

Effectiveness of art therapy in mental disorders: a critical review of systematic reviews and meta-analyses

Eficácia da arteterapia em transtornos mentais: revisão crítica de revisões sistemáticas e meta-análises

Eficacia de la arteterapia en trastornos mentales: revisión crítica de revisiones sistemáticas y metaanálisis

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RESUMO

Objetivo: A arteterapia é uma intervenção complementar que favorece a expressão simbólica e a ressignificação emocional. Objetiva-se avaliar sua eficácia no tratamento de transtornos mentais, com base em revisões sistemáticas e meta-análises publicadas entre 2021 e 2025 nas bases PubMed, Scopus, Cochrane Library, entre outras. Dos 183 estudos encontrados, 08 foram incluídos após avaliação metodológica pelo AMSTAR 2. Com mais de 4.500 participantes, os resultados demonstraram redução de sintomas depressivos (SMD = -0,73; p<0,001), da ansiedade em crianças e adolescentes (SMD = -1,42; p<0,002) e efeito terapêutico no transtorno de estresse pós-traumático (SMD = -0,98; p< 0,005). No manejo da esquizofrenia, observou-se redução dos sintomas negativos (SMD = 0,70), positivos (0,41), depressivos (0,61) e ansiosos (0,91), todos com p< 0,001. Conclui-se que a arteterapia é uma abordagem promissora, sendo recomendada sua integração às práticas de saúde mental e às políticas públicas.

Descritores: Arteterapia; Saúde mental; Terapias Complementares

ABSTRACT

Objective: Art therapy is a complementary intervention that promotes symbolic expression and emotional re-signification. The objective is to evaluate its efficacy in the treatment of mental disorders, based on systematic reviews and meta-analyses published between 2021 and 2025 in PubMed, Scopus, Cochrane Library, among other databases. Of the 183 studies found, 08 were included after methodological evaluation using AMSTAR 2. With over 4,500 participants, results showed a reduction in depressive symptoms (SMD = -0.73; p < 0.001), anxiety in children and adolescents (SMD = -1.42; p < 0.002), and a therapeutic effect on post-traumatic stress disorder (SMD = -0.98; p < 0.005). In the management of schizophrenia, reductions were observed in negative symptoms (SMD = 0.70), positive symptoms (0.41), depressive symptoms (0.61), and anxiety symptoms (0.91), all with p < 0.001. It is concluded that art therapy is a promising approach, and its integration into mental health practices and public policies is recommended.

Descriptors: Art therapy; Complementary Therapies; Mental health

RESUMEN

Objetivo: Examinar los efectos de las terapias antioxidantes en la progresión de la ELA. **Método:** Se realizó una revisión integrativa en las bases de datos PubMed, CAPES, Scielo y BVS (Medline, LILACS), utilizando los descriptores DeCS/MeSH "Amyotrophic Lateral Sclerosis", "Antioxidant", "Therapy" y "Efficacy", relacionados mediante el operador booleano "AND". Se incluyeron artículos completos publicados entre 2019 y 2024. **Resultados:** Se identificaron 89 artículos mediante la palabra clave de búsqueda, de los cuales 13 cumplieron con los criterios de inclusión y exclusión. Se citaron terapias alternativas como la inosina, la astaxantina, el dimetilfumato, los flavonoides y la curcumina por su potencial neuroprotector y antioxidante. Sin embargo, la eficacia de la edaravona en la ELA sigue siendo controvertida, a pesar de su aprobación. **Conclusiones:** A pesar de los hallazgos que demuestran una acción neuroprotectora y antioxidante, la escasez de ensayos clínicos sólidos limita nuestra comprensión del impacto de estas sustancias en la progresión de la enfermedad, lo que resalta la necesidad de mayor investigación.

Descriptores: Esclerosis lateral amiotrófica; Terapia antioxidante; Estrés oxidativo

REVISÃO

Introduction

The growing incidence of mental disorders represents a significant challenge for public health worldwide. Recent estimates from the World Health Organization indicate that more than one billion people live with some form of disorder, with depression and anxiety being the most prevalent conditions. This complexity requires not only the continuous improvement of pharmacological treatments and psychotherapies but also the search for innovative therapeutic strategies that can enhance clinical outcomes, especially in cases where verbalization is limited or insufficient for elaborating suffering.^{1, 2-5}

In this scenario, by using artistic processes (painting, sculpture, collage, drama, and dance) as means of non-verbal symbolic expression, art therapy offers individuals the opportunity to access and re-signify emotional and unconscious content that remains inaccessible through verbal language.^{3, 6-9}

Objective

This article aims to conduct a critical and updated review of the scientific literature regarding the efficacy of art therapy as a complementary therapeutic resource in the field of mental health. It seeks to understand its clinical effects in different populations and disorders and its practical applications.

