

The Proven Efficacy of Creative Arts Therapies: What the Literature Tells Us

**DEANNE GRAY** 

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#### Deanne Gray

Cert. IV TAE., Dip.Man., B.S.W., GradDipCS., M.A.T. ORCID ID: 0000-0001-9459-7626

This document provides the reader with a comprehensive review of up-to-date findings on the efficacy of creative arts therapies. It outlines the most recent research which collectively demonstrates the effectiveness of creative arts therapies for the treatment of many physical and mental health concerns. It cites Level I, II and III evidence: from systematic reviews of relevant randomised controlled trials, evidence from meta-analysis of relevant randomised controlled trials and evidence developed from systematic reviews.

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## Purpose of this document

This document provides the reader with a comprehensive review of up-to-date findings on the efficacy of creative arts therapies. It outlines the most recent research which collectively demonstrates the effectiveness of creative arts therapies for the treatment of many physical and mental health concerns.

As the peak professional body representing creative arts therapists in Australia, New Zealand, and the Asia/Pacific region, ANZACATA recognises the importance of a clear definition of creative therapies. For the purpose of this document, creative therapies are defined as follows:

Registered Creative Arts Therapists are university-trained in both creative and psychotherapeutic methods to help clients express themselves and improve wellbeing. Creative Arts Therapists are mental health professionals who use art, media, and creative processes (visual arts, writing, sculpting, drama, clay, sand, dance, music and movement) to facilitate emotional expression, self-awareness and self-regulation.<sup>1</sup>

Creative arts therapists are inherently focused on the affective outcomes for the people they encounter in professional settings. As such, it stands to reason that qualitative studies have dominated the field of arts research. While this review acknowledges the importance of qualitative work and the honouring of the value of human experiencing, the focus of this piece is to present a body of evidence that is quantifiable, rigorous and affords creative arts therapies the opportunity to provide this evidence for scrutiny. For creative arts therapies to be truly understood and valued as co-contributors to health models, they must offer rigorous evidence of efficacy. This document brings together this evidence in one place.

This document also provides the reader with further tools to contribute to patient/client wellness and expansion of health outcomes. For accessibility purposes, it is categorised by physical health and mental health with different conditions listed in each section. Additionally, it outlines the type of arts modality used, and provides a clear summary of key results as a quick reference to the value of arts for different people, conditions, and outcomes.

Throughout this document, the term 'arts' is noted as these inclusively unless stated otherwis

## Summary of Key Findings



#### FRONTIERS IN PSYCHOLOGY (2021)<sup>2</sup>

A systematic review regarding creative therapies was provided in an edition of the journal *Frontiers in Psychology* (2021). Exploring both the psychological and physiological benefits for clinical settings, the author note the following:

- Over the past ten years, the body of evidence of the effectiveness of creative arts therapies (CATs) has grown rapidly
- CATs are identified as art therapy, dance/ movement therapy, drama therapy, music therapy, psychodrama, and poetry/bibliotherapy and all have benefits across a variety of demographics
- The research demonstrates positive outcomes for both psychological and physiological domains, inclusive of stress, trauma, depression, anxiety, and pain through different CATs
- The review was specifically designed to gain knowledge pertaining to the key contributing factors for positive outcomes (number of studies reviewed = 67)
- Key therapeutic factors are proposed with an acknowledgement that three are solely attributed to the creative arts: (i) improved body awareness, (ii) grounding and (iii) the use of symbols and metaphor as language.

#### Hu, et al. (2021)3

The researchers examined 413 international articles (2006–2020) spanning different studies using painting, drawing, music, drama, dance, and writing. The following was noted:

- Art therapy demonstrated positive outcomes in cancer treatment, autism, dementia, and cognitive impairment
- <sup>2</sup> Cleeremans, A. (Ed.). (2021). A critical appraisal of research in arts, health and wellbeing. Frontiers in Psychology, 12, 686005. https://www.frontiersin.org/research-topics/16863/a-critical-appraisal-of-research-in-arts-health-and-wellbeing#overview
- Hu, J., Zhang, J., Hu, L., Yu, H., & Xu J. (2021). Art therapy: A complementary treatment for mental disorders. Frontiers in Psychology, 12, 686005. https://doi.org/10.3389/fpsyg.2021.686005

- Positive outcomes have also been demonstrated with mental health concerns such as depression and anxiety, particularly when articulating experiences can be challenging
- Art therapy has been successfully used for patients with mental health challenges with positive outcomes in reduction of distress and suffering
- It affords opportunity for non-verbal expression and develops safe spaces for intrapersonal and interpersonal connection.

#### THE WHO REPORT (2019)4

In 2019 the World Health Organisation undertook the largest review to date regarding the impact of arts on health and wellbeing. The evidence brought together pilot studies, case studies, small-scale cross-sectional surveys, nationally representative longitudinal cohort studies, community-wide ethnographies and randomised controlled trials. This report showed:

- The efficacy of creative arts therapies is expansive and well documented across a variety of methodologies, designs and fulfilling a variety of purposes
- The arts (in all modalities) have a significant impact on health and wellbeing at different stages across the lifespan and across a variety of physical and mental health conditions
- The benefits of the arts to support clinical/ patient relationships and the crucial nature this relationship plays in both physical and mental health recovery.

