

CREATIVE FORCES

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NEA MILITARY HEALING ARTS NETWORK

Research and Scholarly Manuscripts Inventory

*Includes Published Research and
Pending Scholarly Manuscripts*

August 2018

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Art Therapy Published Research August 2018

Authors/ Research Team	Berberian, M., Walker, M. S., & Kaimal, G. (2018) <i>Marygrace Berberian, Melissa S. Walker, Girija Kaimal</i>
Study Name	“Master My Demons:” Art Therapy Montage Painting by Active-Duty Military Service Members with Traumatic Brain Injury and Post-Traumatic Stress
Abstract	This study involved a thematic analysis of montage paintings and of related clinical records of 240 active duty military service members collected during their art therapy treatment for traumatic brain injury (TBI) and underlying psychological health concerns, including post-traumatic stress, at the National Intrepid Center of Excellence, Walter Reed National Military Medical Center, Bethesda, MD. Congruent with other research findings, the qualitative analyses of this study suggest that the group art therapy experiences fostered improvement in interpersonal relatedness, hopefulness and gratification for the service members in treatment, aiding in externalization, progressive exposure and construction of a trauma narrative imperative for recovery. The mixed media nature of the montage painting supported the expression of a range of post-combat symptoms. Results from this study highlighted the complexity of military culture, necessitating a broader scope of analyses for how art therapy helps service members express and communicate their challenges to care providers, peers and family as well as regulate emotion in the short and long term.
Population Studied	Service members in art therapy treatment at the National Intrepid Center of Excellence (NICoE); N=240
Treatment	Art Therapy; Integrated medicine; Standalone treatment; Group art therapy sessions in week four of 4-week program.
Study Design	Grounded theory; thematic analysis
Methods and Measures	Grounded theory analysis of content in montage painting and clinical notes created by art therapist. Measures: Images and clinical notes
Status or Citation	Berberian, M., Walker, M. S., & Kaimal, G. (2018). <i>Medical Humanities</i> . Advance online publication. doi:10.1136/medhum-2018-011493
Weblink	https://www.ncbi.nlm.nih.gov/pubmed/30077986

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Art Therapy Published Research August 2018

Authors/ Research Team	Jones, J. P., Gonzaga, A., Landless, B., & Kaimal, G. (2015) <i>Jacqueline P. Jones, Adele Gonzaga, Bronwen Landless, Girija Kaimal</i>
Study Name	Evaluation of the Art Therapy Program at Fort Belvoir Intrepid Spirit One
Abstract	This report presents an evaluation of art therapy programs at Intrepid Spirit at Fort Belvoir (ISO). Fort Belvoir Community Hospital is located on the Fort Belvoir base in northern Virginia and serves military service members (SMs) from the local region. It provides state of the art care to active duty SMs, retired SMs, and their families. The hospital also supports cutting edge research in order to provide optimal clinical care to SMs. Art therapy is offered at the ISO as part of a range of therapies and aims to help service members express themselves and process traumatic experiences from their past.
Population Studied	Military service members in art therapy treatment at Intrepid Spirit Fort Belvoir; N=200
Treatment	Art Therapy and therapeutic/expressive writing; Standalone Service members participate in three to nine weeks of individual and group therapy sessions.
Study Design	Evaluation, mixed-methods
Methods and Measures	Includes a summary of feedback surveys collected over a two-year period. Qualitative and quantitative responses were analyzed using descriptive statistics and thematic analysis. Measures: Narrative and Likert-scale feedback surveys
Status or Citation	Jones, J. P., Gonzaga, A. & Landless, B. M. & Kaimal, G. (2015). <i>Evaluation of the art therapy Program at Fort Belvoir Intrepid Spirit One</i> . Report prepared for the Fort Belvoir Community Hospital and the National Endowment for the Arts. Philadelphia, PA: Drexel University.
Weblink	N/A

CREATIVE FORCES
Art Therapy Published Research August 2018

Authors/ Research Team	Jones, J. P., Walker, M. S., Drass, J. M., & Kaimal, G. (2017) <i>Jacqueline P. Jones, Melissa S. Walker, Jessica M. Drass, Girija Kaimal</i>
Study Name	Art Therapy Interventions for Active Duty Military Service Members with PTS and TBI
Abstract	This paper provides an overview of short and long-term art therapy treatment approaches, used in the USA, for military service members with post-traumatic stress disorder and traumatic brain injury. The described clinical approaches are based on the theoretical foundations and the art therapists' experiences in providing individualised care for the unique needs of the patient population. The art therapy models and directives are designed to be more therapist-led in the short-term model, moving on to an increasingly patient-led format in the long-term treatment model. The overall objectives of art therapy are: to support identity integration, externalisation, and authentic self-expression; to promote group cohesion; and to process grief, loss, and trauma. In addition, programme evaluation is used in both settings as a means to understand participants' experiences and the perceived value of art therapy.
Population Studied	N/A
Treatment	Art Therapy; Integrated medicine; Standalone treatment
Study Design	Clinical Practice Paper
Methods and Measures	Description of art therapy clinical practice and use of evaluation in two settings.
Status or Citation	Jones, J. P., Walker, M. S., Masino Drass, J. & Kaimal, G. (2017). Art therapy interventions for active duty service members with post-traumatic stress disorder and traumatic brain injury. <i>International Journal of Art Therapy</i> . doi: 10.1080/17454832.2017.1388263
Weblink	https://www.tandfonline.com/doi/full/10.1080/17454832.2017.1388263

