ELSEVIER

The Arts in Psychotherapy 34 (2007) 256–262

THE ARTS IN PSYCHOTHERAPY

A review of research and methods used to establish art therapy as an effective treatment method for traumatized children

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Abstract

Art therapy uses creative expression to provide individuals with a safe outlet for expressing thoughts and emotions to successfully facilitate recovery from psychological distress. The present study reviews the efficacy of art therapy as a method for treating traumatized children. Published, peer-reviewed literature that focused exclusively on the use of art therapy for treating children who had experienced a traumatic event was included in this review. This study found that art therapy was used successfully in a variety of contexts as a treatment regimen for traumatized children. Several methodological and statistical issues are discussed and suggestions for future research are provided in this review.

Keywords: Art therapy; Trauma; Children; Methodology; Review

Art therapy is an intervention method that traditionally has drawn from psychoanalytic theory for its framework and procedures. A breadth of current art therapies, informed by a variety of theoretical paradigms, share a common procedure that uses creative art as a method for promoting expression and healing. Modern art therapists apply a procedure of creative art therapy that is appropriate to the psychosocial characteristics and psychological needs of their clients. As applied specifically to traumatized children, art therapy often (but not exclusively) includes the development of a therapist–client relationship through the creation of art, frequently coupled with storytelling (Coleman & Farris-Dufrene, 1996; Moschini, 2005; Simonds, 1994). During the initial therapeutic sessions, a piece of art is completed. During this phase, the role of the therapist is to facilitate the creation of the art by providing appropriate tools (artistic media) and encouragement. When working with children, pencil drawing, coloring, painting, and clay are the most common media. As the sessions progress, the child might be asked to tell a story about his or her piece of artwork and the therapist facilitates the interpretation of that story. As the story unfolds, fantasy and reality are teased apart, leading to self-discovery and cathartic release, and the child is assisted in coping with the reality of the trauma and the accompanying emotions (Avstreih & Brown, 1979; St. Thomas & Johnson, 2002).

Although the practice of art therapy has been in existence for many years, until very recently, the efficacy of art therapy has not been empirically addressed (Reynolds, Nabors, & Quinlan, 2000). One reason cited for the absence of efficacy research is a lack of art therapists trained in experimental research methods (Tibbetts, 1995) and a historical lack of doctoral-level clinical psychologists trained in art therapy (Wadeson, 1995). Another obstacle to pursuing efficacy research is difficulties inherent in measuring outcome variables. Some art therapists maintain that the outcomes of

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doi:10.1016/j.aip.2007.03.001

interest to them, which tend to be abstract psychological constructs, may not be adequately measured by empirical methods (e.g., self-actualization) (Wadeson, 1995; Wolf, 1995).

Despite these obstacles, several art therapists are pursing empirical efficacy research. A recent review uncovered five published randomized controlled clinical trials, four controlled (nonrandomized) clinical trials, and another eight single group (with no control group) studies that tested the efficacy of art therapy (Reynolds et al., 2000). Reynolds et al. explicated several experimental methods that could be employed to study the efficacy of art therapy. Furthermore, the authors noted a variety of outcome measures effectively used, which included measuring symptom reduction and overt behaviors, as well as abstract psychological constructs. For example, Fryrear (1988, cited in Reynolds et al., 2000), measured self-actualization, while several other studies measured constructions such as self-esteem. The studies Reynolds, et al. reviewed were quite diverse in sample demographics, art therapy media, length of therapy, and outcomes measured. Moreover, they varied with regard to the amount of information the researchers provided. Consequently, the authors of this review concluded that, although art therapy appears to demonstrate efficacy, in some cases the results were mixed.

In conclusion, Reynolds et al. (2000) called for more focused research in this area, specifically mentioning efficacy evaluation when art therapy is used to treat children who have experienced trauma. This gap in the literature is particularly unfortunate because many art therapists believe that the process of art therapy is especially successful when it is used with their youngest clients, because children are more willing to partake in imaginative articulation than adults (Avidar, 1995; Clements, 1996; Davis, 1989; Kozlowska & Hanney, 2001; Pifalo, 2002; Prager, 1995; St. Thomas & Johnson, 2002).