Between 2013 and 2021, several large scale reports have been produced which demonstrate the usefulness of creative arts therapy to improve both mental and physical health. These include an entire edition of the peer-reviewed journal, *Frontiers in Psychology* dedicated to the matter, a systemic literature review by Hu, et al. (n=413), evidence provided in the largest report of its kind by the World Health Organisation (WHO), the *Oxford textbook of creative arts*, *health and wellbeing* and a systematic literature review (n=78) published by the Psychotherapy and Counselling Federation of Australia (PACFA). These are summarised below.

### OXFORD TEXTBOOK OF CREATIVE ARTS, HEALTH AND WELLBEING (2015)

The publication, Oxford textbook of creative arts, health and wellbeing: International perspectives on practice, policy and research (2015)<sup>5</sup> provides some significant chapters and findings in creative arts, inclusive of the following:

- The creative arts are identified as being a beneficial resource for the wellbeing of communities, offering contributions to building social capital and health promotion
- Views the literature through the lens of health inequalities and social determinants (inclusive of the spectrum of ill-health through to positive wellbeing)
- Offers case studies and attributed learnings from the research undertaken globally within different communities and demographics demonstrating a variety of positive impacts on physical and mental health
- A case study of First Nation adults (n=235)<sup>6</sup> engaged in community singing demonstrating improved health outcomes inclusive of reduction in depression, increased resilience and associated social capital. The study found a significant increase in First Nation people engaging with health services as a direct result of participation<sup>7</sup>
- A dedicated chapter reviewing quantitative studies on the epidemiological relationship of cultural experiences and positive outcomes for public health.<sup>8</sup>

#### <sup>5</sup> Clift, S., & Camic, P.M. (Eds.). (2015). Oxford textbook of creative arts, health, and wellbeing: International perspectives on practice, policy and research. Oxford University Press. https://doi. org/10.1093/med/9780199688074.001.0001

#### PACFA REVIEW (2013)

The Psychotherapy and Counselling Federation of Australia (PACFA) undertook a literature review (2013)<sup>9</sup> pertaining to the effectiveness of expressive art therapies. The review focused on quantitative research with rigorous selection criteria (n=281 articles with exclusion of n=203 to ensure robust data: review n=78)

- Key findings demonstrate the efficacy of art therapy for a range of physical conditions including cancer, managing terminal illness, asthma, dementia, schizophrenia, and children diagnosed with autism spectrum disorder
- Key findings demonstrate the efficacy of art therapy for a range of mental health conditions including depression, emotional eating, anxiety, and stress
- Art therapy demonstrates positive outcomes in mental health, asthma and assisting with emotional management pertaining to breast cancer
- Dance/movement therapies demonstrated positive outcomes for people managing schizophrenia, cancer, depression, stress, emotional eating and dementia
- Dramatherapy provided sound outcomes for assisting school students with behavioural problems and emotional self-regulation.
- <sup>7</sup> Sun, J., & Buys, N. (2015). Addressing the health needs of indigenous Australians through creative engagement: a case study, In S. Clift, & P.M. Camic (Eds.), Oxford textbook of creative arts, health, and wellbeing: International perspectives on practice, policy and research (pp.145–150). https://doi.org/10.1093/med/9780199688074.003.0018
- Theorell, T., & Ullén, F. (2015). Epidemiological studies of the relationship between cultural experiences and public health. In S. Clift, & P.M. Camic (Eds.), Oxford textbook of creative arts health, and wellbeing: International perspectives on practice, policy and research (pp.55–64). https://doi.org/10.1093/med/9780199688074.003.0008
- Dunphy, K., Mullane, S., & Jacobsson, M. (2013). The effectiveness of expressive arts therapies: a review of the literature. PACFA. https://www.pacfa.org.au/common/Uploaded%20files/ PCFA/Documents/Research/The-Effectiveness-of-Expressive-Arts-Therapies.pdf

Fancourt, D., & Finn, S. (2019). What is the evidence on the role of the arts in improving health and well-being? A scoping review. https://apps.who.int/iris/bitstream/hand le/10665/329834/9789289054553-eng.pdf

Note the authors (Sun & Buys, 2015) refer to First Nation People as Indigenous Australians. In keeping with contemporary progress and acknowledgement of the rights of First Nation People, this document refers to this culture accordingly.



