



Art as a Therapeutic Tool in Depressive Disorders: a Systematic Review of the Literature

Fernando Mateus Viégas Brandão¹  • Carolina Ventura Silva²  •
Kleber Roberto da Silva Gonçalves de Oliveira³  • Janari da Silva Pedroso² 

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Abstract

Different alternative forms of therapy have been studied in relation to their applicability and effectiveness. The use of art therapy in the treatment of depressive disorder is an example frequently employed in several countries. The aim of this research was to identify and discuss which artistic techniques have been applied most frequently in the treatment of depressive disorders and what their main effects are. The research was conducted in the MEDLINE/PubMed, American Psychological Association (APA) and Web of Science databases. The articles were selected through the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA protocol). 14 articles were selected, among which the main techniques of art therapy used were: manual work (drawing, painting, and modeling), music, poetry, photography, theater and contemplation of art pieces. It was found that most of the researches are European and as a field of knowledge they depart mainly from medicine. Of the 14 researches of this review, only two failed in the use of art therapy techniques as a therapeutic tool. It can be understood that art therapy is a safe and reliable tool for treatment not only of depression but also of other mental disorders.

✉ Fernando Mateus Viégas Brandão
viégasmateus@hotmail.com

Carolina Ventura Silva
carolinaventura.psicologia@gmail.com

Kleber Roberto da Silva Gonçalves de Oliveira
drkrsgo225@gmail.com

Janari da Silva Pedroso
pedrosoufpa@gmail.com

¹ Faculty of Medicine, State University of Pará, Angustura Street, 2219, 66087-310, Pedreira, Belém, PA cep 66087-310, Brazil

² Faculty of Psychology, Federal University of Pará, Augusto Corrêa Street, 1 – Guamá, Belém, PA cep 66075-110, Brazil

³ Faculty of Medicine, Federal University of Pará, Augusto Corrêa Street, 1 - Guamá, Belém, PA cep 66075-110, Brazil

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Background

The World Health Organization (WHO) estimates that today 350 million people worldwide are living with depression [1]. The outlook is that by 2020, the disease is the second most prevalent in the world, only surpassed by cardiovascular diseases [2]. In Brazil, it is estimated that 9.7% of adults present some degree of this disease [3]. Suicide is the most tragic outcome of this pathology and today, every 40 s, a person takes his or her own life [4].

Depression treatment is a challenge given the complexity of the disease and multivariate approach it requires. This may involve psychotherapy, qualified hearing and/or use of psychotropic drugs [5]. However, one of the major problems faced is non-adherence to treatment, on which main reasons are: adverse effects of medications (nausea, vomiting, dry mouth, drowsiness, weight gain and worsening depressive symptoms in the first days of medication use); fear of relying on medicines; the poor communication with prescriber and lack of psychosocial support [6, 7].

The search for therapeutic techniques that act as adjuvants of this therapy, as well as facilitate the adhesion and social reintegration of patients with mental disorders is a major challenge for those who work in the area. Among these tools, art has been one of the most studied since the nineteenth century by psychiatrists such as Max Simon [8] in France, Carl Gustav Jung [9] in Switzerland and Nise da Silveira [10] in Brazil, as well as other professionals who believe this is a form of therapy for patients with mental disorders [11].

Dance, music and theater are tools frequently used as an alternative treatment for psychiatric disorders [12–14]. With these techniques, patients become more resilient and can understand better their disease, in order to understand and potentiate their treatment process, so that the individual can modify as he or she experiences and faces illness [15–17].

We can see art as an important instrument in the promotion of well-being and clinical improvement of patients. Nevertheless, a more detailed study of its specific repercussion in certain pathologies such as depression is still necessary. Thus, the present research aimed to identify and discuss, through a Systematic Review of literature, which artistic techniques are most used as therapeutic tools in depressive disorder. Articles published between the years of 2013 to 2017 were analyzed in order to verify the main effects of therapies on the patients, as well as the areas of knowledge and the countries which are producing more materials on the subject.

