

**The Effectiveness and Contribution of Art Therapy Work with Children (2018–
Present): Progress and Outcomes in Psychological and Pediatric Mental Health –
A Systematic Review**

Dr. Hannah Williams^{1*}

¹University of Cambridge, Department of Psychiatry and Child Mental Health,
Cambridge, United Kingdom

Almost two decades have passed since Reynolds, Nabors and Quinlan (2000) published the first paper on the effectiveness of art therapy. In 2010, Slayton, D'Archer and Kaplan published another article in the field covering studies conducted in 1999-2007. Both articles concluded that although there had been a revival in this field of research, there was still a long way to go.

Almost 20 years later, we decided to conduct a new review, collecting the latest articles on the effectiveness of art therapy. Our first publication on the matter, which reviewed the effectiveness of art therapy with adults, was recently published (Regev & Cohen-Yatziv, 2018). This article is one of several reviews specifically related to working with adults (for example Huet, 2015; Schouten, de Niet, Knipscheer, Kleber & Hutschemaekers, 2015; Uttley, Stevenson, Scope, Rawdin & Sutton, 2015; Uttley et al., 2015). However, this disproportionate interest in art therapy with adults does not accurately represent the fact that art therapists treat a much larger proportion of children (Eaton, Doherty & Widrick, 2007). The current article thus focuses on the effectiveness of art therapy with children.

Most reviews that have addressed art therapy in children have considered children who experienced traumatic events, such as one by Eaton and colleagues (2007) that summarizes the literature in the field and covers ten case studies and two quantitative studies. They discuss the difficulties involved in generalizing these

studies. First, half of the studies had fewer than ten participants. Second, many articles did not specify the length of the therapeutic intervention although therapy did not appear to last for more than a few weeks. Third, the diagnoses were not always clearly stated in the articles reviewed. More recently, Van Westrhenen and Fritz (2014) reviewed all research related to arts therapies on children with traumatic life experiences and reported that 73% utilized visual art therapy. Although their search identified 38 publications between 2002 and 2012, they noted that it was still difficult to generalize the contribution of art therapy to this population because the vast majority of these articles involved case studies rather than quantitative research.

A very recent article published by McDonald and Drey (2017) examined primary-school-based art therapy. This article reviewed two controlled (non-randomized) studies and two randomized controlled studies (RCT). Three of these were composed of sample groups of approximately 30 participants (including the experimental group and the control group). Although the authors concluded that these interventions appear to positively assist clients, they raised serious questions about the lack of research in this field, particularly since the demand for child emotional therapy is high; for example in Israel (Snir et al., 2017), the UK (McDonald & Drey, 2017) and other countries.

This review, and its companion - our review on the effectiveness of art therapy with adult clients (Regev & Cohen-Yatziv, 2018), deals with research measuring the effectiveness of art therapy. It addresses two major challenges, the first of which is the definition of the term "effectiveness". Hill, Frappier-Davignon and Morrison (1979) defined effectiveness as "the attribute of an intervention or maneuver that results in more good than harm to those to whom it is offered" (p. 1203). This review adheres to the positivist perspective (Holton, 1993) to examine the assessment of effectiveness

reported in quantitative studies conducted in the field. Since the field of art therapy is still relatively new, there are only a small number of studies of differing quality. This makes it hard to generate a comparative review that presents the state of the art in the field and draw exhaustive conclusions. For these reasons, this review implements the Case-Smith (2013) categorization, that divides studies into three levels of evidence. Level 1 refers to randomized controlled trials (RCTs), level 2 refers to nonrandomized two-group studies, and level 3 refers to nonrandomized one-group studies.

The second challenge has to do with the definition of art therapy. We applied the standard definition provided by the British Association of Art Therapists:

Art therapy is a form of psychotherapy that uses art media as its primary mode of expression and communication. Within this context, art is not used as diagnostic tool but as a medium to address emotional issues which may be confusing and distressing.... Although influenced by psychoanalysis, art therapists have been inspired by theories such as attachment-based psychotherapy and have developed a broad range of client-centered approaches such as psycho-educational, mindfulness and mentalization-based treatments, compassion-focused and cognitive analytic therapies, and socially engaged practice (BAAT, 2018).

This definition makes it clear that art therapy is a process that takes place in the presence of a certified art therapist, and indicates different areas where an effect or outcome in therapy can be expected as a result of this form of treatment.

Thus, the research question was formulated according to “PICOS” components (Participants, Interventions, Comparisons, Outcomes, and Study design) (The PRISMA Group, 2009): is art therapy effective for children as measured in

results published from 2000 to 2017, in various quantitative studies corresponding to Levels 1, 2, 3 (Case-Smith, 2013)? These studies assessed the effectiveness of art therapy on variety of indices including symptoms, quality of life, health or mental health assessments. These indices were typically evaluated through questionnaires and occasionally by projective drawings. By posing this question, this systematic review aims to contribute to the ongoing discussion in the field on the degree of effectiveness of art therapy with children. This forms part of the academization process in the field of art therapy, which involves attempting to relate intervention techniques in the field to their significance for theoretical research.

Method

Searches were conducted in January 2017 by accessing four main electronic databases: Medline, PsycInfo, Scopus and Web of Science. The term 'art therapy' combined with the terms 'Effectiveness', 'Efficacy', 'Outcome', 'Measurement', 'Treatment' and 'Intervention' was searched. The search was restricted to articles published in English from the year 2000 onward, for reasons of relevancy and recency. We also consulted other reviews (such as the ones addressed above) to locate additional articles applicable to this study.