### **Cancer treatment**

PURPOSE	RESULT(S)	METHODOLOGY AND/OR METHOD(S)	CITATION
Art therapy impact on coping capacity in women with cancer	Increase in coping abilities post art therapy intervention  Significant improvement in social connection and support which has been demonstrated in other studies to improve wellbeing and emotional health in cancer sufferers	Randomised controlled trial (n=41) of art therapy participants (n=20) compared to control group (n=21) who received only radiotherapy as treatment	Svensk, AC., Öster, I., Thyme, K.E., Magnusson, E., Sjödin, M., Eisemann, M., Åström, S., & Lindh, J. (2009). Art therapy improves experienced quality of life among women undergoing treatment for breast cancer: A randomized controlled study. <i>European Journal of Cancer Care</i> , 18(1), 69–77. https://doi.org/10.1111/j.1365-2354.2008.00952.x
Art therapy and cancer patients quality of life and psychological health	"Art therapy emerges strongly as a way to enhance [cancer patients] quality of life and their ability to cope with a variety of psychological symptoms" (p.15)	Review of quantitative studies spanning 2000 to 2017 with rigour (n=27)  Demographics inclusive of cancer, different medical conditions, mental health, trauma, incarcerated persons and the elderly	Regev. D., & Cohen-Yatziv, L. (2018). Effectiveness of art therapy with adult clients in 2018: What progress has been made? Frontiers in Psychology, 9, 1531. https://doi.org/10.3389/ fpsyg.2018.01531
Art therapy and emotional processing for women with breast cancer	Art therapy encouraged acceptance of emotions for cancer patients, which improved health outcomes  Statistically significant outcomes were found across groups and over time  Increased emotional awareness and decreased symptoms of depression  Concluded art therapy provided opportunities for expression and communication, resulting in a reduction of both psychological and physical symptoms	Randomised controlled clinical trial  Eight weeks duration with different women (n=20)	Czamanski-Cohen, J., Wiley, J., Sela, N., Caspi, N., & Weihs, K. (2019). The role of emotional processing in art therapy (REPAT) for breast cancer patients. <i>Journal of Psychosocial Oncology</i> , <i>37</i> (5), 586–598. https://doi.org/10.1080/07347332.2019.1590491
Effect of a singular art therapy session on anxiety for cancer patients	Comparatively to control group, art therapy patients experienced a decrease in anxiety and tiredness levels  Statistically significant decreases occurred for patients experiencing shortness of breath and anxiety  Levels of drowsiness were also reported to be decreased for those who engaged with art therapy comparatively to control	Non-randomised pre-post study design  Patients (n=59) participated in one of 27 'one-off' sessions held over a four-month period  Routine medical treatment was provided to control group (n=56)  The State-Trait Anxiety Inventory-Form Y (STAI-Y) and Edmonton Symptom Assessment Scale-Revised (ESAS-R) were used for measurement and reliability	De Feudis, R.L., Graziano, G., Lanciano, T., Garofoli, M., Lisi, A., & Marzano, N. (2019). An art therapy group intervention for cancer patients to counter distress before chemotherapy. <i>Arts &amp; Health</i> , 13(1), 35–48. https://doi.org/10.1080/17533015.2019.1608 566

# Cognition

PURPOSE	RESULT(S)	METHODOLOGY AND/OR METHOD(S)	CITATION
Impact of digital media for abilities and capacity for people with medium to high functioning Autism Spectrum Disorder  Note: the use of digital media selected as creative therapy to assist clients who experience sensory and tactile challenges with other medium	Positive outcomes for development of executive functioning, social awareness, and engagement with others  Improvement in abilities of creativity and imagination  Highlights these outcomes as transferable skills to broader life settings	Qualitative study of adults (n=15) in group program  Three cycles of twelve weekly, 1.5-hour group sessions  Focus on client-centred, strengths-based and group theoretical approaches  Encouraged to work with preferred digital creative apps based on interests, strengths, and cognitive ability	Darewych, O.H. (2021). The future is now: Group digital art therapy for adults with Autism Spectrum Disorder (L'avenir dès maintenant: Groupe d'art-thérapie numérique pour adultes ayant un trouble du spectre de l'autisme). Canadian Journal of Art Therapy, 34(1), 26–32. https://doi.org/10.1080/26907240.2021.1907 940
Efficacy of music therapy for people with Alzheimer's type dementia	Reductions in levels of agitation comparatively to control (n=19)  Results demonstrate that music therapy can be effective for alleviating heightened emotions in residents with dementia in aged care environments  Primary findings were on the impact of short-term agitation rather than longer term outcomes	Quantitative utilising the Cohen-Mansfield Agitation Inventory (CMAI) for measurement throughout trial  People with Alzheimer's type dementia received weekly music therapy sessions over 42 weeks duration	Ledger, A.J., & Baker, F.A. (2007). An investigation of long-term effects of group music therapy on agitation levels of people with Alzheimer's Disease. <i>Aging &amp; Mental Health</i> , 11(3), 330–338. doi: https://pubmed.ncbi.nlm.nih.gov/17558584/
Effect of art therapy for people living with Parkinson's disease	At baseline patients experienced abnormal visual functions and eye movements with increased functional connectivity after art therapy and comparatively to control. This study found art therapy improves the following: overall visual-cognitive skills, visual exploration strategies and general motor functioning	Quantitative, exploratory trial (n=18). Variety of measurement scales used to assess variety of conditions	Cucca, A., Di Rocco, A., Acosta, I., Beheshti, M., Berberian, M., Bertisch, H.C., & Ghilardi, M.F. (2021). Art therapy for Parkinson's disease. Parkinsonism & Related Disorders, 84, 148-154. doi: https://www.sciencedirect.com/science/article/pii/S1353802021000298
Impact of music therapy on executive functioning for people with traumatic brain injury (TBI)  Note: participants were categorised as moderate to severe impairment	"Music therapy group increased quantitative anisotropy (QA) in the right dorsal pathways (arcuate fasciculus, superior longitudinal fasciculus) and in the corpus callosum and the right frontal aslant tract, thalamic radiation and corticostriatal tracts. The mean increased QA in this network of results correlated with improved executive function" (p.1)  Study demonstrated music therapy is effective in having a positive impact on the neuroplasticity related to executive functioning	Single-blind crossover randomised controlled trial	Sihvonen, A.J., Siponkoski, S.T., Martínez-Molina, N., Laitinen, S., Holma, M., Ahlfors, M., Kuusela, L., Pekkola, J., Koskinen, S., & Särkämö, T. (2022). Neurological music therapy rebuilds structural connectome after traumatic brain injury: Secondary analysis from a randomized controlled trial. <i>Journal of Clinical Medicine</i> , 11(8), 2184. doi: https://www.mdpi.com/2077-0383/11/8/2184

