

ART THERAPY OUTCOME & SINGLE SUBJECT STUDIES

August 2005
Revised August 2007

Note: We hope you will find this listing of art therapy outcome and single subject studies useful for purposes of research, grantwriting, to demonstrate support for your art therapy program, and evidence of the effects of art therapy with various client populations. Listings are grouped primarily by client populations. Abstracts are provided for the two journals that gave copyright permissions without a fee: *Art Therapy: Journal of the American Art Therapy Association* and *American Journal of Art Therapy*. Abstracts written or modified by Research Committee members appear for some listings. Links to the abstracts or articles are provided for all the articles. In the future the AATA Research Committee will provide its own abstracts to provide you with the best assessment of the contents, strengths, and weaknesses of each study. This listing will be updated annually by a member of the AATA Research Committee. Please direct any corrections or additions to: pstjohn@cnr.edu.

Contributing Editors: Patricia St. John, EdD., ATR-BC, LCAT, Diana Bermudez-Rodriguez, ATR-BC, Kate Collie, ATR-BC, Donna Kaiser, PhD, ATR-BC, Sarah Deaver, ATR-BC, & Penelope Orr, PhD, ATR-BC

TABLE OF CONTENTS

Title	Page
ADD / ADHD / Asperger's	2
Aging, Elderly, Geriatric	3
Chemical Dependency / Substance Abuse	3
Grief / Bereavement	4
Medical	6
Mentally Retarded / Developmentally Delayed	8
Normal & Outpatient	10
Post Traumatic Stress Disorder & Trauma	15
Prison / Incarceration	18
Psychiatric	19
School / Academic	22
Sexual Abuse / Abuse	24
Traumatic Brain Injury	27
Related Research Articles	28

ADD / ADHD / ASPERGER'S

Kearns, D. (2004). Art therapy with a child experiencing sensory integration difficulty. *Art Therapy: Journal of the American Art Therapy Association, 21(2), 95-101.*

Aim & Method: An increasing number of students diagnosed with difficulties such as attention deficit hyperactivity disorder and Asperger's syndrome are being seen in schools. Sensory integration difficulties may be part of the symptomatology of these disorders. These difficulties may result in difficulties with both classroom behaviors and academic performance. This single-case study investigated the effectiveness of art therapy with a 5-year old white male with sensory integration difficulties. Art therapy focused on preart activities using three media. The pre/post test measurement tool was the *Formal Elements Art Therapy Scales (FEATS)* (Gantt & Tabone, 1998) to assess a "person picking an apple from a tree". Scales were rated for "changes in various qualities over the course of the research period": Prominence of Color, Color Fit, Implied Energy, Use of Space, Integration, Realism, Details of Objects & Environment, and Developmental Level. Teacher ratings, based on observation, assessed classroom behavior for improvement. A recording form "had a series of boxes, one for each 30-minute segment of Michael's school day" (p. 97). Ratings were "positive" or "negative." Each of the varied media sessions was compared to control sessions where a nonart experience was offered.

Results: Results indicated an increase in positive behaviors after art sessions as well as postponement of the first incidence of negative behaviors. Art therapy was found to be a useful intervention. (Kearns, 2004, p. 95; P. St. John, 8/14/05)

Smitheman-Brown, V., & Church, R. P. (1996). Mandala drawing: Facilitating creative growth in children with ADD or ADHD. *Art Therapy: Journal of the American Art Therapy Association, 13(4), 252-262.*

Aim & Method: Using a single-subject, multiple-baseline research design, this study investigates the creative growth and behavioral changes precipitated by the work done in art therapy through employment of the mandala as an active centering device with children (N = 8: 4 experimental and 4 control, ages 10-13) who have been diagnosed with Attention-Deficit Disorder (ADD) or Attention-Deficit Hyperactivity Disorder (ADHD), accompanied by a history of impulsivity. During specified intervals of treatment, a drawing was requested. "Draw a person picking an apple from a tree" was rated according to the guidelines of the *Formal Elements Art Therapy Scales (FEATS)* (Gantt & Tabone, 1998). Four scales were used: #5 Integration, #8 Problem Solving, #9 Developmental, and #10 Details of Objects & Environment. "Baseline data were gathered from historical and observable patterns of behavior, use of the Child Behavioral Checklist (Attenbach, 1979), general artwork produced before the intervention, and the

repeated drawing task...produced prior to the introduction of the intervention” (p. 253). “Ongoing behavioral data were charted through direct observation. The [5-minute-minimum, mandala-drawing] intervention was considered to begin during the art therapy sessions in which the mandala drawing was first introduced” (p. 253).