In the initial screening stage, both authors (who are certified art therapists) reviewed the abstracts to eliminate those that did not meet the research objectives. This resulted in 151 articles (see Figure 1). Then, these articles were read completely. Articles were selected for this study if they met the following criteria (Figure 1):

- They utilized a quantitative measure of the effectiveness of art therapy on a sample of clients. All case studies, method descriptions, qualitative analyses, and literature reviews that did not meet this criterion were rejected. A total of 80 articles were eliminated at this stage.

- They assessed the specific impact of art therapy. All articles that described a combination of therapeutic intervention techniques, or a variety of art modalities simultaneously were eliminated. A total of 14 articles were eliminated at this stage.
- Art therapy took place in an ongoing manner and in the presence of a qualified art therapist. Articles describing artistic intervention techniques that were not implemented in a therapeutic context or were implemented in a single art therapy session, or during sessions in which a qualified art therapist was not present were omitted. A total of 17 articles were eliminated at this stage.

All the articles that met the inclusion criteria were defined as articles that examined "effectiveness" and quantified the impact of art therapy in a measurable way. In total, 37 studies were identified in 40 articles (three studies were published in two different articles). Of these 40 articles, 13 articles related to art therapy with children. This article categorizes these 13 articles in terms of the levels of evidence proposed by Case-Smith (2013).

Findings

The findings described in this article emerge from the 13 studies that met the inclusion criteria. The decision to present these studies as a review rather than as a meta-analysis is due to the emergent nature of the field of art therapy. There is little research in the field, and the differences between studies and the indices are so great that it would have been impossible to produce a meta-analysis that would yield meaningful results (a conclusion also reached by Uttley et al., 2015).

The authors discussed the clinical categorization of each article until full agreement was reached. This categorization was chosen to enable the reader to access knowledge in the field in a way that would allow and encourage researchers to

conduct further research. The next section presents the findings classified into five clinical categories.

Different research methods were used in the 13 articles reviewed: five used a randomized comparison group (Level 1), two included a comparison group without randomized allocation (Level 2), and six used an intervention group without a comparison group (Level 3). Ten of the 13 articles did not define the research population by gender, and the remaining three studies only included female participants. No studies were found that exclusively addressed male participants, among the studies that met this article's inclusion criteria.

Category 1: Children dealing with traumatic events

The first category consists of art therapy with children dealing with traumatic events in their past (see Table 1). Four studies examining effectiveness have been conducted since 2002 of which two (Pifalo, 2002; Pifalo, 2006) were conducted without a control group (Level 3) and two (Lyshak-Stelzer, Singer, Patricia & Chemtob, 2007; Pretorius & Pfeifer, 2010) included control groups and random allocation (Level 1). Two of these dealt with children and adolescents, one exclusively with children and one exclusively with adolescents. One article focused on female participants alone. The total sample sizes ranged from 13 to 41 clients, all of whom received short-term therapy lasting eight to 16 sessions in group therapy settings.

The studies made use of questionnaires that assessed the children's symptoms of trauma. In one study, researchers also used a drawing of a human figure. All these studies strengthen the claim that art therapy may help alleviate post-traumatic symptoms in children.

Category 2: Children with special educational needs and disabilities

The second category consists of children who had special educational needs or disabilities (see Table 2). Four studies on effectiveness have been conducted since 2001, two of which (Epp, 2008; Pachalska et al., 2001) without a control group (Level 3) and the other two (Freilich & Shechtman, 2010; Regev & Guttman, 2005) which included control groups and random allocation (Level 1). Two articles focused solely on children and two other articles on both children and adolescents. The total sample sizes ranged from 14 to 109 clients in different experimental groups. Three studies described group therapy and the fourth one individual therapy. The therapeutic process lasted four to eight months.

Most of the studies in this category suggest that art therapy has a positive effect on children with special educational needs and disabilities. There was a wide variety of research instruments used in these studies including the Auditory Dysarthria Scale, and questionnaires evaluating self-esteem, and behavioral and social measures. However, one study in this category (Regev & Guttman, 2005) found no effect of art therapy on the sample that was tested; namely, children with learning disorders. This study administered validated questionnaires in which the children reported their emotional state. It is possible that these research indices were not sufficiently sensitive to the changes that occurred during the 25-session period. Alternatively, it is also possible that it is difficult for children to look closely enough at the process they underwent during this period. The authors concluded: "Obviously, there are countless possible relevant dependent variables, and some may prove more affected by art activity than others. It is for further research to examine these." (p. 310).

Category 3: Children with no specific diagnosed difficulty

The third category consists of children who received art therapy but were not diagnosed with any specific difficulty (see Table 3). Three studies on effectiveness have been conducted since 2000, one of which (Saunders & Saunders, 2000) without a control group (Level 3), one (Wallace et al., 2014) with a control group (Level 2), and one (Bazargan & Pakdaman, 2016) with a control group and random allocation into groups (Level 1). Two studies had a sample of both children and adolescents, and one only examined adolescents. One article dealt solely with female participants. The total sample sizes ranged from 30 to 94 clients in various experimental groups; some clients received individual therapy and others group therapy. The therapeutic process was very short, ranging from three to an average of 16 sessions.

The measurement indices that were selected for these studies included a variety of questionnaires measuring symptoms, psychological and social functioning, and aspects of the therapeutic relationship. All three articles reinforce the claim that art therapy may help children who are not diagnosed with specific difficulties but are faced with a variety of challenges in life, as reflected in the indices examined.

Category 4: Children dealing with medical conditions

The fourth category consists of children suffering from various medical conditions (see Table 4). Only one study fell into this category (Beebe, Gelfand & Bender, 2010) and addressed children coping with persistent asthma. The study was conducted with randomized participants in a trial group and a control group (Level 1), and covered seven weeks of group art therapy. The study implemented questionnaires that dealt with subjects such as quality of life and the emotional state of the participants, as well as the 'Person Picking an Apple from a Tree' (PPAT; Gantt & Tabone, 1998) art-based assessment tool. This article lends weight to the claim that art

therapy may help children dealing with medical conditions, and specifically persistent asthma, as reflected in the indices examined.