# Cognition (cont)

PURPOSE	RESULT(S)	METHODOLOGY AND/OR METHOD(S)	CITATION
The efficacy of different creative arts modalities in people with Autism Spectrum Disorder (ASD)	The results highlighted music, martial arts (movement), yoga and drama (theatre) produced positive results and high improvements  Music and martial arts improved social communication skills with yoga also contributing to improvements in motor functioning and cognition	Extensive systematic review (Studies: n=72; participants: n=1,939)	Amonkar N., Su WC., Bhat A.N., & Srinivasan S.M. (2021). Effects of creative movement therapies on social communication, behavioral-affective, sensorimotor, cognitive, and functiona participation skills of individuals with Autism Spectrum Disorder: A systematic review. Front. Psychiatry, 12, 722874. https://doi.org/10.3389/fpsyt.2021.722874
Evaluate effectiveness of art therapy for teaching social skills to children with ASD	Art therapy was found to improve the ability to engage others and have assertiveness in social encounters  Further findings demonstrate a statistically significant reduction in hyperactivity and improvements in capacity to maintain attention	Quasi-experimental research study (small sample size)  The Social Skills Improvement System-Rating Scales (SSIS-RS) was primary assessment tool focused on social skills and problem behaviours	D'Amico, M., & Lalonde, C. (2017). The effectiveness of art therapy for teaching social skills to children with Autism Spectrum Disorder. <i>Art Therapy</i> , 34(4), 176–182. https://doi.org/10.1080/07421656.2017.1384678
To explore literature pertaining to the efficacy of dramatherapy	This review demonstrates effectiveness of dramatherapy for various diagnoses, age groups and clinical settings  While a high percentage (46%) focused on some form of disability, other findings highlighted dramatherapy as useful for working with people with schizophrenia  Further highlighted this approach as having 'important existential factors' for people with various mental health challenges and conditions	Integrative systematic review of research (n=24)  46% of studies related to developmental disabilities, cognitive impairment, or both  Authors used PRISMA <sup>10</sup> as data collection method  66% of papers were quantitative; 8% qualitative  46% used control group	Feniger-Schaal, R., & Orkibi, H. (2020). Integrative systematic review of drama therapy intervention research. <i>Psychology of Aesthetics</i> , <i>Creativity, and the Arts</i> , 14(1), 68–80. https://doi.org/10.1037/aca0000257
Exploring research evidence on the effects of dramatherapy for supporting psychological functioning in children and young people with ASD	Quantitative studies used a pre-post test design and reported statistically significant results in social skills and challenging behaviours  Significant improvements were also noted regarding engagement, decreased externalised behaviours, Autism Spectrum behaviours  Authors concluded that drama therapy improves the emotional, social and psychological development and wellbeing in those with ASD  Qualitative findings highlighted common themes of "enhancement of social competence, interaction and conversation skills, emotional development as well as decrease in maladaptive behaviour" (p.10)	Systematic review; Integrative review of literature Authors used PRISMA guidelines for inclusion/ exclusion criteria Findings included participants (n=53) across the studies (n=9) Qualitative studies (n=6), quantitative studies (n=2) and mixed methods (n=1) were included in the review Sample size of each study differed (1 to 20) and participants were aged between 4 and 17 years Males (n=34) and females (n=8) were included in the studies	Bololia, L., Williams, J., Macmahon, K., & Goodall K. (2022). Dramatherapy for children and adolescents with autism spectrum disorder: A systematic integrative review, <i>The Arts in Psychotherapy</i> , 80. https://doi.org/10.1016/j.aip.2022.101918

PRISMA – Preferred reporting items for systematic reviews and meta-analysis. This is highly recommended model for systematic reviews. Authors also used Risk of Bias (RoB) method to ensure high rigor pertaining to included material (Feniger-Schaal & Orkibi, 2020)