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Authors/ Research Team	Kaimal, G., Walker, M. S., Herres, J., French, L. M., & DeGraba, T. J. (2018) <i>Girija Kaimal, Melissa S. Walker, Joanna Herres, Louis M. French, Thomas J. DeGraba</i>
Study Name	Associations Between Visual Imagery and Measures of Depression, Anxiety, and Post-Traumatic Stress Among Active-Duty Military Service Members with Traumatic Brain Injury
Abstract	<p>OBJECTIVES: To compare recurring themes in the artistic expression of SMs with PTSD, TBI, and PH conditions with measurable psychiatric diagnoses. Affective symptoms and struggles related to verbally expressing information can limit communication in individuals with post-traumatic stress symptoms and deployment-related health conditions. Visual self-expression through art therapy is an alternative way for military service members (SMs) with post-traumatic stress disorder (PTSD), and other psychological health (PH) conditions to communicate their lived experiences. This study offers the first systematic examination of associations between visual self-expression and how it relates to standardized clinical self-report measures.</p> <p>PRIMARY OUTCOMES: Associations between scores on the PTSD Checklist – Military (PCL-M), the Patient Health Questionnaire-9, and the Generalized Anxiety Disorder 7-item scale on visual themes in depictions of aspects of individual identity (psychological injury, military symbols, military identity and visual metaphors).</p> <p>RESULTS: Comparisons of the visual and clinical data indicate that SMs who depicted psychological injury also had higher scores for post-traumatic stress and depression. However, the depiction of military unit identity, nature metaphors, sociocultural metaphors, and cultural and historical characters was associated with lower post-traumatic stress, depression, and anxiety scores. Similarly, the use of color-related symbolism and fragmented military symbols was associated with higher anxiety, depression, and post-traumatic stress scores.</p> <p>CONCLUSIONS: There are emergent patterns of resilience and risk embedded in the use of images created by the participants, which in turn could provide valuable information for patients, clinicians and caregivers serving this population.</p>
Population Studied	Active duty military service members with a history of TBI, posttraumatic stress symptoms and related psychological health conditions receiving treatment at the National Intrepid Center of Excellence (NICoE); N=370
Treatment	Art Therapy; Integrated medicine; Standalone treatment The images used for analysis were created by the SMs in the form of masks during art therapy sessions in week 1 of a 4-week integrative treatment program.
Study Design	ANCOVA & correlational analysis of data on clinical symptoms of posttraumatic stress, depression, and anxiety compared with visual themes in mask imagery.
Methods and Measures	Associations between scores on the PTSD Checklist–Military (PCL-M), the Patient Health Questionnaire-9, and the Generalized Anxiety Disorder 7-item scale and visual themes in depictions of aspects of individual identity (psychological injury, military symbols, military identity and visual metaphors). Measures: Themes in masks, PTSD Checklist–Military (PCL-M), Patient Health Questionnaire-9, Generalized Anxiety Disorder 7-item scale
Status or Citation	Kaimal G., Walker, M. S., Herres J., French, L. M., & DeGraba, T. J. (2018). Observational study of associations between visual imagery and measures of depression, anxiety and post-traumatic stress among active-duty military service members with traumatic brain injury at the Walter Reed National Military Medical Center. <i>BMJ Open</i> , 8, e021448. doi:10.1136/bmjopen-2017-021448
Weblink	https://bmjopen.bmj.com/content/8/6/e021448

