



# Clinical Peer-Reviewed Publications Inventory

*Includes Clinical Research and Scholarly Publications*

July 2023

# Creative Forces Art Therapy Publications

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## **Creative Forces Art Therapy Publications**

### **"Master My Demons:" Art Therapy Montage Painting by Active-Duty Military Service Members with Traumatic Brain Injury and Post-Traumatic Stress**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7029253/>

#### **Authors**

Berberian, M., Walker, M.S., & Kaimal, G.

#### **Publication Date**

2019

#### **Publisher**

Medical Humanities (Impact factor = 1343)

#### **Volume/Issue/Pages**

45(4), 353-360

#### **Abstract**

The 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; group art therapy sessions in week four of a 4-week intensive outpatient program

#### **Study Design**

Grounded theory thematic analysis of content in montage painting and clinical notes created by art therapist

#### **Measures**

Images and clinical notes

## Creative Forces Art Therapy Publications

### Art therapy with military families: The animal strengths and family environment directive

<https://www.sciencedirect.com/science/article/pii/S0197455623000230>

#### Authors

Herman, J. and Chilton, G.

#### Publication Date

2023

#### Publisher

The Arts in Psychotherapy; (Impact Factor 1.847)

#### Volume/Issue/Pages

83, 1-8

#### Abstract

Military families are resilient but are impacted by service member's deployments, combat exposure, injuries, and other stressors such as frequent moves. These factors affect the entire family, and in turn family dynamics influence injured service members' capacity to heal. Art therapy is a regulated mental health profession that incorporates the use of visual art to address psychological and rehabilitation treatment goals provided by qualified art therapists and has been used with military families in health settings for over 70 years. Through art therapy, military families can find new ways to communicate with one another in developmentally appropriate ways. This article describes the process of the Animal Strengths and Family Environment (ASFE), an art therapy directive designed to meet the needs of families of service members recovering from effects of traumatic brain injuries (TBI) and post-traumatic stress disorder (PTSD). Case vignettes are presented illustrating the use of the ASFE, describing how two military families identified character strengths through animal metaphors, and created visual artwork to discover and express these strengths, roles, and needs. The authors contend that this process is useful in mapping family dynamics to increase communication which ultimately fosters family resiliency. Continued research is needed to better understand possible outcomes of art therapy directives with military families.

#### Population Studied

Families of service members recovering from effects of traumatic brain injuries (TBI) and post-traumatic stress disorder (PTSD)

#### Treatment

Art therapy

#### Study Design

Case series

#### Measures

Animal Strengths and Family Environment (ASFE) directive

## **Creative Forces Art Therapy Publications**

### **Art Therapy for Military Service Members with Post-Traumatic Stress and Traumatic Brain Injury: Three Case Reports Highlighting Trajectories of Treatment and Recovery**

<https://www.sciencedirect.com/science/article/pii/S0197455618301540>

#### **Authors**

Jones, J.P., Drass, J.M., & Kaimal, G.

#### **Publication Date**

2019

#### **Publisher**

The Arts in Psychotherapy (Impact factor = 1.404)

#### **Volume/Issue/Pages**

63, 18 – 30

#### **Abstract**

Advances in both military and medical technology have led to decreased mortality rates among military service personnel in the United States, yet have led to an increase in occurrences of traumatic brain injuries and posttraumatic stress disorder in military service personnel, often resulting in prolonged unresolved symptoms. The purpose of this article is to illustrate the implementation and effects of an art therapy program on military service personnel attending an outpatient military treatment facility. To this end, we present case reports of three military service personnel diagnosed with comorbid traumatic brain injury and post-traumatic stress and describe their participation in the art therapy program at Intrepid Spirit One, the National Intrepid Center of Excellence satellite site at Fort Belvoir Community Hospital. Through discussion of the therapist's subjective observations, as well as the patients' visual art productions and their personal verbal and written reflections on their experiences in art therapy and, eventually, on community art programs, this article highlights how art therapy was used to treat military trauma as part of a comprehensive integrative treatment program. The cases highlight how participation in a long-term, stage-based, structured art therapy program (through both group and individual sessions), enabled military service personnel to identify and articulate the complexity of their lingering trauma symptoms, fostering improvement in their communication with other treatment providers and loved ones, which, in turn, led to improvements in their overall quality of life.