Methods

The present work is configured as a critical narrative literature review, focused on high-quality evidence on the effectiveness of art therapy in mental health. Searches were conducted in comprehensive electronic databases, including PubMed, Scopus, Scielo, Web of Science, and Cochrane Library, covering the period from January 2021 to June 2025.

The inclusion criteria were: (1) systematic review or meta-analysis design; (2) clinical population with confirmed psychiatric diagnosis; (3) investigation of art therapy as the main or complementary intervention; and (4) presentation of quantitative measures of efficacy (e.g., Standardized Mean Difference - SMD, 95% Confidence Interval - CI 95%, Odds Ratio - OR). Articles that did not fit the above design and those with recognized low methodological rigor were excluded.

The following descriptors (combined with Boolean operators AND/OR) were used: "Art Therapy", "Complementary Therapies", "Mental Health", "Psychiatric Disorders", "Depression", "Anxiety", "PTSD", "Schizophrenia", "Systematic Review," and "Meta-analysis."

Methodological quality was evaluated using the AMSTAR 2 (A Measurement Tool to Assess Systematic Reviews 2) tool, providing an analysis of the robustness of the evidence presented. This process aimed to identify patterns of efficacy, limitations, and gaps in the literature, allowing for an in-depth synthesis of the findings and the formulation of evidence-based conclusions.¹⁰

Results

The initial search resulted in 183 studies, of which 08 were included with systematic review or meta-analysis design, covering over 4,500 participants with a mental disorder diagnosis. The analyzed interventions varied among visual art therapy, drama therapy, music, and creative calligraphy, reflecting the diversity of expressive approaches. The most investigated disorders were depression, anxiety, post-traumatic stress disorder (PTSD), and schizophrenia.

Table I presents a comparative synthesis of the main included studies, highlighting the type of disorder, intervention, number of randomized controlled trials, effect measures, and main conclusions.

Table I - Summary of Evidence on Art Therapy in Mental Disorders

Author (Year)	Disorder	Type of Intervention	N total (RCTs)	SMD (CI 95%)	Main Conclusion
Pan et al. (2024)	Depression in adults	Visual art therapy	15 RCTs	-0,73 (-1,07 a -0,39)	Reduction of depressive symptoms in adults <65 years
Ren et al. (2024)	Anxiety in children	Group art therapy	6 RCTs	-1,42 (-2,33 a -0,51)	Improvement in situational anxiety in children/adolescents
Liu et al. (2023)	Depression in adolescents	Free techniques (collage, painting)	12 RCTs	-0,72 (-1,28 a -0,16)	Effects with greater efficacy in spontaneous approaches
Fang et al. (2024)	Post-Traumatic Stress Disorder Traumático	Symbolic and non-verbal	5 RCTs	-0,98 (-1,63 a -0,33)	Strong therapeutic effect, especially in severe trauma
Chen et al. (2023)	Schizophrenia	Multimodal (visual, music, etc.)	31 RCTs	Neg (0,70); Pos (0,41); Dep (0,61); Ans (0,91)	Broad improvement in symptoms Exportar para as Planilhas

Source: Own authorship.

Legend: SMD=Standardized Mean Difference; CI 95%=95% Confidence Interval; Dep=Depressive symptoms; Neg=Negative symptoms; Pos=Positive symptoms; Anx=Anxiety.

In the context of depression in adults, a recent meta-analysis of 15 randomized controlled trials (RCTs) by Pan et al. (2024) found a significant effect of visual art therapy in reducing depressive symptoms (SMD=-0.73; CI 95%:-1.07 to -0.39; p<0.001). Interventions up to 12 weeks and applied in adults under 65 years old showed greater efficacy, suggesting a more acute response in younger populations.²

For children and adolescents with anxiety, the meta-analysis by Ren et al. (2024), which included 6 studies, demonstrated an improvement in anxiety symptoms, especially in aspects of situational anxiety (SMD=-1.42; CI 95%:-2.33 to

-0.51; $p < 0.002$). Group interventions had a greater impact, indicating that the relational and social support component of collective artistic production can favor emotional self-regulation.³

In depressive disorder in adolescents, Liu et al. (2023) identified positive effects (SMD=-0.72; CI 95%:-1.28 to -0.16; $p=0.01$) in a meta-analysis with 12 RCTs. Freer techniques, such as collage, painting, and sculpture, were more effective than directed approaches, possibly because they allow for greater spontaneity and authentic expression.⁴