Category 5: Juvenile offenders

The fifth and final category consists of juvenile offenders who received art therapy (see Table 5). Only one study fell into this category (Hartz & Thick, 2005). It implemented two approaches to art therapy - art psychotherapy and art therapy, but had no control group (Level 3). The research tools included questionnaires that assessed self-perception and self-esteem. This article supports the claim that art therapy may help juvenile offenders, as reflected in the indices examined.

Discussion

The purpose of this review was to assess whether art therapy is effective in a wide range of child-aged clients, as documented in quantitative studies published from 2000 to 2017. Since the review conducted by Reynolds and colleagues (2000), research on adults has made significant progress and there has been an increase in the number of high quality studies (Level 1) and the number of participants in such studies (Regev & Cohen-Yatziv, 2018). However, there is still a dearth of studies on children: we only located 13 studies conducted since 2000 that have examined the effectiveness of art therapy with children and met this article's inclusion criteria. Most had small samples and only five included randomized allocation to an experimental group and a control group (Level 1). The advantage of such RCT studies lies in the likelihood of fewer errors than in studies that do not include a control group, or studies that have a control group but lack random allocation to groups. The use of randomization is the best way to ensure that differences in outcome measures between the experimental group and the control group result from the intervention itself and not from other factors, thereby decreasing biases.

Analogous to our conclusion in our review of the effectiveness of art therapy with adult clients (Regev & Cohen-Yatziv, 2018), the shortage of studies that relate to each population and the considerable discrepancies in the duration and nature of the therapeutic process, the proposed interventions and the indices make it difficult to draw conclusions or create a database from which a meaningful meta-analysis could be carried out. Thus, more research needs to be conducted on art therapy for children to examine and evaluate its effectiveness.

This raises many questions in that art therapy clearly emerges as pertinent and highly suitable for working with children; in many countries, children constitute the majority of the clients (Eaton, Doherty & Widrick, 2007). However, the challenge may be associated with the difficulty of evaluating children as research participants since they cannot always complete questionnaires, and it may also be connected to the onerous ethical considerations involved in research with children.

An important issue that arose is the necessity to define the profession, in order to evaluate therapeutic interventions. Despite major differences between cultures in relation to the status of the art therapy profession and the legislation in the field, in order to maintain standards we need to define, clarify and specify what art therapy is and what it is not; and specifically to clarify that this type of therapy must be composed of ongoing sessions and be conducted by a certified art therapist who meets the criteria defined for the profession (BAAT, 2018). This process could reduce the large number of articles conducted in the field by uncertified art therapists or in a single therapeutic session, as found in this review and previously documented on its companion on the effectiveness of art therapy with adult clients (Regev & Cohen-Yatziv, 2018).

The first category presented here covered art therapy for children dealing with traumatic events. There is a growing body of research indicating that art therapy can benefit these children, and that art therapists play a significant role in helping them cope with a variety of traumatic experiences and can contribute to improving their quality of life and their ability to cope with a variety of emotional issues. Our review complements previous ones (Eaton, Doherty & Widrick, 2007; Van Westrhenen & Fritz, 2014) which have shown that art therapy with children dealing with traumatic events is one of the most frequently studied topics in this field.

The second category covered art therapy with children with special educational needs and disabilities. In some countries, children with special needs are legally entitled to art therapy within the education system (Snir et al., 2017). The findings in most of these studies indicate an improvement in a variety of measures resulting from art therapy interventions. However, the differences between participants and assessment tools make it difficult to summarize and generalize the findings.

The third category covered art therapy with children with no specific diagnosis. The decision to examine clients in the general population reflects the unique nature of art therapy and its suitability for individuals who are dealing with a wide range of difficulties, or as mentioned in the definition of the profession by the British Association of Art Therapists: "Art therapists work with children, young people, adults and the elderly. Clients may have a wide range of difficulties, disabilities or diagnoses. These include emotional, behavioral or mental health problems, learning or physical disabilities, life-limiting conditions, neurological conditions and physical illnesses." (BAAT, 2018). In the reality of everyday life, there are many frameworks in which therapy is offered to a wide variety of children who

are coping with an array of different difficulties and who remain undiagnosed.

However, the vast differences between such clients make it difficult to find relevant indicators for evaluation, and as such there are considerable variations in the indices between studies.

The fourth category covered art therapy clients dealing with various medical conditions. It was striking that there was only one study on effectiveness, dealing with children coping with persistent asthma, suggesting that conclusions relating to this category should be made with caution. The findings indicated that art therapy interventions had a beneficial effect on this population, as shown by the indices measured. It is surprising that there are so few quantitative studies in the field. By comparison, in our review on the effectiveness of art therapy with adult clients (Regev & Cohen-Yatziv, 2018), six works (published in seven different articles) were found on clients who have cancer (Bar-Sela, Atid, Danos, Gabay & Epelbaum, 2007; Monti et al., 2006; Monti et al., 2012; Öster et al., 2006; Öster, Magnusson, Thyme, Lindh & Astrom, 2007; Svensk et al., 2009; Thyme et al., 2009) and three others on clients coping with a variety of other medical conditions (Feldman, Betts & Blausey, 2014; Sela et al., 2011; Sudres et al., 2013). Since the field of art therapy with clients dealing with various medical conditions is of vital significance and research conducted with adults clearly points to its contribution (Regev & Cohen-Yatziv, 2018), it is important to continue developing research in this field.

The fifth and final category covered art therapy with juvenile offenders. Only one study was found and indicated that art therapy interventions had a beneficial effect for this population, as expressed in the indices measured. This result extends the important work of David Gussak who has investigated the effectiveness of art therapy with adult prison inmates (Gussak, 2004, 2006, 2009a, 2009b) and reported

its beneficial effects. Nevertheless, conclusions concerning this category should be treated carefully since it is based on a single level 3 study.