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Authors/ Research Team	Walker, M. S., Kaimal, G., Gonzaga, A. M. L., Myers-Coffman, K. A., & DeGraba, T. J. (2017) <i>Melissa S. Walker, Girija Kaimal, Adele M. L. Gonzaga, Katherine A. Myers-Coffman, Thomas J. DeGraba</i>
Study Name	Active-Duty Military Service Members' Visual Representations of PTSD and TBI in Masks
Abstract	Active-duty military service members have a significant risk of sustaining physical and psychological trauma resulting in traumatic brain injury (TBI) and post-traumatic stress disorder (PTSD). Within an interdisciplinary treatment approach at the National Intrepid Center of Excellence, service members participated in mask making during art therapy sessions. This study presents an analysis of the mask-making experiences of service members (n=370) with persistent symptoms from combat- and mission-related TBI, PTSD, and other concurrent mood issues. Data sources included mask images and therapist notes collected over a five-year period. The data were coded and analyzed using grounded theory methods. Findings indicated that mask making offered visual representations of the self-related to individual personhood, relationships, community, and society. Imagery themes referenced the injury, relational supports/losses, identity transitions/questions, cultural metaphors, existential reflections, and conflicted sense of self. These visual insights provided an increased understanding of the experiences of service members, facilitating their recovery.
Population Studied	Active duty service members; N=370
Treatment	Art Therapy; Integrated medicine; Standalone treatment Group art therapy sessions in week 1 of 4-week program medicine
Study Design	Grounded theory study, thematic analysis
Methods and Measures	Grounded theory analysis of content in masks and clinical notes created by art therapist. Measures: Images and clinical notes
Status or Citation	Walker, M., Kaimal, G. Myers-Coffman, K., Gonzaga, A. M. L., & DeGraba, T. J. (2017). Active duty military service members' visual representations of PTSD and TBI in masks. <i>International Journal of Qualitative Studies on Health and Well-being</i> , 12(1), 1267317. doi: 10.1080/17482631.2016.1267317
Weblink	https://www.tandfonline.com/doi/abs/10.1080/17482631.2016.1267317

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Authors/ Research Team	Walker, M. S., Kaimal, G., Koffman, R., & DeGraba, T. J. (2016) <i>Melissa S. Walker, Girija Kaimal, Robert Koffman, Thomas J. DeGraba</i>
Study Name	Art Therapy for PTSD and TBI: A Senior Active Duty Military Service Member's Therapeutic Journey
Abstract	Art therapy is increasingly being accepted as a form of complementary and integrative care for military veterans affected by trauma and injuries in the line of duty. Less is known, however, about the applications of art therapy for co-morbid traumatic brain injury (TBI) and post-traumatic stress disorder (PTSD). In addition, most studies to date have focused on art therapy with veterans (former military service members) rather than with active duty service members. Furthermore, there are no studies that have examined the unique context of PTSD in senior military personnel. This case study presents the therapeutic process through art therapy in the case of a senior active duty military service member (with chronic PTSD and TBI) in the context of an integrated model of care that included medical and complementary therapies.
Population Studied	Senior active duty military service member; N=1
Treatment	Art Therapy; Integrated medicine, standalone treatment The patient underwent a series of treatments, including complementary and integrative therapies, and medical and psychiatric care.
Study Design	Case study
Methods and Measures	Case analysis based on images and clinical notes Measures: Images and clinical notes
Status or Citation	Walker, M., Kaimal, G. Koffman, R., & DeGraba, T. J. (2016). Art therapy for PTSD and TBI: A senior active duty military service member's therapeutic journey. <i>The Arts in Psychotherapy</i> 49(2), 10-16. doi: 10.1016/j.aip.2016.05.015
Weblink	https://www.sciencedirect.com/science/article/pii/S0197455616300636

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Art Therapy Published Research August 2018

Authors/ Research Team	Walker, M. S., Stamper, A. M., Nathan, D. E., & Riedy, G. (2018) <i>Melissa S. Walker, Adrienne M. Stamper, Dominic E. Nathan, Gerard Riedy</i>
Study Name	Art Therapy and Underlying fMRI Brain Patterns in Military TBI: A Case Series
Abstract	TBI and PTSD are global issues and are often referred to as signature wounds of the Iraq and Afghanistan wars. Art therapy can provide unique insights into military service members' injuries and states of mind via externalization within an art product; however, interpretation of results is complex and subjective. Advance neuroimaging tools such as resting state fMRI can be employed to demonstrate objective measures of brain structure and activity. This case series highlights two distinct patient profiles, suggesting a relationship between resting state connectivity maps and dynamic thalamic connectivity (as well as PCL-C and NSI scores and brain scars) and the corresponding visual elements of masks made during art therapy treatment. Ultimately, this study indicates a need for future research examining potential neurological changes pre- and post-art therapy treatment.
Population Studied	Service members in treatment at the National Intrepid Center of Excellence (NICoE); N=10
Treatment	Art Therapy; Integrated medicine; Standalone treatment; Group art therapy sessions in week 1 of 4-week NICoE program; Neuroimaging
Study Design	Case series; Between-group comparisons of data on clinical symptoms, neuroimaging and visual themes in masks & correlational analysis
Methods and Measures	Case series with correlational study of service member art therapy products and fMRI (thalamic and default mode network activity, brain scar totals) as well as PCL-M/NSI outcomes; Measures: Art therapy product images, NSI and PCL-M scores, fMRI neuroimaging
Status or Citation	Walker, M. S., Stamper, A. M., Nathan, D. E., & Riedy, G. (2018) Art therapy and underlying fMRI brain patterns in military TBI: A case series. <i>International Journal of Art Therapy</i> . doi: 10.1080/17454832.2018.1473453
Weblink	https://www.tandfonline.com/doi/full/10.1080/17454832.2018.1473453?scroll=top&needAccess=true

