



**MUSIC THERAPY AND THE
MILITARY**

THE CURRENT MILITARY

Operation Enduring Freedom (Afghanistan) and Operation Iraqi Freedom

Rapid-paced and multiple deployments


Medical technology

Military strategies

Signature injuries:

- PTSD
- TBI
- Major depression
- Polytrauma
- Complicating issues: substance abuse, family conflict, suicide risk

RATIONALE FOR MILITARY MUSIC THERAPY

- Build life skills to improve independence
 - Promote adjustment to “new normal”
 - Opportunities for nonverbal expression of inner thoughts and feelings
 - Supports verbal processing of thoughts and reactions
 - Motivates self-disclosure
 - Motivates participation and personal growth
 - Provides means to reveal unconscious fears and anxieties
 - Helps to identify and work through traumatic experiences
 - Transforms traumatic memories into healthier associations
 - Elicits extra-musical ideas useful in recovery, growth, and development
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THEORETICAL BACKGROUND


“Purposeful, organized, methodical, knowledge-based, and regulated”

- Receive and process music in both hemispheres
- Influences physiological responses, behaviors, thoughts, memories, and emotions
- Organizes and energizes human responses


“Here and now” orientation

- Responsibility to self and others
- Provides opportunities for unique human expression and experiences

WHERE IS MUSIC THERAPY PROVIDED?

- **Military bases**
 - **Military treatment facilities**
 - **VA healthcare facilities**
 - **In the community**
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ACTIVE DUTY MODELS

- In the US and overseas
 - Programs in place with active duty military, families, and service members in transition
 - Some provided through community partnerships
 - Military facilities
 - Pre-mobilization, deployment, post-deployment, and recovery phases
 - Services for service members transitioning to veteran status
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CURRENT ACTIVE DUTY MODELS

- Davis-Monthan Air Force Base – Tucson
- Resounding Joy, Inc. – San Diego
- National Intrepid Center of Excellence (NICoE) – Bethesda
- Walter Reed National Military Medical Center – Bethesda
- Institute for Music Therapy through the Arts (ITA), Music Institute of Chicago, Oaktree Program
- Military Children, Special Needs, and Waiting Warriors – various locations

DAVIS-MONTHAN AIR FORCE BASE


Programs not able to be implemented as effectively with other healthcare professionals

- Program for active duty airmen to foster positive coping and stress management skills; used rhythm-based, interactive group tasks
- Waiting Warriors Wellness and Prevention Group – active music making as part of an early intervention and readjustment program for returning military personnel and dependents – international spouses
- Active music making group as part of an early intervention and readjustment program for returning military and their family members – family group

RESOUNDING JOY, INC.

- Balboa Wounded Athlete Program – Naval Medical Center
- The OASIS Program – Naval Base, Pt. Loma
- Camp Pendleton Semper Sound Music Therapy Program
- Intensive Outpatient Program – Naval Medical Center
- Traumatic Brain Injury Group – Naval Medical Center
- Semper Sound Band
- VetJam
- <https://www.youtube.com/watch?v=PNZgxqC5H1s>

NATIONAL INTREPID CENTER OF EXCELLENCE

- “cutting-edge evaluation, treatment planning, research and education for service members and their families dealing with the complex interactions of mild traumatic brain injury and psychological health conditions”
 - 4-week interdisciplinary and comprehensive treatment program
 - Combination of western medicine, complementary and alternative approaches, and mind-body skills
 - Group music therapy session in 3rd week
 - Some members receive individual music therapy assessment
 - Part of Healing Arts program – includes art therapy and creative writing
 - Interventions address multiple goals
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WALTER REED NATIONAL MILITARY MEDICAL CENTER

- “Nation’s medical center”
- Serving military beneficiaries in the DC area and across the country
- Largest military medical center in the country; 100 specialties and clinics
- Board-certified music therapist on staff
 - Conducts assessments
 - Provides services to in and out patient members; active duty, retirees, and dependants
 - Diagnoses include: TBI (mild, moderate, severe), stroke, dysarthria, psychological health (anxiety disorders, depressive disorders, PTSD), trauma-related injuries, children with autism-spectrum disorders, and cancer

MT IN ACTION!