## **Chronic Pain**

PURPOSE	RESULT(S)	METHODOLOGY AND/OR METHOD(S)	CITATION
Impact of art therapy (drawing) for chronic pain	Drawing had positive impact on pain levels, resilience development and other psychosocial factors  Significant results in the areas of pain, depression, anxiety, experiences of helplessness and improvement in relationships  The results demonstrated similar levels of effectiveness across in person and online, irrespective of pre-pandemic and throughout  There was a difference in the frequency of participants experience of pain comparatively to control group	Mixed methods pilot study  Pre and post-test experimental control design  Assessment measures across both psychological and physical domains inclusive of Life Orientation Test-Revised (LOT-R)  Participants spanned both in person and online, across pre, during and post pandemic	Hass-Cohen, N., Bokoch, R., Goodman, K., & Conover, K. (2021). Art therapy drawing protocols for chronic pain: Quantitative results from a mixed method pilot study. The Arts in Psychotherapy, 73, 101749. https://doi.org/10.1016/j.aip.2020.101749
To explore the literature regarding effect of dance therapy on pain	74% of the studies demonstrated positive effects on reducing pain for participants  Participants who engaged with dancing experienced a decrease in chronic musculoskeletal pain  Dance therapy which was performed for 60 to 150 minutes duration weekly had the highest improvement rates in decreasing pain experiences  Based on findings, dance therapy is recommended as a positive adjunct to complement courses of pain management treatment	Systematic literature review of dance therapy  Total included papers (n=34) had high number of participants (n=1,254)  Quantitative studies (n=27) Qualitative studies (n=4) Mixed methods (n=3)  Quantitative studies included randomised controlled trials (n=13), quasi-experimental trials (n=11) and case series (n=3)	Hickman, B., Pourkazemi, F., Pebdani, R., Hiller, C., & Fong Yan, A. (2022). Dance for chronic pain conditions: A systematic review. <i>Pain Medicine</i> . https://doi.org/10.1093/pm/pnac092



# **Depression**

PURPOSE	RESULT(S)	METHODOLOGY AND/OR METHOD(S)	CITATION
To examine the efficacy of art therapy as a treatment modality for women with depression	Positive outcomes reporting lower levels of depression, particularly at three-month follow-up  Findings suggest short-term art therapy may be a beneficial treatment for women experiencing mild depression and stress-related symptoms	Randomised controlled trial (RCT) of women with depression (n=39)  One group (n=18) received art psychotherapy comparatively to verbal therapy (n=21)  Study included several assessment tools, inclusive of the Beck Depression Inventory, Impact of Event Scale (IES) and Symptom Check List 90 (SCL-90)	Thyme, K., Sundin, E., Stahlberg, G., Lindstrom, B., Eklof, H., & Wiberg, B. (2007). The outcome of shortterm psychodynamic art therapy compared to shortterm psychodynamic verbal therapy for depressed women. <i>Psychoanalytic Psychotherapy</i> , 21, 250–264. https://doi.org/10.1080/02668730701535610
Effect of clay therapy on adults diagnosed with depressive disorder	Statistically significant improvements in depression, emotional regulation, general health, and overall connected wellbeing  Outcomes highlight that clay therapy generates positive mental health and is a cost-effective approach to treatment	Randomised controlled trial (n=106) using variety of assessment tools to measure outcomes in depression, wellbeing, and alexithymia	Nan, J., & Ho, R. (2017). Effects of clay art therapy on adults outpatients with major depressive disorder: A randomized controlled trial. <i>Journal of Affective Disorders</i> , 217, 237–245. https://doi.org/10.1016/j.jad.2017.04.013
Identify impact of art therapy on clinical depression (inclusive of follow-up)	Participants who engaged with art therapy experienced a faster decline in depression levels than those in control group  Significant reduction of symptoms in art therapy participants compared to control group and this finding supported at six-month follow-up  Significant improvements in suicidal ideation comparative to baseline  Both groups experienced increased self-esteem  People who participated in art therapy returned to work from sick leave earlier than control group  "These findings indicate that art therapy is a valuable treatment and supports patients in their recovery from depression" (p.20)  "One of the largest randomized controlled trials known to examine the effectiveness of art therapy for adults diagnosed with moderate to severe depression" (p.22)	Randomised controlled trial (n=85) of participatory art group and control  Measurement was undertaken using the Montgomery-Asberg Depression Scale (MADRS-S), Rosenberg Self-Esteem Scale (RSES) and Scale for Suicidal Ideation (SSI)	Blomdahl, C., Guregård, S., Rusner, M., & Wijk, H. (2022). Recovery from depression: A 6-month follow-up of a randomized controlled study of manual based phenomenological art therapy for persons with depression, Art Therapy: Journal of the American Art Therapy Association, 39(1), 13–23. https://doi.org/10.1080/07421656.2021.1922328