The literature review

The present study is a review of the published research concentrating on the efficacy of art therapy as a treatment regime for traumatized children. The purpose of this review is to provide a summary of the existing literature and to provide suggestions for future research aimed at closing the gap in the efficacy studies identified by Reynolds et al. (2000). To obtain the most complete snapshot of the state of the literature, our review will include both quantitative and qualitative research.

Literature search procedure

The articles used in this review were identified by an OCLC FirstSearch PsychInfo search conducted on August 30, 2005. Keywords “art and therapy,” “children,” “trauma,” in “English,” and in “peer reviewed journal” were selected. These search terms narrowed the list of articles to those of interest (studies of art therapy used to treat conditions of childhood trauma) and those that have already been screened for quality by the peer review process. This search yielded a total of 26 articles. On August 1, 2006 a second search, using OCLC FirstSearch PsychInfo, included a combination of keywords used previously, in a process that limited the search to “art therapy” as a subject, “emotional trauma” as a subject, and children as a keyword. These multiple search criteria were used in an effort to obtain and include the maximum number of articles possible.

Categorization and coding of article content

The articles were obtained and categorized in terms of the demographics of the sample, the research methodology, and the non-statistical and/or statistical findings. Fifty-three percent of the 26 articles could not be used because they were studies that used multiple therapeutic approaches or studies that focused on outcomes for someone other than the child (e.g., the art therapist himself or herself, as opposed to the efficacy of art therapy as a therapeutic method[1], or the parents of the child).

[1] When conducting an empirical literature review, such as a meta-analysis, it is common to find that many articles are excluded for various methodological reasons (Rosenthal, 1991). In this case, there were two major reasons some articles were excluded—either because the focus was on therapist training rather than on client improvement or because more than one therapeutic approach was used. When more than one therapeutic approach was used, it was impossible to determine if client improvement was due to art therapy, some other therapeutic approach (such as play therapy, for example), or to the unique contribution of both approaches. In the present study, the question asked pertained to client improvement as a result of the exclusive delivery of art therapy.

Table 1
Summary of sample demographics

Author (year)	Diagnosis	Sample size	Age	Gender
Avidar (1995)	Not diagnosed	2	8 and 10	G/B
Berberian (2003)	Not diagnosed	3100	18	G/B
Buck (2002)	Not diagnosed	1	5	B
Chapman et al. (2001)	PTSD	85	11	29% G/71% B
Clements (1996)	Sexually and physically abused	6	6–17	4G/2B
Davis (1989)	Grief	2	6–10	G
Gregorian et al. (1996)	PTSD, chronic depression, fears/phobia	7	5–11	G/B
Howie et al. (2002)	Grief	10	Infants to teenagers	6G/4B
Kozlowska and Hanney (2001)	PTSD, conduct disorder, depression	5	4–8	4G/1B
Pifalo (2002)	Sexually abused	13	8–17	G
Prager (1995)	Not diagnosed	60	5–18	G/B
Roje (1995)	Symptoms of PTSD	25	4–11	B

Results

Sample demographics from the studies relevant to this review are displayed in Table 1. Using art therapy as a treatment method for childhood trauma was the focus of this study and the nature of the trauma these children experienced was categorized. The breadth of the traumatic events covered by the literature included childhood physical and sexual abuse, exposure to the violence of war, the World Trade Center 9-11 terrorist attacks, exposure to gun violence within a community, and grief following the loss of a loved one. Seventeen percent of the studies included samples of children who met the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV-TR; American Psychiatric Association, 2000) diagnostic criteria for post-traumatic stress disorder. Fifty percent of the studies included samples of children who were not specifically diagnosed with a disorder but who had experienced some specified form of trauma (e.g., physical abuse, sexual abuse, or grief). Thirty-three percent of the studies included samples of children who had experienced trauma but the nature of the traumatic experience was unspecified or unclear in the research report.