Results: Through examination of the drawings by three independent trained raters, and objective findings of this scale, it appears that a visual measurement of creative growth was achieved. Preliminary findings indicate that the mandala exercise has the effect of increasing attentional abilities and decreasing impulsive behaviors over time, allowing for better decision making, completion of task, general growth in developmental level, and an interest in personal aesthetics. (Smitheman-Brown & Church, 1996, p. 252; P. St. John, 8/14/05)

AGING / ELDERLY / GERIATRIC

Bergland, C. (1982). The life review process in geriatric art therapy: A pilot study. *Arts in Psychotherapy, 9(2), 121-130.*

Doric-Henry, L. (1997). Pottery as art therapy with elderly nursing home residents. *Art Therapy: Journal of the American Art Therapy Association, 14(3), 163-171.*

Aim & Method: An art therapy intervention using an eight-session pottery class based on Eastern Method throwing technique was implemented with 20 elderly nursing home residents, with the aim of improving their psychological well-being. Quantitative evaluation was based on Hebl & Enright (1993) and employed a quasi-experimental design measuring the participants’ self-esteem (Coopersmith, 1981), depression (Beck Depression Inventory, Beck et al., 1961), and anxiety (State-Trait Anxiety Inventory, Spielberger et al., 1983) compared with 20 nonparticipating elderly residents of the nursing home. Qualitative evaluation included client self-evaluations (a subjective measure, designed for this study), case progress notes, journal notes, and photographs.

Results: Following the intervention, the participating group showed significantly improved measures of self-esteem, and reduced depression and anxiety at posttest ($p < .05$) relative to the comparison group. However, it should be noted that those with high self-esteem and low anxiety at the beginning of the study did not make significant gains; conversely, those with low self-esteem and high anxiety, pre-intervention, benefited the most. Implications for art therapy intervention with institutionalized elderly and further research are discussed. (Doric-Henry, 1997, p. 163; P. St. John, 8/14/05)

Noice, H., Noice, T., & Staines, G. (2004). A short-term intervention to enhance cognitive and effective functioning in older adults. *Journal of Aging and Health, 16 (4), 562-585.*

CHEMICAL DEPENDENCY / SUBSTANCE ABUSE

Julliard, K. (1995). Increasing chemically dependent patients' belief in Step One through expressive therapy. *American Journal of Art Therapy*, 33(4), 110-119.

Aim: Step One of a Twelve Step Program (the addict admits powerlessness over the addiction) is considered fundamental to chemical dependency treatment in that belief in this step supports sobriety after treatment. This study was based on the premise that art therapy and role-play intervention will increase belief in Step One among individuals who are chemically dependent.

Method: Six outpatient adult clients participated in the art therapy intervention, each of whom made a collage expressive of addiction and recovery. An AB design was used. Gilbert's (1991) *Steps Questionnaire* measured belief in the steps. It was "administered just before group members started the collages and again 9 days later after the collages had been discussed" (p. 113). A factor analytic method was used for scoring along with a Rasch. A "direct measure, the Daily Check-In" was "administered at 5 pm to assess the previous 24 hours" (p. 112). "Patients estimated the percentage of time they spent thinking about using their drug or about their addictive behavior and indicated whether drugs seemed intensely or mildly appealing, neutral, or intensely or mildly unappealing" (p. 112). (The instrument is provided in the article). Patients began using the Daily Check-In "one week before the collage activity and...[was] continued for at least a week. The Steps Questionnaire was...administered once immediately before the collage activity and again after group processing" (p. 113). The Post-Treatment Interview, a Likert-type scale, consisted of "a questionnaire exploring denial and the importance of various Step One experiences" (p. 113).

Results: Their belief in the first three of the Twelve Steps increased as measured by the Steps Questionnaire (Gilbert, 1991), but only the increase in belief in Step Two (a higher power can restore the addict to sanity) was statistically significant ($p = .03$, $t = -2.3$; $p = .04$, $t = 2.2$; one-tailed). Higher power factor scores (pre/post test) showed increases for five of the six individuals (data analysis was not done). In post-study interviews, the clients perceived that they had experienced a significant decrease in denial of their addiction during treatment ($p = .01$, $F = 6.4$, ANOVA) and rated both collage making and role plays as important to their First Step work. (Julliard, 1995, p. 110; P. St. John, 8/14/05)

Springer, J. F., Phillips, J. L., Phillips, L., Cannady, L. P., & Kerst-Harris, E. (1992). CODA: A creative therapy program for children in families affected by abuse of alcohol or other drugs. *Journal of Community Psychology*, 55-74.

GRIEF / BEREAVEMENT

Graham, M., & Sontag, M. (2001). Art as an evaluative tool: A pilot study. *Art Therapy: Journal of the American Art Therapy Association, 18(1), 37-43.*

Aim & Method: The effectiveness of an art therapy support group for grieving children (number not reported) was assessed using artwork to qualitatively measure their perspective of their experiences in the group.