# **Anxiety**

PURPOSE	RESULT(S)	METHODOLOGY AND/OR METHOD(S)	CITATION
Efficacy of art therapy for anxiety, depression, and fatigue in female patients with breast cancer	Significant difference in treatment outcomes between patients who received art therapy and control group  "Our review confidently supports art therapy as a highly effective intervention for anxiety, depression and fatigue" (p.91)  Further discussion asserts that "cancer is an overwhelming experience for not only the patient as well as anyone who supports them, including friends or family. Having an onstaff art therapist available for patients and supporters would be helpful" (p.92)	Meta-analytical systematic review of literature  Randomised controlled trials (n=9) spanning large demographic (n=747)	Tang, Y., Fu, F., Gao, H., Shen, L., Chi, I., & Bai, Z. (2019). Art therapy for anxiety, depression, and fatigue in females with breast cancer: A systematic review. <i>Journal of Psychosocial Oncology</i> , 37(1), 79–95. https://doi.org/10.1080/07347332.2018.1506855
The efficacy of art therapy for children with asthma	Art therapy had a positive impact on worry, quality of life and anxiety, comparatively to control group  This result was supported at six-month follow-up  The findings suggest validity for art therapy to assist chronically ill children to improve emotional health and wellbeing	Randomised controlled trial (n=22)  Utilised a variety of tools at baseline to measure impact on both physical and emotional health	Beebe, A., Gelfand, E.W., & Bender, B. (2010). A randomized trial to test the effectiveness of art therapy for children with asthma. <i>J Allergy Clin Immunol.</i> , 126(2), 263–6, https://doi.org/266.e1. doi: 10.1016/j.jaci.2010.03.019
Review of literature and meta-analysis regarding efficacy of mindfulness-based art therapy on anxiety, depression, and fatigue	Significant improvements across both physical and mental health for those receiving intervention, comparatively to control groups  "Mindfulness-based art therapy is a promising intervention for symptom relief" (p.1)  Improvements were noted across psychological symptoms of anxiety and depression and also physical fatigue  Results demonstrated engaging with art therapy to be positive for both quality of life and wellbeing outcomes  "Evidence from the literature suggests that mindfulness-based art therapy is feasible and effective complementary therapy for symptom relief" (p.6)	Systematic review and meta-analysis (n=14)  Across the studies, a variety of assessment tools were used inclusive of Beck Depression Inventory (BDI) and Trait Anxiety Inventory for anxiety, depression and fatigue  Medical Outcomes Health Survey (SF-36) and the World Health Organisation (WHO) QOL for quality of life	Newland, P., & Bettencourt, B.A. (2020). Effectiveness of mindful-based art therapy for symptoms of anxiety, depression and fatigue: A systematic review and metaanalysis. Journal of Complementary Therapies in Clinical Practice, 41. https://doi.org/10.1016/j.ctcp.2020.101246
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### **Stress**

PURPOSE	RESULT(S)	METHODOLOGY AND/OR METHOD(S)	CITATION
To study the impact of visual art making on the cortisol levels in healthy adults	Statistically significant results in lowering cortisol levels  Participants considered the experience to be relaxing, enjoyable and helpful regarding self-insights  People also stated that participation in the study developed a sense of wanting to engage with art-making in the future	Quasi-experimental study, using pre/post-test saliva sampling (n=39) across a variety of healthy adults in different ages spanning 18 to 59 years	Kaimal, G., Ray, K., & Muniz, J. (2016). Reduction of cortisol levels and participants' responses following art making. <i>Art Therapy</i> , 33(2), 74–80. https://doi.org/10.1080/074216 56.2016.1166832
Explore the impact of art therapy on stress levels	Art therapy had positive effect and decreased stress levels of participants	Quantitative measures using different assessments for stress and anxiety  Demographic health care workers (n=60)	Visnola, D., Sprudza, D., Bake, M.A., & Pike, A. (2010). Effects of art therapy on stress and anxiety of employees. <i>Proceedings of the Latvian Academy of Sciences</i> , <i>Section B</i> , 64(1/2), 85–91. https://doi.org/10.1177/0017896911430545
Investigate the impact of drawing and painting (compared to resting states)	Increased alpha and beta frequency bands throughout engagement with drawing and painting exercises  Further exploration regarding this study as offering potential effectiveness regarding traumatic experiences and recovery	Quantitative measures through electroencephalogram (EEG) of brain wave activity	Belkofer, C.M., & Konopka, L.M. (2008). Conducting art therapy research using quantitative EEG measures. Art Therapy: Journal of the American Art Therapy Association, 25(2), 56–63. https://doi.org/10.1080/07421656.20 08.10129412
Effects of expressive writing on stress and trauma recovery in college students	Students experienced improvements in both stress levels and the capacity to process experiences and events  "Greater heart rate during emotional disclosure was associated with the greatest reductions in event-related distress, depression, and physical illness symptoms at follow-up" (p.344)	Randomised controlled trial Expressive writing (n=113) and neutral (n=133)  Physiological measurements of heart rate and skin conductance at ten-minute baseline, 20-minute writing and ten-minute recovery	Konig, A., Eonta, A., Dyal, S.R., & Vrana, S.R. (2014). Enhancing the benefits of written emotional disclosure through response training. <i>Behavior Therapy</i> , 45(3), 344–357. https://doi.org/10.1016/j.beth.2013.12.00
The effects of a group art therapy program on stress and quality of life for newcomer Iranian children	Group art therapy reduced stress levels and increased quality of life for participants  Results remained statistically significant at four-week follow-up  Highlighted art therapy as a non-invasive intervention for children where stress can be affected by other forms of treatment	Quantitative study (small sample size)  Multiple forms of assessment inclusive of saliva sampling to measure cortisol levels  Measured changes before, after, and at four weeks following the art therapy group	Gerami, M. (2021). The effects of group art therapy on reducing psychological stress and improving the quality of life in Iranian newcomer children. <i>Canadian Journal of Art Therapy</i> , 34(1), 8–17. https://doi.org/10.1080/2690 7240.2021.1883856