#### **Population Studied**

Active-duty service members with TBI and PTS in art therapy treatment in a comprehensive integrated outpatient care setting; N=3

#### **Treatment**

Art therapy within an integrative outpatient treatment program

#### **Study Design**

Case series

#### **Measures**

Diagnostic Drawing Series; Graphic Narrative; Signature Strengths Test

## **Creative Forces Art Therapy Publications**

Art therapy interventions for active-duty service members with post-traumatic stress disorder and traumatic brain injury

<https://arts.legislature.ca.gov/sites/arts.legislature.ca.gov/files/REPORT%20%231%20Art%20therapy%20interventions%20post%20traumatic%20stress.pdf>

### **Authors**

Jones, J.P., Walker, M.S., Drass, J.M., & Kaimal, G.

### **Publication Date**

2018

### **Publisher**

International Journal of Art Therapy (Impact factor = 1.667)

### **Volume/Issue/Pages**

23(2), 70-85

### **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 individualized 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, externalization, and authentic self-expression; to promote group cohesion; and to process grief, loss, and trauma. In addition, program evaluation is used in both settings as a means to understand participants' experiences and the perceived value of art therapy.

### **Population Studied**

Military service members with TBI and PTS

### **Treatment**

Art therapy provided in an integrative care setting

### **Study Design**

Art therapy program description

### **Measures**

Description of art therapy clinical practice and use of evaluation in two settings

## **Creative Forces Art Therapy Publications**

### **Evaluation of Long- and Short-Term Art Therapy Interventions in an Integrative Care Setting for Military Service Members with Post-Traumatic Stress and Traumatic Brain Injury**

<https://www.sciencedirect.com/science/article/pii/S0197455618301321>

#### **Authors**

Kaimal, G., Jones, J.P., Dieterich-Hartwell, R.M., Acharya, B., & Wang, X.

#### **Publication Date**

2019

#### **Publisher**

The Arts in Psychotherapy (Impact factor = 1.404)

#### **Volume/Issue/Pages**

62, 28-36

#### **Abstract**

Background: Program evaluations can serve as a doorway to research in the creative arts therapies. This study provides findings from analyses of participant feedback on short- and long-term art therapy services for military service members with post-traumatic stress and traumatic brain injury (TBI). Methods: Data for the study included feedback surveys from 204 service members who received art therapy services as part of treatment at an integrative care setting. Results: The results indicate that long-term art therapy resulted in higher satisfaction with treatment. Art therapy helped most with developing a sense of self after injury, experiencing positive emotions, processing trauma, and reducing feelings of guilt, grief, and loss. There were no statistically significant differences in outcomes based on rank or severity of TBI, but art therapy services were found to be related to improved symptoms for service members with longer times in service. Implications: The feedback from evaluation helps identify potential areas for further research on how art therapy addresses issues of identity, time in service and experiences of emotions as a result of post-traumatic stress and TBI. Evaluation provides directions for further clinical treatment and yields data on improving quality of care.

#### **Population Studied**

Active-duty military service members with TBI and PTS; N=204

#### **Treatment**

Art therapy provided in an integrative care setting

#### **Study Design**

Mixed methods program evaluation

#### **Measures**

Four feedback surveys



## **Creative Forces Art Therapy Publications**

### **Long-Term Art Therapy Clinical Interventions with Military Service Members with Traumatic Brain Injury and Post-Traumatic Stress: Findings from a Mixed Methods Program Evaluation Study**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10013461/>

#### **Authors**

Kaimal, G., Jones, J.P., Dieterich-Hartwell, R.M., & Wang, X.

#### **Publication Date**

2021

#### **Publisher**

Military Psychology (Impact factor = 1.36)

#### **Volume/Issue/Pages**

33(1), 29-40

#### **Abstract**

Art therapy has been found to help veterans with symptoms of post-traumatic stress. There is however limited scholarship on the differences in outcomes based on dosage (short-term vs. long-term treatment) especially for active duty military service members (SMs). This mixed methods program evaluation study examined feedback from SMs on their experiences of art therapy in an integrative medical care center after 3 weeks of group therapy and at the end of treatment (average time of 2 years). Data included participant demographics, feedback surveys and narrative responses from SMs experiences of art therapy. The results indicate that longer-term art therapy resulted in improved perceived outcomes compared with the short-term 3-week intervention. SMs with longer time in service reported the most improved self-reported outcomes. Women SMs expressed more positive emotions during their art making. Specific themes that were effectively addressed through art therapy included frustration tolerance, grief and loss, emotion regulation, personal insight, resiliency, and trauma processing. SMs also highlighted the unique and transformative role of the relationship with the therapist in alleviation of symptoms. The findings suggest benefits to long-term art therapy including improved ability in SMs to be aware of their symptoms and communicate effectively with others.