<https://www.whitehouse.gov/photos-and-video/video/2014/11/06/president-and-first-lady-host-salute-troops-performance-white-hous>


ITA/MUSIC INSTITUTE OF CHICAGO OAKTREE PROGRAM

- Not-for-profit educational organization that incorporates music therapy services as part of mission to provide community services for individuals with special needs
- “Operation Oaktree” – program for military children and families throughout the cycle of deployment
- Mission
- Get Ready, Get Set
- Growing Strong, Branching Out
- Deep Roots, New Leaves: Reintegration Programming for Military Children

MILITARY CHILDREN, SPECIAL NEEDS, AND WAITING WARRIORS

Exceptional Family Member Program – AZ; CA; IL

Music Therapy

- Interactive music experiences for family events
 - Music-based workshops to educate families
 - Music therapy services on/off base
 - Consult to base staff as part of family support programs
 - Music therapy services in adult groups for spouses of deployed (Waiting Warriors)
 - Music therapy services in adult support groups for parents of children with special needs
 - Summer music therapy camps for children with special needs
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VETERANS MODEL PROGRAMS

- The Role of Music Therapy and Music Programs in the VA Continuum of Care
- Veterans Affairs Facilities – Nationwide


VA CONTINUUM OF CARE

- Begins at point of injury and continues through community re-entry
- Support throughout to initiate and maintain the healing process
- MT's role – beneficial training and skills to facilitate improved outcomes along the continuum
- Additions to treatment plan
- The National Veterans Creative Arts Festival

VA FACILITIES

- Interactions that enhance physical, communication, cognitive, psychological, and socio-emotional functions
 - Design music experiences to facilitate community transition
 - Provide opportunities to acquire, practice, and assimilate new skills into the “new normal”
 - 27 states; Puerto Rico; Washington, D.C.
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RESEARCH

- **Sensorimotor, Physical Rehabilitation**
 - **Cognitive Rehabilitation**
 - **Communication and Speech Rehabilitation**
 - **Pain Management and Social, Emotional, and Behavioral Health**
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SENSORIMOTOR/PHYSICAL REHABILITATION

- A music-cued movement intervention for persons with Parkinson's disease facilitated **enhanced physical outcome measures and quality of life**
- Rhythmic auditory stimulation is effective in rehabilitation of those with acquired brain injury
- VA participants who received RAS following strokes improved their **one-limb stance, cadence, velocity, stride-length, and posture** significantly more than control participants
- Rhythmic cueing delivered through the auditory system can facilitate **improved motor control and motor output** following injury
- RAS resulted in **better gait training gains** than NDT/Bobath training in persons with hemiparetic strokes
- RAS facilitated **improved gait speed, stride length, and gait speed**, which carried over for up to 15 minutes following training


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- Persons with emphysema who participated in a music therapy singing intervention experienced **improved breathing patterns** and **better quality of life**
- Young adult participants who moved their arms to and from a target **adjusted their movements with rhythmic cues that were below the threshold of conscious recognition**; further, the changes occurred within two movement cycles with adaptation occurring in the first movement cycle
- Patients with paretic arms from strokes had **decreased variability in their arm movements** with rhythmic cueing
- Patients with TBI responded to RAS with **increased walking cadence, stride length, and velocity**
- **Synchronization** between step frequency and rhythmic cues in persons with mild to moderate Parkinson's disease **indicates rhythmic entrainment** occurs even with the presence of basal ganglia dysfunction
- RAS **improved cadence, velocity, and stride length** in patients with Parkinson's disease who participated in a home-based training program

MT IN REHAB

<http://www.nbcchicago.com/news/health/music-medicine-brain-rehabilitation-69812472.html>

COGNITIVE REHABILITATION

- Participants with PTSD experienced **greater reductions in symptoms** with music therapy than with cognitive behavioral therapy
 - Music therapy interventions **improve consciousness** in the acute management of TBI
 - Treatment participants with brain injury demonstrated **improvements in executive functions**
 - Active engagement in music therapy **reduces psychomotor agitation** in patients who have severe brain injuries
 - Music during coma **evokes physiological reactions** to sound stimuli that **regulate cardiovascular and cortical rhythms to promote consciousness**
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- Brain injured patients in a vegetative station can **initiate pillow-pressing responses to turn on preferred recorded music**
- Persons in comas have **changes in heart rate, respiration rate, and intracranial pressure** with auditory stimulation
- Clinical descriptions of music therapy outcomes at Rancho Los Amigos Scale Levels I-III for functional assessment include **alert responses, oral motor movements, changing facial expressions and vocalizations**; outcomes at Rancho Los Amigos Scale Levels IV-VI reveal effectiveness of music therapy to **enhance adherence to exercise regimens**
- Brain injured patients in vegetative states for 6 to 38 months can **respond to verbal requests to make lateral hand movements** contingent upon hearing preferred recorded music