Methods

The study is a Systematic Review of Literature, in which advanced searches were conducted in the electronic databases Medical Literature Analysis and Retrieval System Online (MEDLINE/PubMed), APA and Web of Science, using the following descriptors of the Medical Subject Headings (MeSH) and their synonyms: (Depress AND Art), (Depress AND Body Language) and (Depress AND Clown).

We included studies in English published in the period from 2013 to 2017, with a sample composed by humans and using the descriptors Art, Body Language and Clown in the evaluation of the therapeutic effect in depressive disorder, being of the quantitative type and of empirical design. Experimental studies in animals, literature reviews, purely qualitative evaluations, as well as studies that do not analyze the therapeutic effects related to mentioned descriptors, were excluded.

Data was stored and tabulated in a spreadsheet application and in a word processor. The follow up of searches was archived in a field diary that ensured the reliability in the selection of articles and the fulfillment of inclusion and exclusion criteria. The following items were cataloged for further evaluation: Title of article, keywords, year of publication, database in which it was found, journal in which it was published, area of knowledge to which the article belongs, research objective, context where was conducted (hospital, school, support house), country, type of research, instruments used, main results, conclusion, statistical tests and observations of authors of the systematic review about the article in question. These items

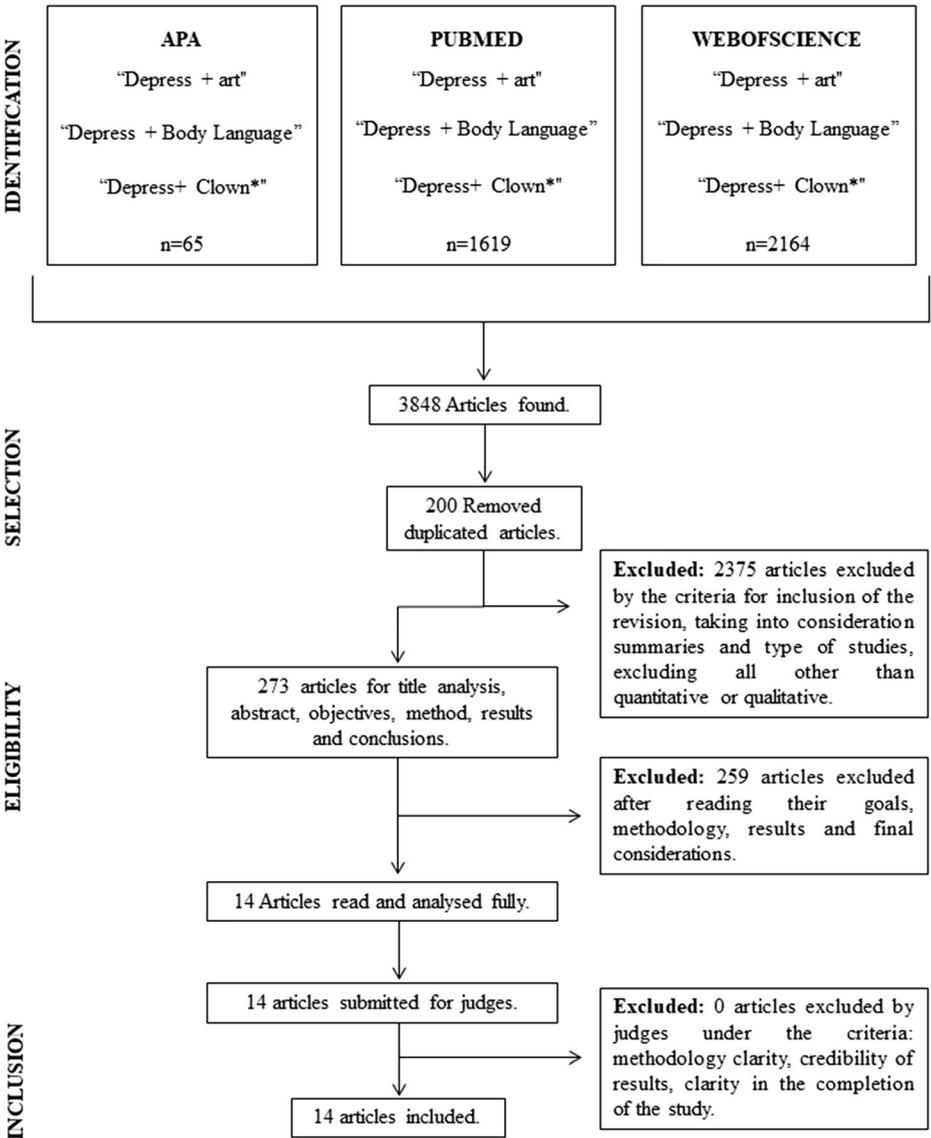


Fig. 1 PRISMA flow diagram of the screening process

were chosen based on what has been pointed out in literature as relevant to evaluate a scientific publication, having as main base the protocol PRISMA [18], as can be seen in Fig. 1.

After being selected and tabulated, the articles passed, one by one, by analysis of three judges, who evaluated whether the research met the criteria of reliability and scientific validity. To do so, they answered a table with the following 5 items: “Is the research problem clear?” (Problem); “Are the study objectives related to the question studied?” (Objective); “Is the method clearly described and achieves objectives?” (Method); “Are the results compatible with the method and deserve credibility?” (Results); “Should the article be included? If not, what is the reason for the exclusion?” (Included). Each of these questions was answered with “yes” or “no” by the judges, being later converted into “one” for positive answers and “zero” for negative answers.