The degree of structure and formality of the art therapy contexts varied widely across studies. Some published data came from international humanitarian efforts in war-torn or natural disaster regions. In these areas, community interventions were executed through the establishment of temporary centers in which children were free to visit as desired (Berberian, 2003; Buck, 2002; Gregorian, Azarian, DeMaria, & McDonald, 1996; Howie, Burch, Conrad, & Shambaugh, 2002; Roje, 1995). Other studies were prospective and highly structured efficacy studies, testing specific art therapy programs (Kozlowska & Hanney, 2001; Pifalo, 2002). Finally, some studies include formal art therapy treatment programs offered to children in hospital settings (Chapman, Morabito, Ladakos, Schreier, & Knudson, 2001; Prager, 1995).

The length of treatment programs also varied across studies. It appears that most studies observed children engaging in art therapy over weeks or months. However, the precise length of therapy was difficult to ascertain; 64% of the studies provided no information concerning the length of the therapeutic intervention. In future publications, it is recommended that authors provide more information about the specific length of the art therapy intervention.

A summary of the results of the studies reviewed appears in Table 2. The majority of these studies utilized case study methods, and the vast majority evaluated the outcome of art therapy using non-statistical, qualitative observations. It was found that exploratory and pilot studies were typical. The investigations typically reported a great deal of information about a single case or about a small group of participants.

Table 2
Research methodology and study results

Author (year)	Methodology	Length of therapy	Results
Avidar (1995)	Case study	Several months of a series of sessions	Storytelling is an effective method to achieving verbal expression of emotions when using art therapy for a traumatized population
Berberian (2003)	Case study	Several months of collection	Thousands of adults and children viewed the portraits of international faces. Everyone who came to see the art work, found peace. The children who participated gave hope to the city and to the people who lost loved ones from the attacks of September 11, 2001
Buck (2002)	Case study	Workshop w/6 month follow up and phone calls	When focusing on cultural backgrounds affecting the nature of post 9/11 trauma, it is important to understand that individuals express their range of emotions in their own artistic manner. It is also encouraged to provide children with art materials during times of hardship
Chapman et al. (2001)	Prospective, randomized cohort design	Baseline to 1 week Baseline to 1 month	Pre-post change in PTSD scores was graphically presented indicating that the art therapy group had reduced symptoms; authors had quantitative data but did not apply inferential statistics
Clements (1996)	Case study	Varied	Allowed the child to release emotions from their traumatic experience; helped to relieve the anxiety towards abusive family members
Davis (1989)	Case study	Not known	Group art therapy sessions are wonderful for children to express their grief after losing a loved one
Gregorian et al. (1996)	Case study	Center open for 3 years	Art therapy is an amazing outlet for children, allowing them to communicate their experiences through drawings. By creating art, these children are releasing their repressed emotions and changing their outlook on life
Howie et al. (2002)	Case study	Weeks	A safe environment for children to express and validate their feelings was provided. Art interventions were useful and significant following the 9/11 disaster, especially for children who were unable to express their emotions verbally
Kozlowska and Hanney (2001)	Case study	Seven weeks, 1 h a week	Using group art therapy helped the children to know that they were not alone. Art became a useful desensitization tool when treating these children with PTSD. Being away from the parental violence and in a safe environment, the children were more likely to engage in the use of art and begin to share their feelings verbally
Pifalo (2002)	Quasi-experimental	Therapy weekly for 10 weeks	Reduction in anxiety $t(12) = 2.39$, $p < .03$, $r = .57$; Reduction in symptoms of posttraumatic stress $t(12) = 2.81$, $p < .02$, $r = .63$; reduction in overt disassociation $t(12) = 2.50$, $p < .03$, $r = .59$[a]
Prager (1995)	Case study	Twice a week	Children tend to find relief and understanding about their illness through the use of art materials
Roje (1995)	Case study	Three months	The terrifying experience of the Los Angeles 1994 earthquake was eased by the use of art therapy. Most of the children who were treated were able to return to a normal life

[a] Effect size indicators (r) for this study were calculated by Eaton et al. for the purposes of this review.