Conclusion

This review is a companion to our review of the effectiveness of art therapy with adult clients (Regev & Cohen-Yatziv, 2018) and documents research conducted in recent years. Similar to the conclusions drawn in earlier reviews (for example McDonald & Drey, 2017), we only found a small number of quantitative studies that relate to the effectiveness of art therapy with children, despite the growing need for this type of therapy. This review did not include qualitative studies, which are very common and acceptable in this field. Applying diverse approaches and a variety of research methods as a dependent measure of the research purpose and question, can help expand knowledge and understanding in this interdisciplinary field (Kapitan, 2017).

The current review has several limitations. First, similar to other reviews in the field (for example: Regev & Cohen-Yatziv, 2018), due to the small number of studies, various levels of quantitative studies were included. This variability makes it difficult to generalize across findings, but not mentioning these studies would have led to a total sample of an even smaller number of studies. Second, in many studies several indices of varying types (questionnaires, drawings) were used and on some occasions only some of these indices led to demonstrable indications of the effectiveness of art therapy. This complex picture of the findings, which is well reflected in the tables, only authorizes partial conclusions at this stage. Further research in the field should make it possible to examine changes in similar research indices and draw more far-reaching conclusions. In so doing, future researchers should examine these specific studies closely before conducting further research on the same types of populations.

In addition, due to the small number of studies in this field, we needed to combine various subjects in certain cases, make decisions and create artificial categories based on our professional knowledge and judgment. Future reviews, including a broader scope of research, could employ a different, possibly more specific, categorization.

A number of recommendations for further research directions in this field can be made. First, art therapy is a very broad field that can be implemented with diverse populations, many of whom have never been examined in terms of treatment effectiveness. An exploration and investigation in these uncharted territories could point to meaningful implications and broaden our knowledge of the field and its scope of effectiveness. Second, based on the conclusions derived from this review and our previous review on the effectiveness of art therapy with adult clients (Regev & Cohen-Yatziv, 2018), future studies are needed on larger sample groups that include art therapy sessions led by qualified art therapists over an extended period of time. This accumulated research could enable a meta-analysis based on significant and comparable findings from the field within approximately a decade. Third, to raise the level of research in our field, it is important for researchers to devote time and thought to their research plans and objectives. Large sample groups on their own are not sufficient. Researchers should also consider randomized control trials (Level 1), and ways to ensure that the experimenters, the participants, the data compilers and the judges/raters are blind to the purpose of the study and the division of the study groups. Finally, most of the studies presented in this review used reliable and valid research indices. We encourage researchers to select valid and reliable research indices that have been used and documented extensively and also to review and consider previous results of studies in art therapy with similar populations that have used these indices in their work.

This long and complex search for articles underscores the importance of encouraging much needed research in the field of art therapy with children. We believe that more studies will emerge in the next few years and hope that this review will contribute to encouraging future studies.

References

- Bar-Sela, G., Atid, L., Danos, S., Gabay, N., & Epelbaum, R. (2007). Art therapy improved depression and influenced fatigue levels in cancer patients on chemotherapy. *Psycho-Oncology*, *16*(11), 980-984.
- Bazargan, Y., & Pakdaman, S. (2016). The Effectiveness of Art Therapy in Reducing Internalizing and Externalizing Problems of Female Adolescents. *Archives of Iranian Medicine (AIM)*, *19*(1).
- Beebe, A., Gelfand, E. W., & Bender, B. (2010). A randomized trial to test the effectiveness of art therapy for children with asthma. *Journal of Allergy and Clinical Immunology*, *126*(2), 263-266.
- Case-Smith, J. (2013). Systematic review of interventions to promote social–emotional development in young children with or at risk for disability. *American Journal of Occupational Therapy*, *67*(4), 395-404.
- Eaton, L. G., Doherty, K. L., & Widrick, R. M. (2007). A review of research and methods used to establish art therapy as an effective treatment method for traumatized children. *The Arts in Psychotherapy*, *34*(3), 256-262.
- Epp, K. M. (2008). Outcome-based evaluation of a social skills program using art therapy and group therapy for children on the autism spectrum. *Children & Schools*, *30*(1), 27-36.
- Feldman, M. B., Betts, D. J., & Blausey, D. (2014). Process and outcome evaluation of an art therapy program for people living with HIV/AIDS. *Art Therapy*, *31*(3), 102-109.
- Freilich, R., & Shechtman, Z. (2010). The contribution of art therapy to the social, emotional, and academic adjustment of children with learning disabilities. *The Arts in psychotherapy*, *37*(2), 97-105.

- Gantt, L., & Tabone, C. (1998). *The formal elements art therapy scale: The rating manual*. Morgantown, WV: Gargoyle Press.
- Gussak, D. (2004). Art therapy with prison inmates: a pilot study. *The Arts in Psychotherapy, 31*(4), 245-259.
- Gussak, D. (2006). Effects of art therapy with prison inmates: A follow-up study. *The arts in psychotherapy, 33*(3), 188-198.
- Gussak, D. (2009a). The effects of art therapy on male and female inmates: Advancing the research base. *The arts in psychotherapy, 36*(1), 5-12.
- Gussak, D. (2009b). Comparing the effectiveness of art therapy on depression and locus of control of male and female inmates. *The arts in psychotherapy, 36*(4), 202-207.
- Hartz, L., & Thick, L. (2005). Art therapy strategies to raise self-esteem in female juvenile offenders: A comparison of art psychotherapy and art as therapy approaches. *Art Therapy, 22*(2), 70-80.
- Hill, N., Frappier-Davignon, L., & Morrison, B. (1979). The periodic health examination. *Can Med Assoc J, 121*, 1193-254.
- Holton, G. J. (1993). *Science and anti-science*. Harvard University Press.
- Huet, V. (2015). Literature review of art therapy-based interventions for work-related stress. *International Journal of Art Therapy, 20*(2), 66-76.
- Kapitan, L. (2017). *Introduction to art therapy research*. Routledge.