The answers of the judges were used for statistical calculations using the Kendall Tau-b coefficient and Cronbach’s alpha, both performed in statistical software. Kendall’s tau-b coefficient is a measure of agreement between two sets of classifications relative to a set of objects or experiments, which evaluated the reliability of judges’ analysis [19]. The correlation was significant when the values were greater than or equal to 0.01, indicating the consistency of evaluations among established attributes. Cronbach’s alpha is a coefficient to measure the reliability of judges’ choice [20]. As the result was classified as relevant, the reliability index was greater than 0.7.

The structure of the literature review followed the criteria established in the PRISMA protocol, which guides the organization of quantitative results in a flowchart composed of four stages: identification, selection, eligibility, and inclusion. In Table 1, the flowchart for selection of articles studied, which was concluded with the selection of 14 articles for analysis.

Except for the relationship between “Method” x “Objective” and “Problem” x “Method”, both with 113, all other bivariate correlations were significant, indicating a consistency of judges’ evaluations among established attributes. Regarding the evaluation of Kendall Tau-b coefficient, of 14 articles sent to the judges’ review, all were included in the analysis of the review, that is 100%. The reliability of the three judges’ answers is positive in relation to 5 evaluated items since it assumes the value of 0.805, greater than 0.8.

Table 1 Kendall tau-b correlation coefficient

			Problem	Objective	Method	Results	Included
Kendall tau-b	Problem	Coefficiente de correlação	1.000	.477	-.113	.548*	.354
		Sig (2 extremidades)	.0	.077	.683	.048	.202
		N	14	14	14	14	14
	Objective	Coefficiente de correlação	.477	1.000	.152	.594*	.813**
		Sig (2 extremidades)	.077	.0	.572	.028	.003
		N	14	14	14	14	14
	Method	Coefficiente de correlação	-.113	.152	1.000	.372	.240
		Sig (2 extremidades)	.683	.572	.0	.180	.386
		N	14	14	14	14	14
	Results	Coefficiente de correlação	.548*	.594*	.372	1.000	.645*
		Sig (2 extremidades)	.048	.028	.180	.0	.020
		N	14	14	14	14	14
	Included	Coefficiente de correlação	.354	.813**	.240	.645*	1.000
		Sig (2 extremidades)	.202	.003	.386	.020	.0
		N	14	14	14	14	14

* The correlation is significant at the 0.05 level (2 extremities)

**The correlation is significant at the 0.01 (2 extremities)

Results

Table 2 corresponds to the summary of 14 articles, which were categorized in following items for analysis: Study (Authors + research title), the country where research was carried out, applied art therapy technique, the area of knowledge, main results and conclusions.