#### **Population Studied**

Service members in treatment at an integrative medical care center, N=222

#### **Treatment**

Art therapy in an integrative medical care center

#### **Study Design**

Mixed methods program evaluation

#### **Measures**

Participant demographics, feedback surveys and narrative responses from SMs experiences of art therapy

## **Creative Forces Art Therapy Publications**

### **Examining Associations Between Montage Painting Imagery and Symptoms of Depression and Posttraumatic Stress Among Active-Duty Military Service Members**

<https://psycnet.apa.org/fulltext/2020-40994-001.html>

#### **Authors**

Kaimal, G., Walker, M. S., Berberian, M. G., Herres, J.M., & DeGraba, T.M.

#### **Publication Date**

2022

#### **Publisher**

Psychology of Aesthetics, Creativity, and the Arts (Impact factor = 4.224)

#### **Volume/Issue/Pages**

16(1), 16–29

#### **Abstract**

Art therapy has traditionally been used as a treatment approach, but it can also be applied successfully as a clinical behavioral health assessment tool in the care of military service members suffering from the effects of traumatic brain injury (TBI) and operational stressors. This observational study examined patterns of associations between visual imagery (mask and montage paintings) and clinical symptoms among 240 active-duty military service members with TBI and associated psychological health conditions to include posttraumatic stress disorder (PTSD). The service members had participated in a 4-week intensive outpatient assessment and treatment program at the Walter Reed National Military Medical Center in the United States. Themes seen in the visual imagery were examined in correlation with standardized measures of PTSD (Posttraumatic Stress Disorder Checklist: Military Version) and depressive symptoms (Patient Health Questionnaire-9). The analysis showed that certain themes, like the use of color symbolism to depict psychological states, were associated with greater PTSD and depressive symptoms at the beginning of the program. In addition, patients who depicted themes like physical injury, psychological injury, and memories of deployment in Week 1 of the program were more likely to continue to represent them in Week 4. Depiction of themes like color metaphors and duality was associated with lower depressive symptoms at the end of the program. The findings indicate the potential clinical and prognostic value of tracking the content of visual imagery created by military service members with TBI and associated psychological health conditions. Clinical applications include the recognition that certain visual themes could indicate higher or lower levels of distress and may help guide targeted care.

#### **Population Studied**

Military service members with TBI and PTS; N=240

#### **Treatment**

Art therapy during an intensive outpatient assessment and treatment program

#### **Study Design**

Observational study

#### **Measures**

Scales for posttraumatic stress and depression, PCL-Military version, PHQ-9

## **Creative Forces Art Therapy Publications**

### **Observational Associations Between Visual Imagery and Measures of Depression, Anxiety, and Post-Traumatic Stress Among Active-Duty Military Service Members with Traumatic Brain Injury at Walter Reed National Military Medical Center**

<https://pubmed.ncbi.nlm.nih.gov/29895656/>

#### **Authors**

Kaimal, G., Walker, M. S., Herres, J., French, L.M., & DeGraba, T. J.

#### **Publication Date**

2018

#### **Publisher**

BMJ Open (Impact factor = 2.692)

#### **Volume/Issue/Pages**

8(6), 1-9

#### **Abstract**

**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. **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). **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. **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. Active duty military service members with a history of TBI, PTS, and related psychological health conditions receiving treatment at the National Intrepid Center of Excellence (NICoE).

#### **Population Studied**

Active duty service members with history of TBI, PTS, related psychological health symptoms; N=370

#### **Treatment**

Art therapy sessions in week 1 of a 4-week intensive outpatient treatment program

#### **Study Design**

Observational study

#### **Measures**

PTSD Checklist-Military, PHQ-9, GAD-7, visual themes in depictions of aspects of individual identity

## **Creative Forces Art Therapy Publications**

### Using Human and Computer-Based text Analysis of Clinical Notes to Understand Military Service Members' Experiences with Therapeutic Writing

<https://www.sciencedirect.com/science/article/pii/S0197455618301370?via%3Dihub>

#### **Authors**

Landless, B.M., Walker, M.S., & Kaimal, G.

