, I found this: "I really want to try the Kundalini Yoga, but can't figure out how to handle so many things at the same time… how do you keep track of the 20 seconds while you are trying to pump your navel, repeat the mantra and running out air?!" My background as a musician has been all about how to communicate complicated information in a simple way. I was a graduate assistant at Harvard in the 1980's for the late Professor Luise Vosgerchian, who, rather than courting on the advanced students, she asked the question – "How can I translate this knowledge to the general student with no musical training?" I spent decades in early childhood music, and then combined my work in Educational Kinesiology, with its emphasis on neurologically-based movement, with music. The sodershan chakra kriya is more difficult than the kirtan kriya, and I am interested in find a route to create maximum compliance – i.e., to make it easy and intuitive to perform. I also plan to record a set of instructions and a musical version of the mantra that participants can download and use on their own. My next ISQRMM workshop will run along the same lines as the last one: I will go through some basic information on how the brain processes movement, musical, and in this case, respiratory information. We'll then talk about issues related to depression and anxiety that people personally would like to address. Then I'll teach the kriya; we'll do it together, and check our responses. There will be handouts that allow participants to continue on their own, and I remain available for questions by email and text after the conference.

Bridging Humanistic Thinking and Evidence-Based Practice in Music-Centered Music Therapy

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Abstract

Music therapists are charged with accountability for their clients' growth in the music therapy treatment process as part of their professional responsibility as healthcare providers.
https://www.musictherapy.org/about/ethics/PrinciplesforEthicalPractice) But in accepting this charge, in-the-moment musical responsiveness and awareness of the wholeness of human experience may be lost. (Nordoff, P. & Robbins, C., 2007). In an era where the need for evidence-based results in healthcare and education is an expectation, not a wish, this can be tricky territory to navigate. The architecture of music therapy treatment plans can account for unexpected surprises that may occur when human potential unfolds through the dynamic nature of musicking. (Elliot, 1995). Treatment plans can be created as templates of *opportunity*. The opposite is also true---if too constricted or limited in scope, they can squash even the possibility of the unexpected or certainly of a therapist's response. This workshop will focus on bridging the seemingly disparate philosophies of humanistic thinking and evidence-based treatment planning in service of maximizing health and helping clients reach life goals. Stories will be provided to help the participants understand humanistic principles and the application to both broad life goals and the implementation of specific music-centered short-term objectives.

The cross-cultural experiences of music therapists working with adolescent girls with significant trauma in Jamaica

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Abstract
The following proposed experiential workshop will explore the cross-cultural experiences of music therapists who had worked in Jamaica with adolescent girls that were exposed to varying degrees of significant trauma. Two music therapists from Molloy College joined an existing Mental Health team in a Molloy College Mission to Jamaica. This was the first time that music therapy was included in treatment for the girls residing at Homestead House of Safety in Kingston. The music therapists will share personal experiences and examples of interventions that were employed to foster group cohesion, emotional self-expression, and personal growth. The workshop will also present phenomenological research findings that will explore themes of culture shock and vicarious trauma. The presentation will not only explore research findings, but will also provide a live experience for participants to gain an understanding of the methodology implemented during the treatment phase in Jamaica. The basis for this workshop is to enrich participants toward a wider understanding of cross-cultural music therapy and trauma care both in native and nonnative communities.

The Cyber Orchestra Method's Effect on Attention Span and Self-Esteem in Typically Developing Five to Six-Year Old Children

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Roy Kennedy[3]

Abstract
The purpose of this experimental research study was to investigate the effects of the Cyber Orchestra Method as compared to traditional music education activities on attention span and self-esteem of 26 typically developmental children 5-6 years old. The Cyber Orchestra Method is a performance and teaching methodology composed of a combination of conventional music therapy techniques and a unique system of music notation. It includes conventional music theory concepts and piano performance techniques to create orchestra-like acoustics utilizing pre-recorded instrument voices played using electronic piano keyboards. Using a duration recording method, the investigators measured the attention and engagement level of subjects when carrying out traditional music education activities and Cyber Orchestra Method exercises. A pre-test and post-test using the Self-Esteem Child Implicit Association Test (Child IAT) was administered. Results from a two-tailed t-test showed there was a significant difference between the attention span of subjects who used the Cyber Orchestra Method from those who used traditional music education. No significant difference was found on the self-esteem between the two groups. However, the Cyber Orchestra Method may be an effective method for increasing the attention span of students while reading music and playing orchestra parts using the Cyber Orchestra Method.