Discussion

This review found that art therapy is used internationally in a variety of contexts as a treatment regimen for children who are experiencing a host of negative psychosocial consequences associated primarily with exposure to traumatic life experience(s). However, the published literature is not always clear on the precise nature of the psychosocial symptoms or on the diagnostic status of the children participating in the therapy. This problem originates from a few sources including diagnostic controversies regarding the childhood disorders contained in the DSM-IV-TR, and from concerns raised by individuals who protest labeling schemes of any kind (e.g., Fewster, 2002; Rabian & Silverman, 2000; Stafford, Zeanah, & Scheeringa, 2003). Until diagnostic issues and associated controversies are resolved, it would be helpful if researchers report, as precisely as possible, the nature of the children's psychosocial difficulties along with the severity and length of symptoms. These data might shed light on differences (e.g., demographic, etiology, and symptoms) between traumatized children who can be treated solely with the use of art therapy and those that require additional intervention (e.g., other forms of behavioral intervention and/or those who require psychopharmacological intervention).

A recurring difficulty encountered in synthesizing art therapy studies, regardless of research methodology, is that authors do not provide adequate information regarding the method of the art therapy chosen, the degree of formal structure used, and the length of therapy provided (Reynolds et al., 2000). This lack of methodological specificity limits the usefulness and generalizability of the studies reported, which may turn out to be a somewhat difficult problem for investigators of art therapy to overcome. The very nature of the art therapy approach is often unstructured and unconstrained, allowing temporal freedom for the client to self-actualize; to grow both emotionally and spiritually (Wolf, 1995). The process of art therapy, in its essence, involves the unfolding and discovery of what a client might be feeling and thinking. The timing and duration of this process varies from client to client, and may not be readily forced into a clean, controlled, time-constrained experimental design.

Further exacerbating the problem of drawing general conclusions from the art therapy literature is a lack of specificity regarding the outcome variables reported. For example, in non-experimental art therapy research, client outcomes are often expressed in narrative form with little or no attempt to summarize or quantify the findings. In contrast, the experimentalist generally hopes to observe a readily quantifiable outcome, such as reduction in the number of anxiety symptoms the client-participants endorse after therapy (in pre-test/post-test designs, commonly used in such studies; Reynolds et al., 2000). This tradition has led to an artificial distinction between qualitative outcomes versus quantitative outcomes. Some have concluded that the qualitative outcomes important to art therapists (such as quality of life, self-actualization, redemption) are somehow scientifically or psychologically inferior to quantitative outcomes, and furthermore, that qualitative outcomes cannot be measured quantitatively (see *Viewpoints*, Tibbetts, 1995 and invited responses). Viewing qualitative or abstract constructs as immeasurable outcomes makes art therapy seemingly inaccessible to empirical inquiry. However, all of the outcomes mentioned in the studies reviewed herein can be measured and quantified using existing research methods. Furthermore, when quantitative methods fail to provide the necessary tools, appropriate procedures can be found in a host of scientifically sound qualitative research methods that may often be a fruitful strategy for art therapy research programs (refer to Camic, Rhodes, & Yardley, 2003 for a text of qualitative methods used primarily for theory development).

The preponderance of information-rich clinical case studies and mixed-method empirical investigations (quantitative and qualitative; with and without presenting statistical findings) is to be viewed as a strength of this literature, at this exploratory stage of empirical investigation (Devlin, 1997). However, it is important to remain mindful that case studies can inform theory, but these data cannot be generalized to populations. Statistical analysis of group-level data is required to draw inferences about populations, and those data are scarce among the published studies found in our literature search. These potential limitations notwithstanding, collectively, the published literature concerning the efficacy of art therapy for the treatment of children who have experienced trauma is quite compelling and should encourage further investigations (see Table 2).

There are however, lingering questions that could be raised resulting from any literature review. Most importantly may be an issue referred to as "the file-drawer problem," an unknown percentage of studies conducted but not published because the results were not statistically significant (Rosenthal, 1991). Empirical investigations of art therapy reveal a preponderance of investigations relying on small samples making these studies particularly susceptible to power issues and Type II error, leading to the file-drawer problem. Researchers who attempt to recruit samples of traumatized children for art therapy studies may frequently struggle with issues concerning power and the risk of Type II error. A

portion of this problem can be attributed to a lack of accessible convenience samples (e.g., large groups of traumatized children with consent to participate in research) and/or the low base rate of children who would meet inclusion criteria some might impose for sampling (e.g., the DSM-IV-TR criteria for post traumatic stress disorder), conditions which would then often necessitate relying upon small samples.