#### **Publication Date**

2019

#### **Publisher**

The Arts in Psychotherapy (Impact factor = 1.404)

#### **Volume/Issue/Pages**

62(5), 77-84

#### **Abstract**

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). Method: 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 TBI and PTS. 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). 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. 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.

#### **Population Studied**

Service members with TBI and/or PTS at the National Intrepid Center of Excellence (NICoE)

#### **Treatment**

Therapeutic/expressive writing; standalone treatment

#### **Study Design**

Retrospective analysis of patient clinical notes

#### **Measures**

Qualitative analysis, thematic coding, computer-assisted linguistic analysis

## **Creative Forces Art Therapy Publications**

### **A Case Analysis of Service Member Trauma Processing Related to Art Therapy within a Military-Intensive Outpatient Program**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7496439/>

#### **Authors**

Maltz, B., Hoyt, T., Uomoto, J., & Herodes, M.

#### **Publication Date**

2020

#### **Publisher**

Journal of Clinical Psychology (Impact factor = 2.885)

#### **Volume/Issue/Pages**

76(9):1575-1590

#### **Abstract**

Objectives: Art therapy has been widely used in clinical settings and has shown preliminary success in military trauma. This case study describes a mask-making art therapy directive facilitated by a board-certified art therapist as an adjunct to group posttraumatic stress disorder (PTSD) treatment in a military intensive outpatient program. Methods: Described are clinical outcome measures, linguistic analysis of a personal journal, evaluation of this servicemember's artwork, and experiences in the program. Results: Mask-making, as a trauma-focused group art therapy directive, expanded the understanding of treatment progress reflected in journal notes, mask imagery, and by a change in linguistic indices of trauma processing, despite an overall increase in PTSD symptoms as he confronted his traumatic experiences. He reported improvement in coping and successfully returned to full military duty following treatment. Conclusions: This case study suggests that art therapy and written narrative, combined with standardized self-report assessments, may more accurately indicate improvement in overall PTSD treatment.

#### **Population Studied**

Active-duty Navy Senior Chief Petty Officer

#### **Treatment**

Two sequential courses of intensive outpatient group-based treatment

#### **Study Design**

Case study

#### **Measures**

Computer-assisted linguistic analysis, BASIS-24; PCL-5

## **Creative Forces Art Therapy Publications**

### Increased Functional Connectivity in Military Service Members Presenting a Psychological Closure and Healing Theme in Art Therapy Masks

<https://www.sciencedirect.com/science/article/abs/pii/S0197455623000576?via%3Dihub>

**Authors**

Payano Sosa, J., Srikanchana, R., Walker, M., Stamper, A., King, J., Olinger, J., Bonavia, G., Workman, C., Darda, K., Chatterjee, A. & Sours Rhodes, C.

**Publication Date**

2023

**Publisher**

The Arts in Psychotherapy; (Impact Factor 1.847)

**Volume/Issue/Pages**

85(3), 102050

**Abstract**

Military service members (SMs) have an increased risk of developing posttraumatic stress symptoms. Art therapy is a promising intervention that allows SMs with posttraumatic stress to explore their trauma through art-making and reflection in a psychotherapeutic relationship. Thematic analysis of art products may lend itself as a description of visual indicators of an internal state of the brain. We hypothesized that specific neurobiological markers are associated with the theme of psychological closure and/or healing of traumatic memories as represented in the masks created during art therapy. Resting state fMRIs of a convenience sample of 104 SMs who received art therapy as part of the interdisciplinary Intensive Outpatient Program (IOP) at the National Intrepid Center of Excellence were examined. SMs depicting psychological closure and/or healing within their art therapy masks demonstrated greater resting state functional connectivity between regions associated with attention, memory, language, and pain processing. These findings are preliminary in nature therefore causal relationships cannot be assumed between art therapy and neuroimaging metrics, as both art therapy and neuroimaging measures were collected as part of a larger integrative IOP. Future work collecting neuroimaging metrics pre and post an art therapy intervention is warranted to further evaluate these associations.