The Effects of Music Therapy on Second Language Acquisition When Used as a Supplemental Tool for Adult Immigrants in a Community College

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Abstract
Music has long been recognized as being closely related to language with regard to the areas of the brain that are engaged during music and/or language activities. In addition, the use of music activities as a vehicle for teaching academic content, including language content, has been documented as well. English-as-a Second Language (ESL)

teachers are always exploring creative methods for increasing second language acquisition in their students. While music is frequently used for teaching language content to children at the elementary levels, it is less commonly used for adults, who struggle the most with language learning. The purpose of this study was to investigate the effectiveness of supplemental music therapy activities for second language acquisition (SLA) compared to the effectiveness of traditional classroom methods for teaching language acquisition. This was an experimental study in which 38 adult ESL students participated. The students were enrolled in a community college in the Southeastern part of the United States. Students were divided into an experimental group (n = 23) and a control group (n = 15). The control group received traditional ESL instruction only, whereas the experimental group received both traditional ESL instruction and supplemental ESL music therapy instruction in the last 30 minutes of their normal class time twice per week. As a standardized assessment, the BEST Literacy Assessment was used to gather data for the comparison of pretest to posttest gain scores of the experimental group to the control group, and to describe the qualitative aspects of the participants' language acquisition as well. In addition, Hurley and Tinajero's Speaking Checklist and Story Retelling Inventory were used to assess the expressive/qualitative English language skills of students in the experimental group as well.

Exploring the Connection between Mind, Body, and Soul through Sound and Movement: Finding Your Own Homeostasis through Crystal Bowls and African Drumming

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Abstract
The urge to move to music is universal among humans (Levitin, Grahn & London, 2018). Music and movement evoke a wide range of feelings in the human body, mind, and soul. Feelings (along with emotions, the phenomena that are commonly and unfortunately taken as their equivalent) are only considered from psychological or sociocultural perspectives, without consideration of the fact that feelings are also neurobiological phenomena and play a central role in homeostasis (Sloboda, O'Neill, & Ivaldi, 2001; Craig, 2002). When listeners get carried away by the music, either through movement (such as dancing) or through reverie (such as trance), it is usually the temporal qualities of the music—its pulse, tempo, and rhythmic patterns—that put them in this state (Levitin, Grahn & London, 2018). This experiential workshop will involve participants listening to both Crystal bowls and drum sounds while making voluntary movements, chanting, humming, and experiencing the presence of the cosmos within the human mind, body, and soul.
Keywords: Mind, Body, Hemostasis, Crystal Bowls, African Drumming

Plato's Harmonious Man: a musical journey within using "charms", silence and remembrance of the cosmic harmony

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Abstract
Notorious for recognizing the superiority of oral to written teaching - as Socrates proclaims in Phaedrus - the Hellenic tradition has been transmitted from the times of Pythagoras to those of Socrates and Plato in the appreciation of a certain vibratory resonance carried by the voice and the presence of the teacher. Harmonizing and healing the conflicted condition of the human being is the main concern of the Platonic dialogues. As showed in Charmides, in order to restore the health of a part of the body, a true physician should first attempt to cure the novice's ψυχή (psyche, soul). This can be done by the use of "charms" - spirited words that create a certain vibration and harmonize the conflicting aspects of the soul: the rational, the appetitive and the spirited. Resulting is persuasion, the "charm" will induce self healing of the novice's soul by lessening his subjective suffering. Favoring the re-organization of the soul in a harmonious manner, the "charms" will create the conditions for a silent interior dialogue within the soul which in turn will lead to the re-tuning of the individual to the cosmic harmonious order. By tuning into the Ἁρμονία (harmony) of the cosmos, Plato suggests, we can remember our true nature, the perfect Form which is in intrinsic harmony with the world's soul, as showed in Timaeus. The purpose of this last step is to become "melodic" (μελωδικός): attunement (Ἁρμονία - harmony) is an ally,