According to Table 2, when reviewing the countries from which publications originated, it could be seen that most of the research ($n = 9$) were carried out in European regions. A similar result was found when evaluating the main areas of knowledge that published articles on the subject during the period studied, in which medicine is highlighted in the number of publications ($n = 9$). The most cited therapeutic tools ($n = 8$) are manual work, such as drawing, painting, sculpture and modeling, and second ($n = 3$) music. Few studies ($n = 2$) did not have statistically significant results regarding the efficacy of therapeutic techniques.

Discussion

The use of art as a therapeutic strategy originated in Europe, which also housed great researchers like Carl Gustav Jung [9], Max Simon [8], Cesare Lombroso [35], among others, as demonstrated by Ciasca [11] in her dissertation in which she made an extensive review of the history of art as a therapeutic tool.

The trend of medical publications has lasted for many years and the popularity of the application of art as a diagnostic and therapeutic tool, especially for mental disorders, has led Lippin [36] to inaugurate the term medicine of arts and to propose this as a new medical specialty.

In addition to the techniques used in art therapy, the most cited therapeutic tools ($n = 8$) are manual work, such as drawing, painting, sculpture and modeling [21–24, 27–29, 35]. Most of the studies obtained positive results in their analyzed variables, being only the works of Montag et al. [21] and Geue et al. [22] those who did not present satisfactory results in their studies.

The research of Montag et al. [21], did not obtain a statistically significant reduction in the parameters of depression, in other words, there was no significant decrease in initial values of the scales in relation to the final ones. The evaluation process was based on Scale for the Assessment of Negative Symptoms (SANS), Scale for Assessment of Positive Symptoms (SAPS), Calgary Depression Scale for Schizophrenia (ECDE), and Overall Assessment of the DSM Scale of Functioning-4-TR. Despite this, it achieved satisfactory results in the evaluation of the secondary parameters of the disease, such as the levels of emotional awareness and in the capacity of reflection on the mental states of others by the patients, which allowed to conclude that therapeutic technique was satisfactory.

The study by Geue et al. [22], which also did not have statistical significance in the parameters studied such as psychological stress and ability to deal with disease (evaluated by Freiburg Questionnaire on Coping with Illness, Perceived Adjustment to Chronic Illness Scale, Hospital Recognition and Depression Scale), recognizes that this result contradicts several previous works. It also recommends that studies that are carried out in this line should present randomized designs and concentrate on evaluating which interventions are most effective and at what stage of treatment (hospitalization, outpatient, rehabilitation), art therapy is most useful.

Table 2 Characteristics of included studies

Study	Country	Art therapy technique	Area of knowledge	Main results	Conclusions of studies
Montag et al. [21]	Germany	Painting and sculpture with clay	Medicine	There were no differences between groups regarding depressive symptoms. Patients in the ART group showed significant improvement in levels of emotional awareness	Alternative forms of treatment were beneficial for the treatment of depressive symptoms in patients with schizophrenia
Geue et al. [22]	Germany	Drawing, painting, and writing	Medicine	No significant differences were found between the “intervention” and “control” groups in any of the studied moments nor on the variants surveyed	The results contradict the preliminary studies. Further research is needed that uses a randomized controlled trial design and focuses on assessing the efficacy of intervention’s form
Crone et al. [23]	United Kingdom	Poetry, drawing, ceramics, paintings, and mosaics	Psychology	There was a greater participation of women in the conclusion of the therapy and a greater abandonment by the young people. In the group that concluded activities, there was a significant improvement in well-being	The findings reveal that artistic interventions were effective in promoting well-being among women, the elderly, and people with lower socioeconomic conditions
Lefèvre et al. [24]	France	Photograph, painting, drawing, modeling, and sculpture of clay	Psychology	Art therapy sessions reduced patients’ overall distress by 7%. There was a significant reduction in all of the symptoms: pain, anxiety, evil, fatigue, sadness, and depression. A study of significant correlations indicated that technical satisfaction, aesthetic beauty, and leisure are involved to varying degrees in symptom reduction	The benefits of art therapy in reducing suffering in the palliative context are confirmed
Alfano et al. [25]	Brazil	Not reported	Medicine	The analysis of the association of quality of life scores with specific alternative medicine modalities revealed some potential associations (especially for dietary supplements, art therapy, psychotherapy, and prayer)	Women with metastatic breast cancer often use alternative medicine to treat cancer and/or its symptoms. Biological-based practices appear to be particularly important in Brazil