**Population Studied**

Military service members; N=104

**Treatment**

Masks created during art therapy.

**Study Design**

Retrospective data analysis

**Measures**

Self-report assessments for traumatic brain injury (TBI) and posttraumatic stress disorder (PTSD), thematic analysis of art products and neuroimaging metrics - resting state fMRI

## **Creative Forces Art Therapy Publications**

### **Active-Duty Military Service Members' Visual Representations of PTSD and TBI in Masks**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5328376/>

#### **Authors**

Walker, M.S., Kaimal, G., Gonzaga, A.M. L., Myers-Coffman, K.A., & DeGraba, T.J.

#### **Publication Date**

2017

#### **Publisher**

International Journal of Qualitative Studies on Health and Well-being (Impact factor = 1.947)

#### **Volume/Issue/Pages**

12(1), 1-12

#### **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; group art therapy sessions in week 1 of a 4-week intensive outpatient program

#### **Study Design**

Grounded theory thematic analysis of content in masks and clinical notes created by art therapist

#### **Measures**

Images and clinical notes

## **Creative Forces Art Therapy Publications**

### **Art Therapy for PTSD and TBI: A Senior Active Duty Military Service Member's Therapeutic Journey**

<https://www.sciencedirect.com/science/article/pii/S0197455616300636?via%3Dihub>

#### **Authors**

Walker, M. S., Kaimal, G., Koffman, R., & DeGraba, T. J.

#### **Publication Date**

2016

#### **Publisher**

The Arts in Psychotherapy (Impact factor = 1.404)

#### **Volume/Issue/Pages**

49(2), 10-18

#### **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

#### **Treatment**

Art therapy; complementary and integrative therapies, medical and psychiatric care

#### **Study Design**

Case study

#### **Measures**

Images and clinical note



## **Creative Forces Art Therapy Publications**

### Art Therapy and Underlying fMRI Brain Patterns in Military TBI: A Case Series

<https://www.tandfonline.com/doi/pdf/10.1080/17454832.2018.1473453>

**Authors**

Walker, M.S., Stamper, A. M., Nathan, D. E., & Riedy, G.

**Publication Date**

2018

**Publisher**

International Journal of Art Therapy (Impact factor = 1.667)

**Volume/Issue/Pages**

23(4), 180-187

**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; group art therapy sessions in week 1 of a 4-week intensive outpatient program

**Study Design**

Case series

**Measures**

Resting state fMRI; PCL-C; Neurobehavioral Symptom Inventory

## Creative Forces Music Therapy Publications

### Songs Created by Military Service Members in Music Therapy: A Retrospective Analysis

<https://www.sciencedirect.com/science/article/pii/S0197455618301916>

**Authors**

Bradt, J., Biondo, J., & Vaudreuil, R.

**Publication Date**

2019

**Publisher**

The Arts in Psychotherapy (Impact factor = 1.404)

**Volume/Issue/Pages**

62, 19-27

**Abstract**

A successful transition to civilian life is challenging for many service members returning from deployment. Psychological and physical injuries may hamper successful reintegration into home life and communities and, as a result, many service members report feeling lonely, isolated and misunderstood. This study analyzed 14 songs written by 11 active-duty service members with post-traumatic stress disorder, mild traumatic brain injury, and psychological health conditions, who received music therapy services at the National Intrepid Center of Excellence, a Directorate of Walter Reed National Military Medical Center in the United States of America. Service members wrote songs over the course of two or more individual music therapy sessions. Latent thematic analysis of the song lyrics yielded four main themes: (a) personal struggles and barriers to recovery, (b) moving forward, (c) relational challenges, and (d) positive relationships and support. The songs offer a window into service members' lived experiences of military service, injury, recovery, homecoming, and transition from active-duty. Songwriting enabled service members to share their thoughts, emotions, fears, and hopes with family, friends, and other providers, often for the first time, and as such played an important role in their personal growth and recovery process. This is the first study to examine the therapeutic benefits of songwriting in a military population.

**Population Studied**

Active-duty service members in music therapy treatment at NICoE; N=11

**Treatment**

Music therapy during a 4-week intensive outpatient program.