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Art Therapy Pending Scholarly Manuscripts August 2018

Authors/ Research Team	Jones, J. P., Drass, J. M., & Kaimal, G. <i>Jaqueline P. Jones, Jessica M. Drass, Girija Kaimal</i>
Study Name	Portraits of Recovery: Collective Case Studies of Art Therapy Interventions for Military Service Members with PTS and TBI
Abstract	This paper will summarize a series of case examples of how art therapy helped active duty military service members address and manage symptoms related to traumatic brain injury and post-traumatic stress. The case examples will include short and long term art therapy strategies used in the integrated care setting as well as patient reported outcomes.
Population Studied	Active duty service members in art therapy treatment in an integrated care setting; N=4
Treatment	Art Therapy; Integrated medicine
Study Design	Case summaries
Methods and Measures	Includes case summaries describing range of art therapy approaches for service members with PTS and TBI.
Status or Citation	This manuscript is in preparation.
Weblink	

CREATIVE FORCES
Art Therapy Pending Scholarly Manuscripts August 2018

Authors/ Research Team	Kaimal, G., Walker, M., & Dieterich-Hartwell, R. <i>Girija Kaimal, Melissa Walker, Rebekka Dieterich-Hartwell</i>
Study Name	Using Clinical Notes to Track Changes in Art Therapy using Linguistic Inquiry and Word Count (LIWC)
Abstract	<p>This brief report presents a text analysis of clinical notes from mask making (n=198) and montage making sessions (n=198). These sessions were offered as part of an integrative model of art therapy treatment for service members with posttraumatic stress disorder and/or traumatic brain injuries at the National Intrepid Center of Excellence (NICoE).</p> <p>Using the Linguistic Inquiry and Word Count (LIWC), a computerized text analysis program that counts words in psychologically significant groups, the clinical notes were analyzed and compared. Results indicated statistically significant changes in a number of categories defined in LIWC, including analytical thinking, clout, authenticity, emotional tone, and a variety of psychological processes. The study findings indicate that although clinical notes formats are specific to a clinician, and represent a third person report of the sessions, they can be a valuable data source for tracking changes in patient groups over time.</p> <p>This brief report sought to explore the usefulness of clinical notes as a data source to assess aggregate changes in participants. In this case we used clinical notes generated from art therapy sessions. The findings of this brief report suggest that, based on LIWC analyses of clinical notes, SMs underwent a number of changes between the mask making sessions that occurred in week one of a four-week art therapy curriculum and a montage painting session in week four. While analytical thinking was higher initially, it had decreased by the third session. On the other hand, clout, authenticity, and tone increased in the same time frame. It is possible that the participants began to feel less reserved and more comfortable through the art therapy process and the media used. Affective processes changed as well over the course of two weeks, with an increase in positive emotions and a decrease in negative emotions. More specifically, references to both anxiety and sadness declined significantly. These findings are congruent with the suggestion of having established greater ease through the ongoing art therapy process. Interestingly, there was no noticeable change in the references to anger.</p>
Population Studied	Service members with posttraumatic stress disorder and/or traumatic brain injuries at the National Intrepid Center of Excellence (NICoE); N=198
Treatment	Art Therapy; Integrated medicine Group art therapy sessions consist of a four-week curriculum of two hour sessions each.
Study Design	Pre post design examining changes over time. Analysis conducted using paired samples t-tests
Methods and Measures	Comparison of LIWC categories based on clinical notes of mask making sessions (week one and four) and montage painting (week four) Measures: LIWC summaries of clinical notes
Status or Citation	This manuscript is in preparation.
Weblink	

CREATIVE FORCES
Art Therapy Pending Scholarly Manuscripts August 2018

Authors/ Research Team	Kaimal, G., Walker, M. S., Herres, J. M., & Berberian, M. <i>Girija Kaimal, Melissa S. Walker, Joanna M. Herres, Marygrace Berberian</i>
Study Name	Associations Between Montage Painting Imagery and Symptoms of Depression and Post-Traumatic Stress Among Active Duty Military Service Members
Abstract	This paper will provide an overview of the themes represented in the montage paintings created by service members as well as associations between visual imagery and standardized measures of depression and post-traumatic stress.
Population Studied	Service members in art therapy treatment at National Intrepid Center of Excellence (NICoE); N=240
Treatment	Art Therapy; Integrated medicine
Study Design	Between group comparisons of data on clinical symptoms and visual themes in montage painting imagery using ANCOVA & correlational analyses
Methods and Measures	Associations between scores on the PTSD Checklist–Military (PCL-M) and the Patient Health Questionnaire-9 on visual themes in the montage paintings Measures: Themes in montage paintings, PTSD Checklist–Military (PCL-M), the Patient Health Questionnaire-9
Status or Citation	This manuscript is undergoing review at WRNMMC.