In the case of PTSD, a systematic review and meta-analysis of 5 RCTs by Fang et al. (2024) revealed a strong therapeutic effect (SMD=-0.98; CI 95%:-1.63 to -0.33; $p < 0.005$) in adults exposed to severe trauma. The best results were observed in interventions with non-verbal symbolic activities, which can facilitate the elaboration of traumatic memories without the need for direct verbal confrontation.⁵

Finally, in the management of schizophrenia, the meta-analysis by Chen et al. (2023), which analyzed 31 RCTs, reported significant reductions in negative symptoms (SMD=0.70; CI 95%:0.45 to 0.95; $p < 0.001$), positive symptoms (0.41; CI 95%:0.22 to 0.60; $p < 0.001$), depressive symptoms (0.61; CI 95%:0.39 to 0.83; $p < 0.001$), and anxiety symptoms (0.91; CI 95%:0.68 to 1.14; $p < 0.001$). Art therapy promoted improvement in social functioning and medication adherence, especially when integrated into multidisciplinary care schemes, reinforcing its role as an adjunct in the global therapeutic plan.⁶

Discussion

The compiled findings consistently indicate that art therapy has a relevant role in expanding therapeutic resources aimed at mental health, especially in contexts of intense psychological distress and difficulties in symbolization. Its clinical power lies in creating an intermediate space between the symbolic and the sensible, where the individual can experience, express, and transform complex affections through image, color, and form.⁷⁻⁹

From a psychoanalytic perspective, art therapy operates through sublimation, as described by Freud as one of the possible destinies of instinctual drives. The transformation of the drive into cultural or aesthetic production allows for the symbolic elaboration of desire and anguish in a socially acceptable and constructive manner. Spontaneous artistic production is configured as a living metaphor of psychic conflict, and the therapist assumes a position of listening and welcoming, allowing the patient to attribute meaning to their own work.^{2,4,8}

The Expressive Therapies Continuum model, proposed by Kagin and Lusebrink, offers a theoretical structure that justifies the therapeutic effects of art therapy by organizing creative processes into hierarchical levels: sensory-motor, perceptual-affective, symbolic, and cognitive. This approach recognizes that different techniques activate distinct psychological functions, making it possible to adapt the intervention to the patient's specific needs. For example, activities with clay or collage predominantly activate the sensory-motor level, favoring emotional regulation in cases of intense anxiety or states of psychotic agitation, while visual narrative can engage the cognitive level.³⁻⁵

In the field of Cognitive-Behavioral Therapy, art therapy can be incorporated as a visual representation of dysfunctional thoughts and feelings, which allows the patient to distance themselves from their internal content, facilitating critical analysis, cognitive restructuring, and increased metacognition about their thinking and behavior patterns.^{2,3,5}

Furthermore, these interventions favor the engagement of populations that may be resistant or have difficulties with the traditional verbal approach. The image, in this context, functions as a pre-verbal and non-linear means of expression, accessing archaic emotional memories and allowing catharsis without the need for immediate logical or narrative organization.^{2, 7-9}

Although the results are promising, it is important to consider the heterogeneity of psychiatric disorders, which hinders the generalization of the findings and demands greater standardization of protocols and techniques. Moreover, studies with long-term follow-up are still rare, which prevents definitive conclusions about the durability of the therapeutic effects.^{3,7,}

On the other hand, the advancement of innovative approaches such as digital art therapy and the use of immersive technologies is highlighted. Tele-art therapy, which gained strength during the COVID-19 pandemic, can increase therapeutic engagement, especially among young people, and also expand access to treatment for geographically isolated populations or those with reduced mobility. These innovations point to promising avenues in the democratization of mental health care.⁶

Final Considerations

In summary, art therapy emerges as a highly promising therapeutic intervention in the field of mental health. Reinforced by a robust theoretical foundation—rooted in psychoanalytic, cognitive, and developmental models—and, crucially, validated by a growing body of recent systematic reviews and meta-analyses, it demonstrates substantial clinical efficacy in reducing symptoms and promoting well-being across a diverse range of mental disorders.

Given the solidity and consistency of the evidence presented, it is urgent that art therapy be officially recognized and incorporated into Brazilian clinical guidelines and public mental health policies. Its inclusion in the Unified Health System devices—especially in the Psychosocial Care Centers, school mental health programs, and psychosocial care networks—represents a necessary step towards the democratization of care, the strengthening of integrative approaches, and the expansion of therapeutic possibilities centered on the subjectivity and dignity of the suffering individual.

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