Table 2 (continued)

Study	Country	Art therapy technique	Area of knowledge	Main results	Conclusions of studies
Kokavec et al. [26]	Australia	Not reported	Psychology	Group data revealed a significant reduction in psychiatric morbidity and better psychological adjustment. When divided into degrees of psychiatric morbidity, a significant reduction in the reporting of symptoms of anxiety, depression and irritability, mental confusion and somatic symptoms	A structured community-based psychosocial program is beneficial for women struggling to come to terms with the emotional consequences of breast cancer at all stages of recovery
Kim et al. [27]	Korea	Music and manual works	Medicine	The mean score for the geriatric depression scale showed a reduction after the intervention (14.87 ± 7.69) versus the previous score (16.31 ± 7.73)	The program reduced the levels of depression in the elderly with Alzheimer's disease
Mandić-Gajić et al. [28]	Serbian	Drawing and painting	Medicine	The patient's drawings and group protocols show clinical improvement from the reduction of depressive themes and an increase in the frequency of human figure drawings and self-confidence	The art therapy group enables visual expressions of emotions, develops creative potential, reduces depressive symptoms, which facilitates integration into the therapeutic process of schizophrenia
Hamre et al. [29]	Germany	Painting, drawing, and sculpture of clay	Medicine	There was a significant improvement in all evaluated points ($p < 0.001$ for all pre-post comparisons)	Outpatients who received anthroposophic treatment for chronic diseases showed improvement of symptoms and quality of life
McCabe et al. [30]	Ireland	Artistic exposure observation at the patient's choice through a remote camera	Medicine and nursing	There was a reduction of anxiety after transplantation. Data on depression were similar, but only statistically significant 1 day after transplantation. Anxiety showed a significant reduction at all points in the study. The experience / helped patients to know how to handle isolation better	There were positive effects of the introduction of artistic interventions quality of life as well as levels of anxiety, depression, and experience of patients who had undergone stem cell transplantation
Armstrong et al. [31]	United Kingdom	Painting, drawing, and collage	Psychology	The responses of the questionnaires were more positive after the intervention, and 8 of the 10 mothers showed an improvement in postpartum depression and in the relationship with their children	The groups made a positive difference in the lives of mothers and infants, which can be demonstrated in positive quantitative outcomes as well as positive feedback

Table 2 (continued)

Study	Country	Art therapy technique	Area of knowledge	Main results	Conclusions of studies
Rawtaer et al. [32]	Singapore	Tai Chi, music and contemplation of art pieces	Medicine	There were significant reductions in the scales scores on depression and anxiety in the single intervention phase, which remained significant at week 52, after completion of the combined intervention phase, relative to the baseline	Participating in these psychosocial interventions led to a positive improvement in the symptoms of subsyndromal depression and subsyndromal anxiety in these elderly individuals over a year
Jani et al. [33]	Ethiopia	Music and theatre	Medicine	In women: Reduction of 60% of aggressive behaviors and 50% of general mental health problems (depression, anxiety, and attention problems). For men: There were no significant reductions in mental health problems	The psychosocial intervention was associated with increased knowledge and acceptance of HIV services. There was a reduction in mental health problems in adolescents
Oklan & Henderson. [34]	United States	Music	Psychology	The intervention increased the use of adaptive coping strategies, measured by the Adolescent Coping Orientation to Experienced Problems (A-COPE) and reduced the psychiatric symptoms measured by the Symptom Checklist-90-R	The study suggests a promising strategy, especially for the mental health of adolescents who abuse inhalants. However, one should consider the limitations of a case study for a more generalized analysis

Among researches that obtained positive results in the study of the influence of manual labor, we highlight the studies of Lefèvre et al. [24] e Crone et al. [23] which, in addition to the technique already mentioned, also used photography and poetry, respectively, as therapeutic instruments. The first, besides evaluating depressive symptoms, also evaluated other psychological components such as pain, anxiety, evil, fatigue, and sadness, obtaining a significant reduction in all parameters.