CREATIVE FORCES
Music Therapy Published Research August 2018

Authors/ Research Team	Bronson, H., Vaudreuil, R., & Bradt, J. (2018) <i>Hannah Bronson, Rebecca Vaudreuil, Joke Bradt</i>
Study Name	Music Therapy Treatment of Active Duty Military: An Overview of Intensive Outpatient and Longitudinal Care Programs
Abstract	In recent years, there has been increased demand for music therapy services within military treatment facilities to treat combat-related injuries. This demand is partly due to increased research output related to music interventions in neuro-rehabilitation as well as an increased prevalence of signature injuries including traumatic brain injury and posttraumatic stress disorder for which interdisciplinary patient-centered care is recommended. The complexity of traumatic brain injury, p[osttraumatic stress, and military service itself presents challenges for music therapist when creating patient-centered program models. As military healthcare increases access to new treatments as a standard of care, it is important for music therapists to provide descriptions of effective treatment models in military settings. Outlining established music therapy models of care is essential to the successful addition of music therapy in the treatment of service members' complex injuries. This paper outlines current program models at two facilities, the National Intrepid Center of Excellence at Walter Reed National Military Medical Center and Intrepid Spirit Center at Fort Belvoir.
Population Studied	Not applicable
Treatment	Music Therapy; Standalone within integrated medicine
Study Design	Clinical Practice Paper: Description of Clinical Practice
Methods and Measures	Measures: Not applicable
Status or Citation	Bronson, H., Vaudreuil, R., & Bradt, J. (2018). Music therapy treatment of active duty military: An overview of intensive outpatient and longitudinal care programs. <i>Music Therapy Perspectives</i> , miy006.
Weblink	https://academic.oup.com/mtp/advance-article-abstract/doi/10.1093/mtp/miy006/4945362

CREATIVE FORCES
Music Therapy Published Research August 2018

Authors/ Research Team	Vaudreuil, R., Avila, L., Bradt, J., & Pasquina, P. (2018) <i>Rebecca Vaudreuil, Luis Avila, Joke Bradt, Paul Pasquina</i>
Study Name	Music Therapy Applied to Complex Blast Injury in An Interdisciplinary Model: A Case Report
Abstract	Music therapy has a long history of treating the physiological, psychological, and neurological injuries of war. Recently, there has been an increase in the use of music therapy and other creative arts therapies in the care of combat injured service members returning to the United States from Iraq and Afghanistan, especially those with complex blast-related injuries. This case report describes the role of music therapy in the interdisciplinary rehabilitation of a severely injured service member.
Population Studied	Military service member in ongoing rehabilitation from complex blast injury; N=1
Treatment	Music Therapy; Integrated medicine, standalone treatment. The patient receives ongoing treatment, including 2+ years of integrated and stand-alone music therapy services.
Study Design	Case Report
Methods and Measures	Music therapy was provided as stand-alone treatment and in co-treatment with speech language pathology, physical therapy, and occupational therapy. Measures: Clinical data, self-reports by patient and family, interviews with rehabilitation team members
Status or Citation	Vaudreuil, R., Avila, L., Bradt, J., & Pasquina, P. (2018). Music therapy applied to complex blast injury in an interdisciplinary model: A case report. <i>The Journal of Disability and Rehabilitation</i> . doi: 10.1080/09638288.2018.1462412
Weblink	https://www.tandfonline.com/doi/full/10.1080/09638288.2018.1462412

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Music Therapy Pending Scholarly Manuscripts August 2018

Authors/ Research Team	Bradt, J., Biondo, J., & Vaudreuil, R. <i>Joke Bradt, Jacelyn Biondo, Rebecca Vaudreuil</i>
Study Name	A Thematic Analysis of Original Songs Created by Service Members in Music Therapy: A Retrospective Analysis
Abstract	<p>This study aims to analyze songs written by active duty service members with Post Traumatic Stress Disorder (PTSD), Mild Traumatic Brain Injury (mTBI), and psychological health issues who receive music therapy services at the National Intrepid Center of Excellence (NICoE).</p> <p>Songs were written collaboratively by the service member and the music therapist over the course of two or more individual music therapy sessions. Songs were recorded and produced by the music therapist, and a CD was created for the service member to share with friends and loved ones.</p> <p>Thematic analysis was used to code each song and identify themes. In addition, clinical notes about the songwriting sessions were analyzed and associations between the identified themes and demographic and clinical characteristics of the service members were examined.</p>
Population Studied	Active duty service members in music therapy treatment at NICoE, N=11
Treatment	Music Therapy Standalone; Each patient who wrote a song in music therapy received at least 2-3 individual music therapy sessions to complete songwriting/recording projects.
Study Design	Thematic Analysis and Correlational Analyses
Methods and Measures	<p>Thematic analysis of songs written by service members and clinical notes of the songwriting sessions. Associations between identified themes and patient clinical and demographic characteristics will be examined.</p> <p>Measures: Not Applicable</p>
Status or Citation	EIRB approved by WRNMMC, awaiting data extraction from NICoE to complete manuscript.
Weblink	