- Lyshak-Stelzer, F., Singer, P., Patricia, S. J., & Chemtob, C. M. (2007). Art therapy for adolescents with posttraumatic stress disorder symptoms: A pilot study. *Art Therapy, 24*(4), 163-169.
- McDonald, A., & Drey, N. S. (2017). Primary-school-based art therapy: a review of controlled studies. *International Journal of Art Therapy, 1-12*.
- Monti, D. A., Peterson, C., Kunkel, E. J. S., Hauck, W. W., Pequignot, E., Rhodes, L., & Brainard, G. C. (2006). A randomized, controlled trial of mindfulness-based art therapy (MBAT) for women with cancer. *Psycho-Oncology, 15*(5), 363-373.
- Monti, D. A., Kash, K. M., Kunkel, E. J., Brainard, G., Wintering, N., Moss, A. S., ...Newberg, A. B. (2012). Changes in Cerebral Blood Flow and Anxiety Associated with an 8-week Mindfulness Programme in Women with Breast Cancer. *Stress and Health, 28*(5), 397-407.
- Öster, I., Svensk, A. C., Magnusson, E., Thyme, K. E., Sjödin, M., Åström, S., & Lindh, J. (2006). Art therapy improves coping resources: a randomized, controlled study among women with breast cancer. *Palliative & supportive care, 4*(1), 57-64.
- Öster, I., Magnusson, E., Thyme, K. E., Lindh, J., & Åström, S. (2007). Art therapy for women with breast cancer: The therapeutic consequences of boundary strengthening. *The Arts in Psychotherapy, 34*(3), 277-288.
- Pachalska, M., Frańczuk, B., Macqueen, B. D., Jastrzebowska, G., Perzanowski, Z., & Neldon, K. (2001). The impact of art therapy on the intelligibility of speech in children with cerebral palsy. *Ortopedia, traumatologia, rehabilitacja, 3*(4), 508-518.

- Pifalo, T. (2002). Pulling out the thorns: Art therapy with sexually abused children and adolescents. *Art Therapy, 19*(1), 12-22.
- Pifalo, T. (2006). Art therapy with sexually abused children and adolescents: Extended research study. *Art Therapy, 23*(4), 181-185.
- Pretorius, G., & Pfeifer, N. (2010). Group art therapy with sexually abused girls. *South African Journal of Psychology, 40*(1), 63-73.
- Regev, D., & Cohen-Yatziv, L. (2018). Effectiveness of Art Therapy with Adult Clients in 2018 – What progress has been made? - A systematic review. *Frontiers in Psychology, 9*, p.1531. doi: 10.3389/fpsyg.2018.01531
- Regev, D., & Guttmann, J. (2005). The psychological benefits of artwork: The case of children with learning disorders. *The Arts in psychotherapy, 32*(4), 302-312.
- Reynolds, M.W., Nabors, L., & Quinlan, A. (2000). The Effectiveness of Art Therapy: Does it Work? *Art Therapy, 17*(3), 207-213.
- Saunders, E. J., & Saunders, J. A. (2000). Evaluating the effectiveness of art therapy through a quantitative, outcomes-focused study. *The Arts in Psychotherapy, 27*(2), 99-106.
- 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. *Trauma, violence, & abuse, 16*(2), 220-228.
- Sela, N., Baruch, N., Assali, A., Vaturi, M., Battler, A., & Ben, G. T. (2011). The influence of medical art therapy on quality of life and compliance of medical treatment of patients with advanced heart failure. *Harefuah, 150*(2), 79-83.
- Slayton, S. C., D'Archer, J., & Kaplan, F. (2010). Outcome studies on the efficacy of art therapy: A review of findings. *Art Therapy, 27*(3), 108-118.

- Snir, S., Regev, D., Keinan, V., Abd El Kader-Shahada, H., Salamey, A., Mekel, D., ... & Alkara, M. (2017). Art therapy in the Israeli education system—a qualitative meta-analysis. *International Journal of Art Therapy*, 1-11.
- Sudres, J. L., Anzules, C., Sanguignol, F., Pataky, Z., Brandibas, G., & Golay, A. (2013). Therapeutic patient education with art therapy: effectiveness among obese patients. *Education Thérapeutique du Patient-Therapeutic Patient Education*, 5(2), 213-218.
- Svensk, A. C., Öster, I., Thyme, K. E., Magnusson, E., Sjödin, M., Eisemann, M., ...Lindh, J. (2009). Art therapy improves experienced quality of life among women undergoing treatment for breast cancer: a randomized controlled study. *European journal of cancer care*, 18(1), 69-77.
- The British Association of Art Therapy (2018). What is art therapy? Retrieved From: <https://www.baat.org/About-Art-Therapy>.
- The PRISMA Group, Moher D, Liberati A, Tetzlaff J, Altman DG, (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. [PLoS Med 6\(7\): e1000097. doi:10.1371/journal.pmed1000097](https://doi.org/10.1371/journal.pmed1000097)
- Thyme, K. E., Sundin, E. C., Wiberg, B., Öster, I., Åström, S., & Lindh, J. (2009). Individual brief art therapy can be helpful for women with breast cancer: a randomized controlled clinical study. *Palliative & supportive care*, 7(1), 87-95.
- Uttley, L., Stevenson, M., Scope, A., Rawdin, A., & Sutton, A. (2015). The clinical and cost effectiveness of group art therapy for people with non-psychotic mental health disorders: a systematic review and cost-effectiveness analysis. *BMC psychiatry*, 15(1), 151.