provided by the Muses for the soul in its fight to restore itself to order. By developing a holographic relationship with the cosmic order, our original nature is thus encountering its own musicality. The ordered cosmos and the tempered human life are both to be conceived of as musical performances. At this stage, as showed in Symposium, the novice must actively recollect Beauty, intrinsically related to Harmony itself in order to ascend, rather than passively listen to speeches that provide an image of beauty. This paper will seek to explore the means of creating Ἁρμονία (harmony) within the fine structures of the human ψυχή (psyche, soul), according to Plato. The paper will then seek to propose clinical applications based upon the three Platonic musical devices explored here: 1- "Charms" (spirited words from rhetorical investigations, myths and metaphors from Plato's dialogues), 2- Silence and 3- Tuning into the cosmic harmony. A protocol of this three steps sequencing was developed and applied in a pilot study in a meditation studio to a group of ten subjects suffering with self reported anxiety. Physiological effects were observed and a Generalized Anxiety Disorder Scale (GAD-7) questionnaire was filled by each participant and compared with effects of auricular acupuncture.

Musical Saint Composers of Andhra, India-Tyagaraja-A Study

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Abstract
MUSIC, Song of the Soul, the vent for the externalisation of internal emotions, through verbal notes and scales of sounds, with intonation and modulations, is the source for understanding and reaching the Supreme Reality, by means of Devotion (Bhakti) and Submission (Arpana). TYAGARAJA (May 4, 1767–January 6, 1847) was an ardent follower of Lord Rama. For him, HE is the Perfect MAN, Embodiment of Unblemished Character–raamo vigrahavaan dharmah. His songs represent the ultimate philosophy of life, as gleaned through Vedanta and Upanishad texts. Songs of Tyagaraja are set in emotional experience with spiritual coherence. For him, life is a gratis of Lord and HE is the answer for all his questions. Following two examples best exemplify his Emotional and Spiritual communing with the Bhagawan RAMA—(1) When Tyagaraja's brother fell ill, his mother requests him to pray Lord Rama for his recovery. Tyagaraja prays Lord Rama in a song set in Raga Kaapi (a typical musical metrical note) an example of expression of pathos, as – anyaayamu seyakuraa raama, anyuni gaa choodakura naa eda – O Rama, don't be un-just to me and treat me not as alien. (2) Tyagaraja, yet in another song, set in Raga Abheri (yet another typical musical metrical note) sings the plight of elephant, caught in jaws of crocodile, praying Lord Vishnu, to protect him–gagaananiki ilaku bahu duram anina, o jagamele paramaatma evarito moralidudu – O Lord, if You say that Your abode is in the sky and it is too far off to earth earth, Who should I pray for my protection. Present article divulges potentiality of Tyagaraja in communicating with Ultimate of Life, and how best we can reach HIM, still practising mundane life. Article will be authenticated through rendering relevant songs to the scholars present.

Music-based interventions on the improvement of physical, social and emotional well-being of stroke patients

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Abstract
Background: Stroke is a leading cause of disability, often accompanied by social and emotional stressors that lead to increased long-term impairment. Music-based interventions have the potential to improve outcomes through integrating care across multiple areas of need, including physical, social and emotional well-being.
Objective: To test the efficacy of a collaborative approach to stroke rehabilitation, called Music Upper Limb Therapy Integrated (MULT-I), that combines music therapy and occupational therapy in a group setting to improve physical, emotional and social well-being.
Methods: A mixed-methods randomized controlled trial was performed. Thirty participants with sub-acute or chronic stroke were randomly assigned to either the MULT-I intervention or a self-led home exercise program. Both

interventions were completed twice a week for 6 weeks, for a total of 12 sessions. Physical, emotional and social well-being were evaluated pre- and post-intervention.
Results: 25 participants (n=13 for MULT-I and n=12 for Home Therapy) completed the intervention, pre-tests and post-tests. There was no significant improvement in physical function for either the MULT-I or home therapy control groups. However, MULT-I participants showed greater improvement in emotional well-being, as measured by the World Health Organization Well-being Index (WHO-5) and the Patient Health Questionnaire (PHQ-9), a validated scale for measuring symptoms of depression. MULT-I participants reported qualitatively more enjoyment in the intervention, and identified positive social interactions during the intervention as important for their overall wellbeing.
Conclusions: The MULT-I intervention effectively supports emotional and social well-being and may be especially significant for stroke survivors experiencing emotional distress to a degree that impedes engagement in their recovery.