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Music Therapy Pending Scholarly Manuscripts August 2018

Authors/ Research Team	Bradt, J., Hughes, J., Bonavia, G., Vaudreuil, R., & McLaughlan, N. <i>Joke Bradt, John Hughes, Grant Bonavia, Rebecca Vaudreuil, Nathan McLaughlan</i>
Study Name	Impact of Music on Emotional Regulation for Service Members with PTSD (Grammy Foundation Study)
Abstract	This exploratory study examines the impact of listening to music on cortical alpha power, cortical functional connectivity, and cortical volume in brain areas associated with emotional regulation in service members (SMs) with Post Traumatic Stress Disorder (PTSD). In this prospective, randomized controlled study, 20 SMs with PTSD are randomized to either an emotional regulation training (ERT) treatment arm or a non-ERT treatment arm. The ERT treatment arm consists of three music-based ERT training sessions. Participants in the non-ERT treatment arm do not receive ERT training. MEG, fMRI and MRI measurements are obtained at baseline and after 3 months. MEG activity is recorded while participants listen to various music conditions. At 1, 2, 3, 6, and 12 months, all participants will be asked to fill out a brief online survey to assess their continued use of music for emotional regulation.
Population Studied	Active duty military and veterans with PTSD diagnosis; N=20: 10 control, 10 experiential
Treatment	Music Therapy; Music listening without ERT training (control group), Music therapy ERT training (experiential group); Each study participant, regardless of treatment allocation, receives 1 music consult session; participants assigned to the ERT treatment arm participate in 3 additional music therapy sessions following the consult session.
Study Design	Randomized Controlled Trial
Methods and Measures	After the baseline neuroimaging recording sessions, participants are randomized to the emotional regulation training (ERT) group or the non-ERT group using computer-generated randomization scheme with block randomization. Participants assigned to the ERT group receive three training sessions with the NICOE music therapist, targeted at using music listening for emotional regulation. Participants assigned to the control group are told that music listening can help with emotional regulation but will not receive ERT. MEG and MRI are repeated with all subjects after 3 months. Study personnel involved with collecting and analyzing brain imaging data are not aware of the participant group assignment. Measures: Neuro-imaging: MEG, fMRI, MRI, and questionnaires related to music use and home practice
Status or Citation	This study is awaiting approval of IRB amendment from WRNMMC. The Grammy extension is nearing expiration, and there is a chance that this study may not occur.
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CREATIVE FORCES
Music Therapy Pending Scholarly Manuscripts August 2018

Authors/ Research Team	Bronson, H., Vaudreuil, R., & Bradt, J. <i>Hannah Bronson, Rebecca Vaudreuil, Joke Bradt</i>
Study Name	The Effects of Individual Music Therapy Sessions on Symptom Management in Military Service Members (working title)
Abstract	This study is a secondary analysis of symptom management data that were collected as part of standard music therapy program evaluations at Intrepid Spirit Fort Belvoir and the National Intrepid Center of Excellence. Approximately 100 service members completed the Creative Forces Symptom Management evaluation form at the start and end of individual music therapy sessions between July 2016 and August 2017. This 10-item form uses 0-10 numeric rating scales to evaluate the impact of a single music therapy session on commonly encountered symptoms in service members, namely pain, stress, anxiety, fatigue, worries, physical tension, sadness, anger, ability to focus, and overall well-being. Paired t-tests will be used to analyze pre to post session changes in symptoms. The findings will be associated with clinical characteristics of the service members.
Population Studied	Active duty service members in music therapy treatment at Intrepid Spirit Fort Belvoir and the National Intrepid Center of Excellence; N=100
Treatment	Music Therapy Standalone; Results will include a year's worth of evaluations, inclusive of July 1, 2016, through August 31, 2017.
Study Design	One Group Pretest Posttest Design
Methods and Measures	During the past year, service members were asked to fill out the symptom assessment form at the start and end of the music therapy session. At this time, data on approximately 200 service members has been gathered. The research team will use paired t-tests to analyze pre to post session changes in symptoms and will correlate changes in symptoms to clinical characteristics of the service members. Measures: Symptom Assessment Form included in the NEA Evaluation Toolkit.
Status or Citation	Manuscript in progress.
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CREATIVE FORCES
Music Therapy Pending Scholarly Manuscripts August 2018