Uttley, L., Scope, A., Stevenson, M., Rawdin, A., Buck, E. T., Sutton, A., & Wood, C. (2015). Systematic review and economic modelling of the clinical effectiveness and cost-effectiveness of art therapy among people with non-psychotic mental health disorders. *Health Technology Assessment, 19*(18).

Wallace, J., Packman, W., Huffman, L. C., Horn, B., Cowan, M., Amylon, M. D., ... & Moses, J. (2014). Psychosocial changes associated with participation in art therapy interventions for siblings of pediatric hematopoietic stem cell transplant patients. *Art Therapy, 31*(1), 4-11.

van Westrhenen, N., & Fritz, E. (2014). Creative arts therapy as treatment for child trauma: An overview. *The Arts in Psychotherapy, 41*(5), 527-534.

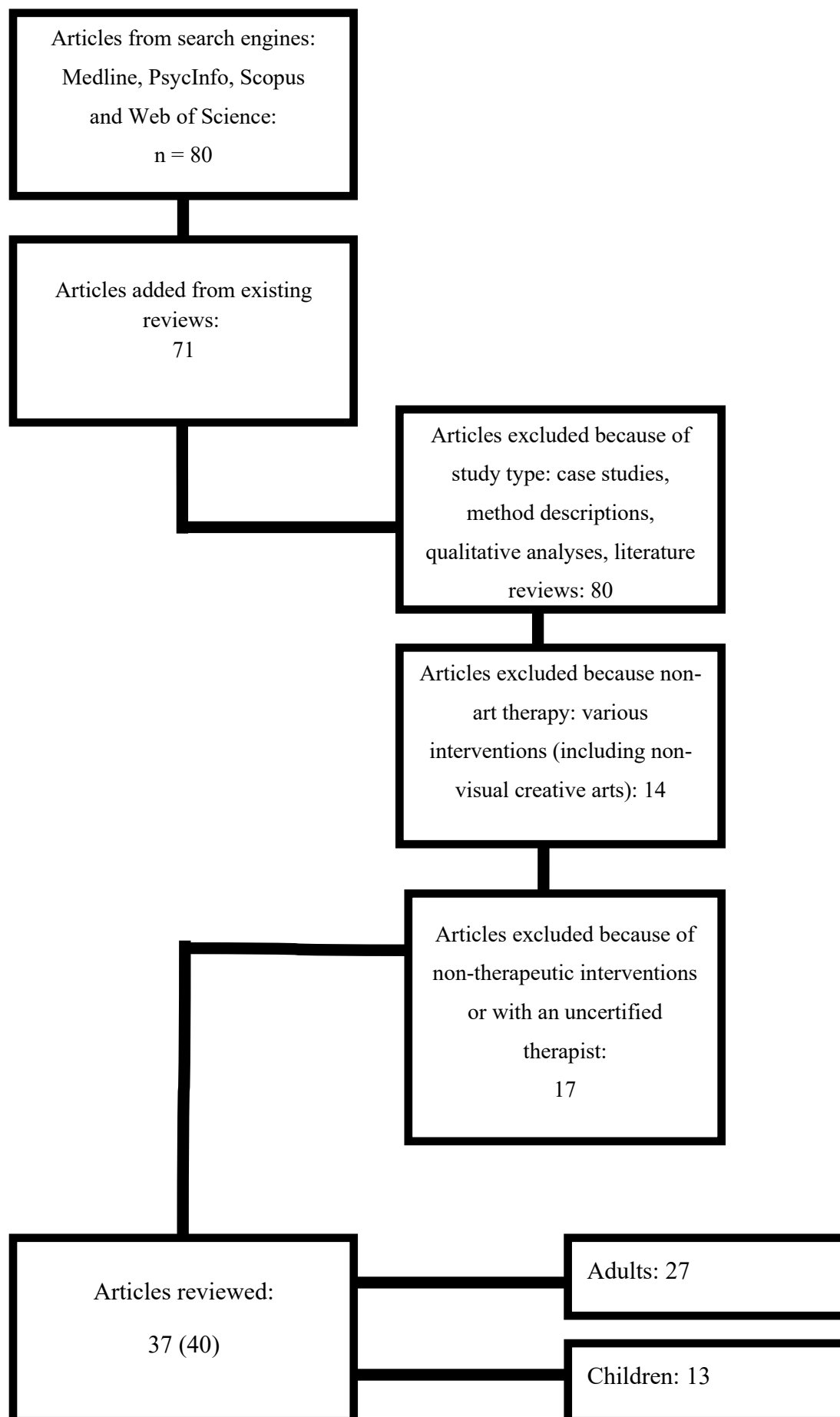


Table 1:

Children dealing with traumatic events

Article	Author (year)	Sample (size and groups)	Group Description	Intervention & Treatment	Amount and duration of therapy	Assessment Points	Outcome measured	Results
Pulling Out the Thorns: Art Therapy with Sexually Abused Children and Adolescents	Pifalo, T. (2002)	Only intervention group (N=13).	Sexually abused children and adolescents - 8-10, 11-13, and 14-16 years of age.	An approach that integrates art therapy and group process to target areas of need when working with child and adolescent victims of sexual abuse.	10-week group cycle.	Baseline, immediately after.	The Trauma Symptom Checklist (TSCC).	On 3 of the 10 clinical subscales, the difference reached sufficient magnitude to yield a statistically significant Fisher t-value. Level 3
Art Therapy with Sexually Abused Children and Adolescents: Extended Research Study	Pifalo, T. (2006)	Only intervention group (N=41).	Sexually abused children and adolescents - 8-10, 11-13, and 14-16 years of age.	Trauma-focused group treatment using the combined modalities of AT and CBT.	One hour weekly for eight weeks.	Baseline, immediately after.	The Trauma Symptom Checklist (TSCC).	There was a statistically significant reduction in symptomatology scores on nine of the ten clinical subscales (Anxiety, Depression, Anger, Posttraumatic Stress, Dissociation, Dissociation-Overt, Sexual Concerns, Sexual Preoccupation, and Sexual Distress) in the direction of reduced pathology. Level 3
Art Therapy for Adolescents with Posttraumatic Stress Disorder Symptoms: A Pilot Study	Lyshak-Stelzer, F., Singer, P., Patricia, S. J., & Chemtob, C. M. (2007)	N=29 Randomly assigned to A trauma-focused expressive art therapy protocol (TF-ART) (n=14) A treatment-as-usual (TAU) (n=15).	Adolescents with Posttraumatic Stress Disorder Symptoms. Inclusion criteria: Ages 13-18, were able to sustain a school program for 2 weeks running, and were expected to stay at the hospital for at least 16 weeks.	Groups consisted of 2 to 5 participants.	One hour group sessions over 16 weeks.	Baseline, immediately after.	The UCLA PTSD Reaction Index for DSM-IV, Child Version.	There was a significant effect of treatment over time for both groups across treatment conditions. There was a significant treatment by condition interaction showing that TF-ART was significantly more effective in reducing trauma symptoms from pre-treatment to post-treatment. Level 1
Group art therapy with sexually abused girls	Pretorius, G., & Pfeifer, N. (2010)	N=25 The Solomon four-group design was used to investigate the efficacy of the intervention.	Sexually abused girls aged 8-11 years.	A group art therapy intervention designed by the authors aimed at reducing depression, anxiety, sexual	The program consisted of four themes with eight sessions.	Baseline, immediately after.	The Trauma Symptom Checklist for Children (TSCC), The Human Figure Drawing (HFD).	The results indicated that the experimental groups improved significantly compared to the control groups with regard to anxiety and depression. Level 1

				trauma and low self-esteem. The program was based on existential-humanistic, Gestalt, client-centered and abuse focused principles.				
--	--	--	--	---	--	--	--	--

Table 2:

Children with special educational needs and disabilities

Article	Author (year)	Sample (size and groups)	Group Description	Intervention & Treatment	Amount and duration of therapy	Assessment Points	Outcome measured	Results
The impact of art therapy on the intelligibility of speech in children with cerebral palsy.	Pachalska, M., Frańczuk, B., Macqueen, B.D., Jastrzebowska, G., Perzanowski, Z., & Neldon, K. (2001)	Only intervention group (N=14 children - 9 boys and 5 girls)	Children with cerebral palsy (CP). Average age 15.3, who showed severe dysarthria at admission without other language or cognitive disturbances.	Art therapy with elements of logopedic therapy.	4-month art therapy program.	Baseline, immediately after.	The Auditory Dysarthria Scale.	On the Auditory Dysarthria Scale, the largest improvements were noted in overall intelligibility; less improvement, though still statistically significant took place with respect to volume, tempo, and control of pauses. The least improvement was noted in the pronunciation of vowels and consonants (the most purely motor of the measured parameters). All the children also exhibited significant improvement in fluency of speech. Level 3
The psychological benefits of artwork: The case of children with learning disorders	Regev, D. & Guttman, J. (2005)	N=109 Randomly assigned to Experimental (art) group (n=25) Control group A (games group) (n=25) Control group B (art therapy group) (n=29) Control group C (no intervention group) (n=25)	Primary-school children with learning disorders.	Groups - as described.	The intervention program included 25 weekly encounters, each of 45 min.	Baseline, immediately after.	CSCS—The Piers–Harris Children’s Self-Concept Scale, IARQ—The Intellectual Achievement Responsibility Questionnaire, CS—The Children’s Sense of Coherence Scale, LSDQ—The Loneliness and Social Dissatisfaction Questionnaire.	Children in the art-therapy group did not score better than those in any other group on any of the dependent variables. Level 1
Outcome-Based evaluation of a Social Skills Program using Art Therapy and Group Therapy for children	Epp, K. M. (2008)	Only intervention group – (N=66)	Children ages 6-12 with ASD.	Group of approximately six children of similar age and social communication ability.	One-hour group therapy sessions held once a week - October till Mai.	Baseline, immediately after.	The Social Skills Rating System (SSRS) - was constructed to screen and classify children suspected of	Scores revealed a significant improvement in assertion scores, coupled with decreased internalizing behaviors, hyperactivity scores, and problem behavior scores in the students.

on the autism spectrum							having social behavior problems.	Level 3
The contribution of art therapy to the social, emotional, and academic adjustment of children with learning disabilities	Freilich, R., & Shechtman, Z. (2010)	N = 93 Randomly assigned to Experimental group (n=42). Control group (n=51).	Children aged 7-15 with learning disabilities	Individual art therapy with experienced art therapists.	Children in the art therapy group (experimental) received 2 h of academic assistance and 1 h of art therapy per week. Children in the academic assistance group (control) received 3 h of teaching per week; for 22 weeks	Outcome measures- Baseline, immediately after, and follow-up (3 months later). Process measures - five times over the course of the intervention. Critical incidents - following each session.	Outcome measures - Child Behavior Checklist (CBCL), The Teacher Evaluation Form (TRF), Scores on academic achievement. Process measures - Working Alliance Inventory, The Session Evaluation Questionnaire. The Critical Incident (after each session)	Results indicated more favorable outcomes in adjustment under art therapy conditions and similar progress in academic achievement under either condition. Although children in the control group scored higher on the process variables (bonding and impression of therapy), bonding was associated with outcomes only in the therapy condition. A session-by-session evaluation revealed that the two interventions were very different: the academic intervention focused on improved learning experiences, whereas the art therapy intervention focused on emotional exploration and awareness-insight development.
								Level 1