### **Trauma**

PURPOSE	RESULT(S)	METHODOLOGY AND/OR METHOD(S)	CITATION
Trauma and veterans	Art therapy was helpful for veterans in processing trauma The longer the intervention the higher the benefit for recovery processing and wellbeing No statistical significance in differences between groups noted at beginning of treatment but significant difference at one-month follow-up  Participants who engaged with art therapy experienced improvements in depression, anxiety, and significant improvements in overall general quality of life  Participants also experienced improvements in self-image and cognitive functioning (being able to combine ideas, represent stories as basics for effective cognition and creativity)  Humour also found to be helpful for veterans and recovery	Individual veterans in stress disorder treatment program randomly assigned (n=112) to art therapy (n=62) or control group (n=50)  Control group received occupational therapy, physiotherapy, and pharmacological treatment as per standard procedures  Variety of measurements used, inclusive of Symptomatic Checklists (SCL-90), Questionnaire of Depressive Conditions, Quality of Life (WHO) and Integrative Anxiety Test  Quality of Life (WHO) and Integrative Anxiety Test	Kopytin, A., & Lebedev, A. (2013). Humor, self-attitude, emotions, and cognitions in group art therapy with war veterans. <i>Art Therapy: Journal of the American Art Therapy Association</i> , 30(1), 20–29. https://doi.org/10.1080/07421656.20 13.757758
Critically examine literature pertaining to the efficacy of art therapy as trauma treatment	Findings conclude art therapy is beneficial for variety of demographics regarding trauma processing and development of improved capacity  Improvements in emotional regulation as an outcome of trauma recovery	Systematic review with rigorous inclusion criteria which examined six quantitative studies using clinical trials with controlled conditions and pre/post test measurements	Schouten, K.A., de Niet, G.J., Knipscheer, J.W., Kleber, R.J., & Hutschemaekers, G.J. (2015). The effectiveness of art therapy in the treatment of traumatized adults: A systematic review on art therapy and trauma. <i>Trauma Violence Abuse</i> , 16, 220–228. https://doi. org/10.1177/1524838014555032
Review of literature pertaining to post traumatic stress disorder and trauma	Art therapy is beneficial in PTSD recovery, demonstrating: <ul> <li>ability to process trauma</li> <li>improvements in self-image</li> </ul>	Systematic literature review (n=449) with strict criteria for inclusion (n=20)	Schnitzer, G., Holttum, S., & Huet, V. (2021). A systematic literature review of the impact of art therapy upon post-traumatic stress disorder. <i>International Journal of Art Therapy</i> , 26(4), 147–160. https://doi.org/10.1080/17454832. 2021.1910719
Whether playback theatre can positively impact anxiety, depression and PTSD in hurricane (natural disaster) survivors	Results demonstrate statistically significant improvements in both anxiety and PTSD  Mild to moderate improvements in depression across all participants  Note: participants were from different cultural backgrounds and not homogenous, which provides further validation for these results	Pre/post testing undertaken with participants (n=13) before the first theatre and week after final performance  Anxiety assessment scale: HAM-A  PTSD assessment scale: PCL  Depression assessment scale: QIDS-SR  This study also used brain imaging to collect data on the impact of frontal lobe, amygdala and other areas	Munjuluri, S., Bolin, P., Amy Lin, Y., Garcia, N., Gauna, L., Nguyen, T., & Salas, R. (2020). A pilot study on playback theatre as a therapeutic aid after natural disasters: Brain connectivity mechanisms of effects on anxiety. <i>Chronic Stress</i> , 4. https://doi.org/10.1177/2470547020966561