Authors/ Research Team	Vaudreuil, R., Biondo, J., & Bradt, J. <i>Rebecca Vaudreuil, Jacelyn Biondo, Joke Bradt</i>
Study Name	Group Music Therapy Services for Active Duty Military: Protocol, Program Evaluation and Replication
Abstract	This article evaluates the Introduction to Music Therapy group session offered at the National Intrepid Center of Excellence (NICoE) in Bethesda, MD. Music therapy is one of the many creative arts therapies and interdisciplinary treatment modalities offered within the context of the four-week long, intensive outpatient program designed to treat service members with posttraumatic stress disorder (PTSD), mild traumatic brain injuries (mTBI), and other psychological health issues. This paper shares the Introduction to Music Therapy group protocol, the session evaluation form, and the results from a year's worth of session evaluation data by cohorts of patients receiving this group session. In addition, this paper presents feedback by three Creative Forces music therapists regarding the use and value of the introductory group treatment protocol and associated session feedback form for treatment planning.
Population Studied	Active duty service members in music therapy treatment at NICoE; N=201
Treatment	Music Therapy Standalone; Each patient receives this session once. The authors will show a year's worth of evaluations inclusive of January 1, 2016, through December 31, 2016.
Study Design	Program evaluation
Methods and Measures	Session evaluation data from 201 service members will be analyzed. Descriptive statistics will be used to create summaries of impact in areas specified on the form. In addition, feedback from three clinicians who currently use the group protocol and the associated evaluation tool will be summarized. Based on evaluation data and clinician feedback, recommendations will be made for use of the protocol and evaluation form in military health settings. Measures: The Introduction to Music Therapy Group Session form, a self-report form included in the NEA evaluation toolkit.
Status or Citation	Manuscript in progress.
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CREATIVE FORCES
Music Therapy Pending Scholarly Manuscripts August 2018

Authors/ Research Team	Vaudreuil, R., Bronson, H., & Bradt, J. <i>Rebecca Vaudreuil, Hannah Bronson, Joke Bradt</i>
Study Name	Bridging the Clinic to Community: Music Performance as Social Transformation for Military Service Members
Abstract	<p>The use of musical performance in music therapy with military service members is discussed as a vehicle for social transformation and re-integration. The use of musical performance in music therapy is not without controversy. Therapy is considered a process, not a product, and confidentiality and privacy are essential components of therapy. However, others have argued that public performances can validate therapeutic changes in clients, give voice to their experiences, raise awareness of social issues within their communities, transform perceptions of injury or illness in audience members, and may result in the clients gaining support and validation from their communities.</p> <p>We discuss the potential of musical performances to contribute to individual development and rehabilitation and facilitate change at the community level for military service members. We illustrate this through two brief case reports of service members who received music therapy as part of their treatment for post-traumatic stress, traumatic brain injury, and other psychological health concerns at the National Intrepid Center of Excellence, a Directorate of Walter Reed National Military Medical Center in the USA.</p> <p>The service members wrote, learned, and refined songs over multiple music therapy sessions and created song introductions to share with the audience the meanings and benefits gained from integrating performance in music therapy. The case reports also include excerpts of interviews conducted with these service members several months later about their experiences of performing and the perceived impact on the audience and greater community.</p>
Population Studied	Active duty service members in music therapy treatment at NICoE; N=2
Treatment	Music Therapy Standalone; at least two sessions with each patient
Study Design	Case Report: Qualitative Research Study
Methods and Measures	<p>Patient reports of song selection, symbolism, and performance experiences to enhance understanding of the impact of performance integrated into music therapy sessions and service member preparation for and participation in NICoE Creative Arts Cafe.</p> <p>Measures: Clinical commentary, patient interviews, documentation, performance observation</p>
Status or Citation	Abstract accepted for submission to <i>Frontiers in Psychology</i> , manuscript under review by NICoE PAO.
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Music Therapy Pending Scholarly Manuscripts August 2018

Authors/ Research Team	Vaudreuil, R., Langston, D., O'Malley, A. M., Kass, S., Levy, C., & Magee, W. <i>Rebecca Vaudreuil, Diane Langston., Ann Marie O'Malley, Sara Kass, Chuck Levy, Wendy Magee</i>
Study Name	Implementing Music Therapy through Telehealth: Considerations for Military Populations (working title)
Abstract	This paper explores the field of telehealth, as implemented to facilitate the delivery of music therapy. Research regarding the use of telehealth in creative arts programming is predominantly focused on art and dance movement therapies and includes little information about music therapy and telehealth. This paper addresses the integration of telehealth technology in music therapy through the use of telehealth with other creative arts therapies. This paper reviews past and present utilization of clinical music therapy telehealth practices with military populations and informs discussion for future considerations of music therapy as an integrated part of creative arts therapies telehealth practices on a clinical to community continuum.
Population Studied	Veterans who transferred from the National Intrepid Center of Excellence and are in treatment through the Malcom Randall VA in Gainesville, FL.
Treatment	Music therapy; telehealth; individual and group sessions.
Study Design	Clinical practice paper with a focus on program development and program examples
Methods and Measures	Clinical observations, program review, program design, documentation, participant testimonials
Status or Citation	Manuscript in progress.
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Music Therapy Pending Scholarly Manuscripts August 2018