Another technique of art therapy that gained prominence in this study was music, which was the second most used technique ($n=3$) in the articles [27, 32–34]. This technique has also been shown to be an excellent therapeutic option, including for the control of other mental disorders such as chemical dependence [34]. The study by Jani et al. [33] points out that, since the positive results were limited to the female population studied, the men who participated in the study were not included, which was attributed mainly to greater difficulties they face in terms of work and housing.

Another important fact is that in almost all studies, music was used along with other artistic interventions, such as manual work [27], theater [33] and even Tai Chi [32]. This last study also brought the observation of works of art as a therapeutic tool, which is presented separately as an art therapy technique by McCabe et al. [30]

The study of McCabe et al. [30] presents a differentiated perspective in relation to others in this review, both in relation to application method and data analysis. In this research, participants hospitalized for transplantation could choose from a menu of nine art channels that transmitted real images from partner museums through remote cameras with themes of nature, places of personal meaning, abstract visual or classic works of art that were exhibited in these galleries. The results were excellent, mainly showing a significant reduction in anxiety and depression levels, however, long-dependent effects were not maintained for long periods of hospitalization, lasting from 1 to 7 days after transplantation, on anxiety and only 1 day on depression.

In view of the results presented, it can be seen that art therapy is an effective tool for the treatment of depressive disorders, as well as other psychological and psychiatric disorders such as anxiety disorders and chemical dependence. It can be pointed out that this is a safe tool to be used in the treatment of depression, being its choice made in an individualized and conscious way by the health professional along with the patient.

Conclusions

Through this study, it was possible to verify and discuss the main artistic techniques that are used in the treatment of depressive disorder. Medicine is the area of knowledge that has most searched for art therapy as a form of treatment for depression and Europe is still the great pole of knowledge and research on the subject. In addition, among the main techniques of art therapy used today are manual works (drawing, painting, and modeling, usually with ceramics and clay), music, poetry, photography, theater and contemplation of art pieces.

The lack of methodological uniformity and lack of valuable information about the analyzed characteristics (Problem, Objective, Method, Results, Included) of the studies made it difficult to deepen the investigation, which could result in a possible limit to this article. Nevertheless, it was possible to understand by reading and analyzing the data, that art therapy is a safe and reliable tool for the treatment not only of depression but also of other mental disorders.

Data Availability Please contact the author for data requests.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.

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Fernando Mateus Viégas Brandão is a graduated in Medicine at the State University of Pará, 10th period. Member of the Health Development Laboratory of the Federal University of Pará. Member of Psychiatry Academic League. He currently conducts research in the areas of: art therapy and mental disorders; personality structure and attachment.

Carolina Ventura Silva is a graduated in Psychology at the Federal University of Pará, 9th period. She is a scholarship holder of the Institutional Program of University Extension Scholarships at the Bettina Ferro de Souza Hospital, within the Ambulatory of Anxiety and Depression. Member of the Health Development Laboratory, where the areas of research are temperament of babies in institutional contexts, psychological evaluation, psychopathology and art therapy work.

Kleber Roberto da Silva Gonçalves de Oliveira is an assistant professor of the Medicine Course at the Federal University of Pará and University Center of Pará and Medical Psychiatrist at the State Public Foundation Hospital de Clinicas Gaspar Vianna. Doctorate at the Graduate Program in Clinical Psychology. Currently is Psychiatry Paraense Association president.

Janari da Silva Pedroso is an associate professor III of the Federal University of Pará; Productivity fellow teacher CNPq, carries out his academic activities at the Faculty of Psychology, Graduate Program in Theory and Behavior Research and Graduate Program in Psychology. Adviser of masters and doctorate. It develops researches with the themes: human development in biopsychosocial aspects, psychotherapeutic interventions, family and mental health studies, psychopathological processes and diagnostic evaluation of developmental and personality disorders with the different methods of psychodiagnostic evaluation (psychological tests, interviews, development scales and intelligence). Coordinates the development and health laboratory where research is centered on human development (childhood, elderly and family), extension activities are developed in the program of Ambulatory Anxiety and Depression at Bettina Ferro Hospital of the Federal University of Pará and teaching in undergraduate and postgraduate teaching activities, academic orientation and internship supervision.