PURPOSE	RESULT(S)	METHODOLOGY AND/OR METHOD(S)	CITATION
Art therapy intervention for social, emotional, and behavioural difficulties and mental health problems	A statistically significant improvement for social, emotional, and behavioural difficulties was found  Large effect comparatively to control group in both emotional regulation and behaviour  Qualitative data demonstrated that young people also felt they had improvements across all domains, inclusive of mental health	Mixed method study (n=52) with control group (n=29)  Measurement was undertaken through Strengths and Difficulties Questionnaires (SDQ) and a self-rated scoring system	Cobbett, S. (2016). Reaching the hard to reach: Quantitative and qualitative evaluation of school-based arts therapies with young people with social, emotional and behavioural difficulties. <i>Emotional and Behavioural Difficulties</i> , 21(4), 403–415. https://doi.org/10.1080/13632752.2016.1215119
Art therapy and social, emotional, and mental health difficulties for primary school-aged children	Results demonstrate that both children and teachers considered art therapy to assist with classroom engagement and learning  Found art therapy to be helpful in both peer and teacherstudent relationships  Creating safe spaces, designed to be social, fun, and engaging is recommended to promote coping strategies and self-expression	Mixed methods utilising control group for before and after comparisons  Art therapy students (n=25) Control group (n=25)  Focus group included teachers (n=10)	McDonald, A., & Holttum, S. (2020). Primary-schoolbased art therapy: A mixed methods comparison study on children's classroom learning. <i>International Journal of Art Therapy</i> , 25(3), 119–131. https://doi.org/10.1080/1745 4832.2020.1760906
Examine the use of creative art therapies (drama, art, and music) for mental health in young people exposed to school shooting (trauma recovery)	Improvements in the impact of PTSD, anxiety, and depression  Encouraged sense of fun, connection, and safety for those involved  Dramatherapy emerged as most effective treatment for trauma recovery, over music therapy and art therapy  Drama groups were involved in physical movement, improv and playing out of narratives  Theorised that body movement contributed to trauma recovery through healing immobility during the event	Students affected by a school shooting (n=44) were involved in three sessions of two-week summer art therapy camp  Depression was assessed using the Patient Health Questionnaire 8-Item Scale and anxiety via Generalised Anxiety Disorder (GAD-7)  Measurement of post-traumatic stress was through Child's Reaction to Traumatic Events Scale (CTRES)  Impact of Events Scale (Horowitz) was also utilised together with additional measurements pertaining to wellbeing	Hylton, E., Malley, A., & Ironson, G. (2019). Improvements in adolescent mental health and positive affect using creative arts therapy after a school shooting: A pilot study. <i>The Arts In Psychotherapy</i> , 65, 101586. https://doi.org/10.1016/j.aip.2019.101586

PURPOSE	RESULT(S)	METHODOLOGY AND/OR METHOD(S)	CITATION
Comparatively explore the impact of emotion-based directed drawing intervention and a mandala drawing intervention regarding mental health during pandemic	Results demonstrated significant effects on inattention with the drawing group  Participants in the emotion-based directed drawing group showed lower inattention scores at post-test compared to mandala group  The researchers state that both drawing, and mandala interventions demonstrate benefits for positive mental health in elementary school children during lockdown of the pandemic	Random allocated of students (n=22) to the mandala drawing group (n=8) or the emotion-based directed drawing group (n=14)  Interventions occurred over five weeks for a duration of 45 minutes (online, during covid lockdown)  Assessments were undertaken using the Behavior Assessment Scale for Children-3rd edition (BASC III) and the Mindful Attention Awareness Scale for Children	Malboeuf-Hurtubise, C., Léger-Goodes, T., Mageau, G., Taylor, G., Herba, C., Chadi, N., & Lefrançois, D. (2021). Online art therapy in elementary schools during COVID-19: Results from a randomized cluster pilot and feasibility study and impact on mental health. <i>Child and Adolescent Psychiatry and Mental Health</i> , 15(1). https://doi.org/10.1186/s13034-021-00367-5
Efficacy of art therapy on children with mild emotional and behavioural challenges	Results show that creative art therapy interventions improve child wellbeing  Arts practices which demonstrated positive results included story making/telling, puppetry, drawings, and song writing  Art therapies assisted with emotional expression, bonding and relationships, empathy and optimism	Pilot randomised controlled design Qualitative arts-based methods Children with mild difficulties in emotional and behavioural areas (n=62) across different primary school environments (n=4)	Moula, Z., Powell, J., & Karkou, V. (2020). An investigation of the effectiveness of arts therapies interventions on measures of quality of life and wellbeing: A pilot randomized controlled study in primary schools. <i>Frontiers in Psychology</i> , 11. https://doi.org/10.3389/fpsyg.2020.586134
Explore art therapy intervention impact on children and quality of life	Results show improvements in health-related quality of life and child wellbeing for those in art therapy group compared control group  Findings supported at three, six and twelve-month follow-up  Significant improvements in sleep, and emotional and behavioural health	Systematic review with development of pilot program  Outcome measures were assessed using the Health-Related Quality of Life (HRQOL), EQ-5D-Y and Child Outcome Rating Score (CORS)  Cross-over randomised controlled design (random assignment to intervention or control groups)	Moula, Z. (2021). "I didn't know I have the capacity to be creative": Children's experiences of how creativity promoted their sense of wellbeing. A pilot randomised controlled study in school arts therapies. <i>Public Health</i> , 197, 19–25. https://doi.org/10.1016/j.puhe.2021.06.004
Impact of art therapy for adolescents from refugee backgrounds	Results demonstrate significant improvement in emotional health  Some effect on reduction in challenging behaviours  "Findings provide empirical support for school-based creative arts programs specific to refugee young people" (p.72)	Quantitative study utilising the HSCL-25 and Strengths and Difficulties Questionnaire (SDQ) for wellbeing  Participants (n=42) were new arrivals to Australia from Middle East, Africa and East Asia	Quinlan, R., Schweitzer, R., Khawaja, N., & Griffin, J. (2016). Evaluation of a school-based creative arts therapy program for adolescents from refugee backgrounds. <i>The Arts in Psychotherapy</i> , 47, 72–78. https://doi.org/10.1016/j.aip.2015.09.006

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