Our review indicates that, at present, investigators and journal editors are not necessarily discouraged by sample sizes. We suggest that journal editors continue to err on the side of publishing important findings, even if the author does not present traditional statistical results that meet the traditional $p < .05$ cut-off (such as, allowing the publication of what some call *statistical trends*, findings at the $p < .10$). When publishing statistical results, it is suggested that investigators include an effect size indicator along with the null-hypothesis test and associated *p*-value. Effect size indicators are very helpful to readers as they facilitate a fair and complete evaluation of the results of a study (and are required by the 5th edition of the *Publication Manual of the American Psychological Association*, 2001). Where the hypothesis test provides a means by which to make a binary decision about data (is the result significant/not-significant), effect size indicators provide an index concerning the *magnitude* of any difference between groups (e.g., *how much greater* was the improvement for those who engaged in art therapy than was any improvement found for those who did not receive art therapy). Many software programs can provide effect size indicators along with the value of the chi-square, t-test, or ANOVA. They can also be easily calculated manually (see Rosenthal & Rubin, 1982; Rosnow & Rosenthal, 2005 for more information).

Most of the studies reviewed herein rarely used common methods of experimental control that would result in the development of clean inferences regarding the cause of the client change. In the absence of a control group, researchers cannot determine whether or not client change is due to seeking therapy (regardless of therapeutic method) or if art therapy is the specific causal mechanism by which change occurred. However, the issue of randomly assigning traumatized children to any kind of control group brings to light an ethical dilemma that cannot be resolved by traditional methods (e.g., the use of waiting-list controls). A two-treatment group design, an alternate to using a control group, involves using a between-groups design where participants are randomly assigned to one of two groups, an art therapy group and a group that receives some other accepted and established form of therapy. This way, researchers can see how effective art therapy is in comparison to other available therapeutic techniques. However, this methodology is extremely conservative and will frequently yield non-significant results. Meta-analysis of clinical psychology interventions show that treatment technique accounts for only about 15% of the variance in client change (7.5% more clients improving by a particular therapeutic technique than would be expected from chance alone[2]; Asay & Lambert, 1999).

Even more fruitful may be an alternative model of examining client change that focuses on *common factors*. Rather than simply focusing on the treatment technique, this approach also includes measuring client factors, client–therapist relationship factors, and even placebo effect (Hubble, Duncan, & Miller, 1999). When examining the efficacy of using art therapy with children, from the viewpoint of the common factors, exciting opportunities for further investigations and insight emerge. For example, it was previously noted that many art therapists believe that the process of art therapy is possibly the most successful when it is used with their youngest clients (Avidar, 1995; Clements, 1996; Davis, 1989; Kozlowska & Hanney, 2001; Pifalo, 2002; Prager, 1995; St. Thomas & Johnson, 2002). This may be because the process of art therapy provides a safe vehicle by which the therapist and child are able to form a therapeutic bond. The artistic effort provides a means by which the child can express experiences, memories, and emotions that he or she may not be able to put into words, thereby providing a common language by which the child and therapist can communicate. If art therapy is shown to facilitate the development of the client–therapist relationship, then the efficacy of this technique could extend beyond the achievement of therapeutic goals. In fact, meta-analytic research has shown that the client–therapist relationship is one of the most important predictors of client outcomes. On average, 30% of the variance in client outcomes has been attributed to the client–therapist relationship, which translates to a 65% success rate[3] (Asay & Lambert, 1999).

In its entirety, the data available from the reviewed qualitative and quantitative studies were encouraging. It appears that art therapy is an effective tool for the establishment of a relationship between a child client and his or her therapist, and is an effective method of treatment for the negative psychosocial consequences of childhood trauma. It is clear that

[2] Improvement percentage calculated using the binomial effect size display (BESD; Rosenthal & Rubin, 1982) $[(r \times 100)/2] + 50$; where *r*: correlation coefficient as a measure of effect size.

[3] Success rate percentages calculated using the BESD.

art therapy deserves more empirical attention, with researchers and therapists continuing to capitalize on the best that both qualitative and quantitative methodological tools can bring to answer questions concerning efficacy. Broadening approaches to art therapy, both theoretical and empirical, open a wealth of exciting opportunities as well as ideas that can be generated from the present literature for both basic and applied research of art therapy.

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