Authors/ Research Team	Vaudreuil, R., Nordstrom, M., Margulies, E., & Pasquina, P. <i>Rebecca Vaudreuil, Michelle Nordstorm, Erick Margulies, Paul Pasquina</i>
Study Name	A Case Study Exploring the Intersection of Occupational Therapy, Music Therapy and Biofeedback for Treatment of Posttraumatic Stress
Abstract	This paper investigates intervention implementation and co-treatment of Occupational Therapy, Animal-Assisted Therapy, and Music Therapy focusing on emotional regulation while following a patient who utilizes the emWave during therapy sessions. <i>Note: This paper is not based on the Creative Forces initiative and will be published by an Occupational Therapy Researcher at WRNMMC; however, a Creative Forces Music Therapist worked on this paper and makes mention of Creative Forces in the manuscript.</i>
Population Studied	Case Study; N=1
Treatment	Music Therapy; Integrated (Occupational Therapy, Music Therapy, Animal Assisted Therapy)
Study Design	Case Study
Methods and Measures	Clinical co-treatment (OT/Music therapy), clinical notes/documentation, emWave frequency readings Measures: Clinical documentation, heart rate variability readings
Status or Citation	The study is complete, and the paper is currently in the editing process at WRNMMC.
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Therapeutic/Expressive Writing Pending Scholarly Manuscripts August 2018

Authors/ Research Team	Landless, B. M., Walker, M. S., & Kaimal, G. <i>Bronwen M. Landless, Melissa S. Walker, Girija Kaimal</i>
Study Name	Using Human and Computer-Based text Analysis of Clinical Notes to Understand Military Service Members' Experiences with Therapeutic Writing
Abstract	<p>Background: Therapeutic writing interventions have been shown to improve both physical health and emotional well-being. This brief report examines the usefulness of clinical notes as a data source and presents two different analyses of individual clinical notes of therapeutic writing group sessions: analysis performed by a person and analysis by a computer-based program (Pennebaker, Booth, Boyd & Francis, 2015). The therapeutic writing sessions were offered during the second week of treatment at the National Intrepid Center of Excellence (NICoE) as part of an integrative care model for service members (SMs) with traumatic brain injury and underlying psychological concerns to include post-traumatic stress disorder (PTSD).</p> <p>Method: Therapeutic writing sessions were facilitated in the art therapy studio at the NICoE. The sessions were documented in the military healthcare system's patient record application by the art therapist and art therapy interns at the NICoE. Clinical notes were informed by SM self-report surveys and clinician observations. Notes from May 2012 to 2015 and were pulled and coded manually for emerging themes, then separately analyzed by a computer software text content analysis program (Pennebaker et al., 2015).</p> <p>Results: Overall, SMs reported more positive than negative, neutral, or mixed emotions during and after the therapeutic writing experience. Some reported a change from negative to positive emotions through the writing process, and many described experiencing relief during and after sessions. SMs wrote on a wide range of topics. Most SMs kept their writing pieces, although some destroyed them or shared them with others, and a few SMs gifted the pieces. Computerized-based analysis (Pennebaker et al., 2015) indicated that work and social were the most prominent content theme areas. It also showed that positive emotions were more evident than negative emotions in the clinical notes and that the focus of the notes was primarily on the present rather than on the past or the future.</p> <p>Implications: Many SMs perceived the therapeutic writing experience as therapeutic, a relevant coping skill, and enjoyable. Some, however, preferred to work on art therapy projects they had begun in previous sessions (such as mask-making) during the writing sessions. The computer-based analysis of the clinical notes took much less time than the human analysis, but it did not produce results of comparable richness or nuance. Computer-based analysis of the actual therapeutic writing pieces may provide deeper insights into the content and themes that emerged during this therapeutic intervention.</p>
Population Studied	Service members with posttraumatic stress disorder and/or traumatic brain injuries at the National Intrepid Center of Excellence (NICoE); N=200
Treatment	Therapeutic/Expressive Writing; Integrated, standalone treatment; Therapeutic writing sessions were implemented and documented by the art therapist and art therapy interns at the NICoE.
Study Design	Thematic analysis
Methods and Measures	Clinical notes were created from SM self-report surveys and clinician observations from May 2012 to 2015 and were coded manually for emerging themes, and separately analyzed by LIWC, a computer software text content analysis program. Measures: Clinical notes, tallies of qualitative themes generated through LIWC
Status or Citation	This manuscript has been submitted for publication and is under review.
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