**Study Design**

Observational study

**Measures**

Inductive thematic analysis of song lyrics written by service members; memos on initial impressions of lyrics

**Creative Forces**  
**Music Therapy Publications**

**Music Therapy Treatment of Active Duty Military: An Overview of Intensive Outpatient and Longitudinal Care Programs**

<https://academic.oup.com/mtp/article/36/2/195/4945362>

**Authors**

Bronson, H., Vaudreuil, R., & Bradt, J.

**Publication Date**

2018

**Publisher**

Music Therapy Perspectives (Impact factor = 0.82)

**Volume/Issue/Pages**

36(2), 195-206

**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, posttraumatic 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**

Intensive outpatient and longitudinal treatment programs for Active Duty service members with TBI and PTSD

**Treatment**

Music therapy

**Study Design**

Music therapy program description

**Measures**

None

## **Creative Forces Music Therapy Publications**

### **Music Therapy with Military Populations: A Scoping Review**

<https://academic.oup.com/jmt/article/56/4/315/5614310?login=false>

#### **Authors**

Gooding, L.F. & Langston, D.G.

#### **Publication Date**

2019

#### **Publisher**

Journal of Music Therapy (Impact factor = 1.742)

#### **Volume/Issue/Pages**

56(4),315-347

#### **Abstract**

Music therapy treatment is increasingly being used to promote health, enhance quality of life, and improve functioning in military personnel, but evidence on the use of music interventions with military service members is still emerging. The purpose of this scoping review was to synthesize the available literature regarding music therapy treatment with military personnel by identifying the types of information available, key characteristics, and gaps in the knowledge base. The review was completed using the methodological framework proposed by Arksey and O'Malley. A total of 27 publications met the criteria for review. The results included anecdotal reports, white papers/ briefs, case studies, historical reviews, clinical program descriptions, and research studies. Both active duty and veteran service members were represented in the literature, and post-traumatic stress disorder and traumatic brain injury were the most commonly listed conditions among those served. Music therapy services were offered in both group and individual formats, and drumming was the most common music intervention cited. Most publications accurately represented music therapy, and the historical reviews highlighted the connection between the development of the field of music therapy and the use of music with military personnel. Several gaps were identified, including a lack of specificity in reporting, low levels of evidence, and limited inclusion of women service members.

#### **Population Studied**

Active duty service members and veterans

#### **Treatment**

Music therapy

#### **Study Design**

Scoping review of literature

#### **Measures**

Scoping review methodological framework proposed by Arksey and O'Malley (2005)

## Creative Forces Music Therapy Publications

### Feasibility and Acceptability of Music Imagery and Listening Interventions for Analgesia: Protocol for a Randomized Controlled Trial

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9539652/>

**Authors**

Story, K., Bravata, D., Robb, S., Wasmuth, S., Slaven, J., Whitmire, L., Barker, B. , Menen, T., and Bair, M.

**Publication Date**

2022

**Publisher**

Journal of Medical Internet Research (JMIR) Research Protocols (Impact Factor 7.077)

**Volume/Issue/Pages**

11(9), e38788

**Abstract**

Chronic pain and access to care are identified as critical needs of the Veterans Health Administration. Music imagery and music listening interventions have shown promise as effective nonpharmacological options for pain management. However, most studies have focused on acute pain, passive music experiences, and in-person delivery. This study aimed to examine the feasibility and acceptability of 2 music interventions delivered through telehealth for chronic musculoskeletal pain, trial design, and theoretical model before conducting a fully powered efficacy or comparative effectiveness trial.

**Population Studied**

Veterans with chronic musculoskeletal pain

**Treatment**

Music therapy via telehealth

**Study Design**

Trial design description: 3-arm, parallel group, pilot feasibility trial; 60 veterans randomized to one of the three conditions: music imagery, music listening, or usual care.

**Measures**

Qualitative interviews, Working Alliance Inventory, State-Trait Assessment of Resilience Scale, Arthritis Self-Efficacy Scale, pain intensity numeric rating scale, Brief Pain Inventory – Interference, Brief Pain Catastrophizing Scale, Centrality of Pain Scale, Patient Global Impression of Change, PROMIS Sleep Scale, PHQ-9, Primary Care PTSD Screen, NIH Perceived Stress Scale, EQ-5D (general health quality of life), Brief Social Support Scale

## **Creative Forces Music Therapy Publications**

### **Music Therapy Applied to Complex Blast Injury in an Interdisciplinary Model: A Case Report**

<https://pubmed.ncbi.nlm.nih.gov/29688085/>

#### **Authors**

Vaudreuil, R., Avila, L., Bradt, J., & Pasquina, P.