COMMUNICATION AND SPEECH REHABILITATION

- A music therapy protocol for patients who had strokes and dysarthria **increased their maximum phonation time, fundamental frequency, and average intensity** after treatment
- Group music **therapy improved singing quality, and voice range** while speaking quality was maintained in persons with Parkinson's disease
- Music therapy for persons with nonfluent aphasia demonstrated singing **strengthens breathing and vocal ability, improves articulation and speech prosody, and increases verbal and nonverbal communication**. Music and language are linked in the structural patterns and brain processing in those with aphasia
- Persons with TBI who participated in a music therapy singing intervention **gained vocal range, experienced improved mood, and had better affective intonation**
- Auditory **rhythmicity enhances movement and speech motor controls** in Parkinson's disease to restore speech function
- Hypokinetic dysarthric speakers with Parkinson's **disease improved their speech intelligibility** with rhythmic speech cueing
- Persons with Parkinson's **improved their speech intelligibility and vocal intensity** after participating in a music therapy protocol

PAIN MANAGEMENT

- MT interventions have **positive effects of anxiety, pain, mood, and quality of life** in people who have cancer
- **Anxiety and pain are reduced** during burn dressing changes with self-selected music listening
- **Chronic pain and narcotic ingestion are reduced** through music distraction and relaxation

EMOTIONAL HEALTH

- Adolescents who participated in psychotherapy percussion playing had **lower trait anger, decreased aggression, lower depression, and increased self-esteem**, all of which maintained for 6 months. At 9 months post-treatment, participants maintained lower trait anger and anger expression
- MT using Emotional-Approach Coping **yielded increases in positive affect** for patients who were liver and kidney transplant recipients
- Songwriting and instrument playing led to **improved self-organization and affective expression**
- MT in TBI rehabilitation **improved patients' overall emotional adjustment while it decreased depression, sensation seeking, and anxiety**; although control participants had better emotional adjustment and less hostility, they had decreased memory, positive affect, and sensation-seeking behaviors
- **Traumatic memories and evoked emotions were managed** through group improvisation

SOCIAL

- Social interaction is promoted through group music making
- Associations connected to trauma and traumatic memories were accessed in a non-intimidating way through group drumming, and emotional expressions were facilitated while promoting a sense of relief and empowerment
- Though trauma can isolate and disconnect individuals from society, group drumming restored social relationships by fostering feelings of belonging

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- Improved vocal range and mood, along with enhanced affective intonation styles, result from song singing
- Music and music-assisted relaxation reduced arousal associated with stress
- Increased socialization, improved mood, and participation in the standard rehabilitation processes occur through group singing, composing, sounding instruments, improvising, performing, and listening
- Bonny Method of Guided Imagery and Music (GIM) was associated with reductions in cortisol levels and improvements in depression, fatigue, and mood in healthy adults
- Stressors were identified through music imagery improvisation, and songwriting
- Daily coping skills were established through progressive muscle relaxation to live music
- Music-assisted progressive muscle relaxation provided tension control

CASE IN POINT!

Parkinson's and Alzheimer's

Positive response to music therapy

Statistics:

- Currently 80,000 veterans with Parkinson's
- DOD program supporting PD research - \$16 million for FY12

Symptom management



THE FUTURE OF MILITARY MUSIC THERAPY

- Testing/adapting of established music therapy interventions and protocols within military populations
 - Replicating studies in military populations with evidence formed from civilian studies
 - Adequate power and sample size studies in experimental studies
 - Mixed methods and feasibility studies
 - Including music therapists as investigators in collaborative interdisciplinary research teams and part of the research planning process
 - Including qualified music therapy scholars/researchers in military and VA study sections and human subjects/IRB committees
 - Developing mechanisms to efficiently translate important research findings to practice
 - Evaluating the impact of using music therapy services to complement and support innovative treatment technologies and methodologies
 - Aligning with and supporting service delivery models including patient-centered care teams
 - Surveying and planning for research funding support
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CHECK IT OUT!

http://www.huffingtonpost.com/ronna-kaplan-ma/veterans-music-therapy_b_2361076.html

REFERENCES

American Music Therapy Association (2014). *Music therapy and military populations: A status report and recommendations on music therapy treatment, programs, research, and practice policy*. Silver Spring: AMTA.

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