Table 3:

Children with no specific diagnosed difficulty

Article	Author (year)	Sample (size and groups)	Group Description	Intervention & Treatment	Amount and duration of therapy	Assessment Points	Outcome measured	Results
Evaluating the effectiveness of art therapy through quantitative, outcomes-focused study.	Saunders, E. J. & Saunders, J. A. (2000)	N=94 Only intervention group.	Children between the ages of 2 and 16	Art therapy program which operates in a large multi-program, private, nonprofit human service agency in Des Moines, Iowa	An average of 16.8 sessions. The range of the number of sessions was quite large (2 to 96).	Baseline, immediately after.	Each client was rated on 24 behaviors typically identified as symptomatic of individual and family dysfunction. The therapist rated each client on seven indicators of a positive therapeutic relationship.	Symptomatic Behavior - the change in scores, suggesting a decline in frequency, was statistically significant. Therapeutic Relationship - This positive change in scores from Intake to exit was statistically significant for each item. Level 3
Psychosocial Changes Associated with Participation in Art Therapy Interventions for Siblings of Pediatric Hematopoietic Stem Cell Transplant Patients	Wallace, J., Packman, W., Huffman, L. C., Horn, B., Cowan, M., Amylon, M. D., ... & Moses, J. (2014)	N=30 Intervention group (n=20) Control group (n=10)	Children (ages 6–18 years) - Siblings of Pediatric Hematopoietic Stem Cell Transplant Patients	Individual art therapy with experienced art therapists, working in a pediatric hospital setting	3 sessions - 90-120 minutes each	Three times - 1 week after the HSCT procedure, 1 month post-HSCT, 3 months post-HSCT	Participant Demographics (parent), Medical Characteristics (parent), Revised Children's Manifest Anxiety Scale (RCMAS), Piers-Harris Children's Self-Concept Scale, UCLA PTSD Index for DSM-IV, McMaster Family Assessment Device.	Results showed improvements in sibling psychosocial functioning associated with participation in the art therapy interventions. Compared to a control group, the intervention group showed lower levels of posttraumatic stress symptoms at the final session. There was no intervention versus control group difference for self-concept, anxiety, family functioning, or parent-reported PTSS. Level 2
The Effectiveness of Art Therapy in Reducing Internalizing and Externalizing Problems of Female Adolescents	Bazargan, Y., & Pakdaman, S. (2016)	N=60 30 students with internalizing problems - randomly assigned to experimental and control groups. Similarly, 30 students with externalizing problems - randomly assigned to experimental and control groups.	Female adolescent students (14-18 years old) of one of art schools in district 3 of Tehran.	Experimental groups participated in painting sessions designed based on Art therapy theories and previous studies (specific topic for each session). 15 minutes – explanation, 45 minutes – drawing, 15 minutes – reflecting.	Six sessions, 1.5 hours each.	Baseline, immediately after.	The history of artistic interest and activities scale, Achenbach System of Empirically Based Assessment (ASEBA), Intervention package of Art therapy	Data were analyzed using mixed ANOVA. The results showed that Art Therapy significantly reduced internalizing problems; however, its effect in reducing externalizing problems was not significant. Level 1

Table 4:

Children dealing with medical conditions

Article	Author (year)	Sample (size and groups)	Group Description	Intervention & Treatment	Amount and duration of therapy	Assessment Points	Outcome measured	Results
A randomized trial to test the effectiveness of art therapy for children with asthma	Beebe, A., Gelfand, E. W., & Bender, B. (2010)	N=22 Randomly assigned to Intervention group (n=11) Control group (n=11)	Children 7 to 14 years old. Diagnosis of persistent asthma requiring daily treatment	Group art therapy included specific art therapy tasks designed to encourage expression, discussion, and problem-solving in response to the emotional burden of chronic illness.	60-minute art therapy sessions once a week for 7 weeks.	Baseline, immediately after, and 6 months after the final art therapy.	The Pediatric Quality of Life (PedsQL)—Asthma Module (child and parent report), The Beck Youth Inventories—Second Edition, The Draw a Person Picking an Apple from a Tree evaluation - (FEATS).	Immediately after art therapy there was a reduction in parent-reported and child-reported worry scores from the PedsQL questionnaires, a reduction in the anxiety score and an increase in the self-concept score from the child-reported Beck Inventories, and improvements in the color, logic, and details scores from the FEATS in the intervention group compared with the control group. Six months after completion of the therapy there was improved parent-reported and child-reported worry and total scores from the PedsQL questionnaires, a lower anxiety score from the Beck Inventories, and higher color and detail scores from the FEATS persisted remained in the intervention group. Level 1

Table 5:

Juvenile offenders

Article	Author (year)	Sample (size and groups)	Group Description	Intervention & Treatment	Amount and duration of therapy	Assessment Points	Outcome measured	Results
Art Therapy Strategies to Raise Self-Esteem in Female Juvenile Offenders: A Comparison of Art Psychotherapy and Art as Therapy Approaches	Hartz, L., & Thick, L. (2005)	N=27 Only intervention groups (12 art psychotherapy 15 art as therapy).	Female Juvenile Offenders ranging from 13 to 18 years old.	Six core groups were randomly divided so that half of them received one type of art therapy and half received the other.	Ten 1-1/2-hour art therapy sessions were conducted with each group during a 12-week period.	Baseline, immediately after.	The Self-Perception Profile for Adolescents (SPPA) + The Hartz Art Therapy Self-Esteem Questionnaire (Hartz AT-SEQ).	The art psychotherapy group showed a significant increase in the domains of close friendship and behavioral conduct whereas the art as therapy group did so in the domain of social acceptance. Level 3