#### **Publication Date**

2019

#### **Publisher**

Disability and Rehabilitation (Impact factor = 3.033)

#### **Volume/Issue/Pages**

41(19), 2333-2342

#### **Abstract**

Purpose: 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. Methods: Music therapy was provided as stand-alone treatment and in co-treatment with speech language pathology, physical therapy, and occupational therapy. The report is based on clinical notes, self-reports by the patient and his wife, and interviews with rehabilitation team members. Results: In collaboration with other treatment disciplines, music therapy contributed to improvements in range of motion, functional use of bilateral upper extremities, strength endurance, breath support, articulation, task-attention, compensatory strategies, social integration, quality of life, and overall motivation in the recovery process. The inclusion of music therapy in rehabilitation was highly valued by the patient, his family, and the treatment team. Conclusions: Music therapy has optimized the rehabilitation of a service member through assisting the recovery process on a continuum from clinic to community.

#### **Population Studied**

Active duty service member in ongoing rehabilitation from complex blast injury

#### **Treatment**

Music therapy; integrated within outpatient rehabilitation and stand-alone music therapy services

#### **Study Design**

Case study

#### **Measures**

Clinical data, self-reports by patient and family, interviews with rehabilitation team members

## **Creative Forces Music Therapy Publications**

### **Music Therapy with Active-Duty Service Members: Group Protocol Description and Secondary Analysis of Protocol Evaluations**

<https://academic.oup.com/mtp/article/38/2/167/5813537>

#### **Authors**

Vaudreuil, R., Biondo, J., & Bradt, J.

#### **Publication Date**

2020

#### **Publisher**

Music Therapy Perspectives (Impact factor = 0.82)

#### **Volume/Issue/Pages**

38(2), 167-177

#### **Abstract**

Based on the growing need for music therapy programming at military treatment facilities and clinics that specialize in the rehabilitation of service members, this article describes a music therapy group protocol and the findings of 201 post-session evaluations. In addition, we present clinical perspectives and recommendations from three music therapists who have facilitated this group protocol on four military bases across the United States. The group session outlined in the protocol is intended as an introduction to music therapy. It familiarizes service members to various music therapy experiences structured specifically to enhance feelings of safety during emotional risk-taking. In addition, the protocol functions as an initial assessment of service members' responses to the various receptive and interactive music experiences and includes psychoeducation regarding the role of music therapy in an interdisciplinary treatment model. The post-session evaluation data suggests that service members endorsed this introductory group as moderately to very helpful. Perceived benefits included the opportunity to express various emotions and increased awareness of somatic responses through music. A large number of requests for continued music therapy services following the introductory session suggest that the protocol is successful in facilitating understanding in service members regarding the potential treatment benefits of music therapy in an interdisciplinary care setting. Feedback from the music therapists indicated that the group protocol is a helpful initial experience for service members to acclimate to music therapy, and for music therapists to learn about their patients' specific needs and inform subsequent treatment.

#### **Population Studied**

Active duty service members in music therapy treatment at NICoE; N=201

#### **Treatment**

Music therapy, group music therapy within a 4-week intensive outpatient program

#### **Study Design**

Program evaluation

#### **Measures**

Music therapy intake group evaluation

## Creative Forces Music Therapy Publications

### Bridging the Clinic to Community: Music Performance as Social Transformation for Military Service Members

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6370624/>

**Authors**

Vaudreuil, R., Bronson, H., & Bradt, J.

**Publication Date**

2019

**Publisher**

Frontiers in Psychology (Impact factor = 2.99)

**Volume/Issue/Pages**

10, 119

**Abstract**

The use of musical performance in music therapy with active duty 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 essential components of this therapeutic process are confidentiality and privacy. However, others have argued that public performances can validate therapeutic changes in clients, give voice to clients' experiences, raise awareness of social issues within their community, transform perceptions of disability or illness in audience members, and provide opportunities to receive support and validation from the community. We discuss the potential of musical performances to contribute to individual development and rehabilitation in active duty service members as well as facilitate change at the community level. We illustrate this through three brief case reports of active duty service members who received music therapy services at the National Intrepid Center of Excellence on base at Walter Reed National Military Medical Center in the USA as part of their treatment of Post-Traumatic Stress Disorder, Traumatic Brain Injury, and other psychological health concerns. The service members selected, learned and refined songs over multiple music therapy sessions, created introductions to each song to share with the audience the meaning of each song and the benefits gained from working with these songs in therapy. The case reports also include excerpts of interviews conducted with these service members several months following their performances about their experiences of the performances themselves and the perceived impact on the community.

**Population Studied**

Active duty service members in music therapy treatment at NICoE; N=2

**Treatment**

Music therapy within intensive outpatient program and a longitudinal care program.

**Study Design**

Music therapy program description and case series

**Measures**

Patient interviews, documentation, performance observation



## **Creative Forces Music Therapy Publications**

### **Implementing Music Therapy through Telehealth: Considerations for Military Populations**

<https://pubmed.ncbi.nlm.nih.gov/32608282/>

#### **Authors**

Vaudreuil, R., Langston, D. G., Magee, W. L., Betts, D., Kass, S., & Levy, C.

#### **Publication Date**

2022

#### **Publisher**

Disability and Rehabilitation: Assistive Technology (Impact factor = 2.099)

#### **Volume/Issue/Pages**

17(2), 201-210

#### **Abstract**

Telehealth provides access to psychotherapeutic interventions and psychoeducation for remote populations that may have limited access to in-person rehabilitation treatments. This paper explores the use of telehealth to facilitate music therapy with service members and veterans living in rural areas across the U.S. and reviews research regarding creative arts therapies delivered through telehealth. The existing evidence base is predominantly focused on art and dance movement therapies and includes little information about music therapy. However, music therapists have begun to use telehealth in clinical and community environments to increase access for remote patients. This article reports on the integration of telehealth and music therapy and presents facilitation techniques of didactic and applied clinical music experiences. This is accomplished through the review of current research, addressing knowledge gaps, and reviewing the evolving models of creative arts therapies delivered through telehealth for military populations.

#### **Population Studied**

Veterans engaged in telehealth delivered creative arts therapy

#### **Treatment**

Music therapy; telehealth; individual and group sessions

#### **Study Design**

Case examples of music therapy telehealth models

#### **Measures**

Clinical observations, program review, program design, participant testimonials

## Creative Forces Music Therapy Publications

### Treatment Description and Case Series Report of a Phased Music Therapy Group to Support Veteran Reintegration

<https://www.tandfonline.com/doi/full/10.1080/08995605.2021.1962194>

#### **Authors**

Vetro-Kalseth, D., Vaudreuil, R. & Segall, L. E.

#### **Publication Date**

2021

#### **Publisher**

Military Psychology (Impact factor = 1.36)

#### **Volume/Issue/Pages**

33(6), 446-452

#### **Abstract**

Music therapy is becoming increasingly prevalent in rehabilitation programs serving military and Veteran populations in the United States. Music therapy is integrated into interdisciplinary models and positioned to treat brain injury, post-traumatic stress disorder, and other psychological health conditions at military installations and Veteran medical centers nationwide. Phased group music therapy is delivered in a longitudinal treatment model to assist in the rehabilitation of service members and Veterans. Different phases of group music therapy are aligned with a treatment trajectory that exists on a clinic to community continuum to support recovery and reintegration. This article provides a description and case presentations of clinical programming. Information was accessed from patients' electronic medical records, clinical documentation, therapist observation, and patient interviews. Interviews were transcribed and a content analysis was conducted by the authors. Emergent themes from the patient interviews included social relationships, community reintegration and transition, and post-military occupational success. Patients reported that group music therapy provided skill-building opportunities that were helpful for them during military service transitions, specifically active duty to Veteran status. Support skills included rapport-building and enhanced camaraderie. Furthermore, music therapy appeared to bolster peer connections through shared experiences, which decreased isolation, increased socialization, and supported reintegration.

#### **Population Studied**

Active duty service members with history of TBI and PTSD. N=3

#### **Treatment**

The program follows a three-phase music therapy approach to care: (1) 6-week MT group series;(2) active music making/jam group; and (3) community engagement through musical performance.

#### **Study Design**

Clinical treatment description and case series

#### **Measures**

Interviews