Results: Evaluation of perceptions of their grief was conducted retrospectively at a “reunion” of the group one year after completion of a 10-session treatment program. Three themes emerged: the vulnerability of grieving children, the importance of maintaining memories, and the contribution of the group to the process of grieving. Findings indicate that art can be an effective qualitative tool to evaluate children’s grief groups. (Graham, & Sontag, 2001, p. 37; P. St. John, 8/14/05)

Orton, M. (1994). A case study of an adolescent mother grieving the death of her child due to Sudden Infant Death Syndrome. *American Journal of Art Therapy, 33(2), 37-44.*

Aim: The death of a child is one of the most traumatic losses with which to cope (Bernstein, Duncan, Gavin, Lindhal, & Ozonoff, 1989). In this paper I present a single subject study illustrating how I used art therapy with an adolescent mother grieving the death of her child due to Sudden Infant Death Syndrome (SIDS).

Hypothesis: I hypothesized in this B-design single-subject study that the use of expressive therapy interventions within the framework of grief counseling would assist the mother’s grieving process by increasing her awareness of coping resources.

Method: The *Coping Resources Inventory (CRI)* (Hammer & Marting, 1987), was given during the third and ninth sessions and “...rated by a blind rater” (p. 38). The *Grief Scale: Self Help* (Graves & Gibson, 1985), was given as a pre- and post-test measure, as was the CRI. (All tools are provided in the article, pp. 38 - 40). A *Self-Monitoring Report* was also used by the client “to record daily information...to score occurrences ranging from crying and anger to identification and acceptance of her feelings” (p. 40). Treatment consisted of “10 therapy sessions primarily focused on the emotional state of the client upon her arrival, and included themes of support, awareness and identification of emotions,...the acceptable expression of these feelings, and themes of self-nurturance” (p. 40).

Results: Results on the CRI “indicate that the client improved her cognitive and emotional coping resources” (p. 41) (two of the five categories) by a few points, but did not improve in three categories: Social, Spiritual/Philosophical, and Physical. Results on the Grief Scale showed improvement in areas of sadness, guilt, humor, and hopefulness. That is, declines were apparent in sadness, anger, and guilt. “These results appear to correspond with the CRI results” (p. 42). “The results of the self-monitoring were consistent with the results of the Grief Scale” (p. 42). The treatment protocol is given and discussed. Limitations of the study and recommendations for further research are given. (Orton, 1994, p. 37; P. St. John, 8/14/05)

Ponteri, A., K. (2001). The effect of group art therapy on depressed mothers and their children. *Art Therapy: Journal of the American Art Therapy Association, 18(3), 148-157.*

Aim & Method: This study examined the effect of eight consecutive sessions of group art therapy on maternal self-image and self-esteem as well as on the quality of interactions between mother and child. The participants were four mother-child pairs in which the mothers were experiencing depressive symptoms that affected their care giving capacities.

Hypothesis: It was hypothesized that group art therapy would improve maternal self-esteem and self-image and, in turn, foster positive mother-child interactions. The research design was pre-experimental, one-group pretest posttest. A mother-and-child drawing (Gillespie, 1994), a 20-minute videotaped play session (Interaction Rating Scale [Perez, 1998]), and two self-reports (a 20-item Mother Questionnaire [MQ] that self-assessed parenting skills and a 26-item Maternal Self-Report Inventory-Short Form [MSI-SF] designed to assess adaptation to being a mother and maternal self-esteem [Shea & Tronick, 1988]) were used as pre- and post treatment assessments. Mother-and-Child drawings were scored using 14 items on an adapted FEATS (Gantt & Tabone, 1998).

Results: Results showed that mothers reported higher levels of self-esteem and a more positive self-image following treatment. All participants depicted more mature and/or more self-assured other-child relationships in their mother-and-child drawings following the group. Only half, however, were able to integrate their more optimistic attitudes and self-beliefs into their behavior and interactions with their children by the end of the study. Because the sample size was so small, statistical analyses of the data was not conducted. (Ponteri, 2001, p. 148; P. St. John, 8/14/05)

Schut, H. W., De Keijser, J., Van Den Bout, J., & Stroebe, M. S. (1996). Cross-modality grief therapy: Description and assessment of a new program. *Journal of Clinical Psychology, 52, 357-365.*

MEDICAL

Anschel, D.J., Dolce, S., Schwartzman, A., & Fisher, R.S. (2005). A blinded pilot study of artwork in a comprehensive epilepsy center population. *Epilepsy & Behavior Journal, 6(2), 196-202.*

Collie, K., Bottorff, J. L., & Long, B. C. (In press.) A narrative view of art therapy and art making by women with breast cancer. *Journal of Health Psychology.*

Colwell, C. M., Davis, K., & Schroeder, L. K., (2005). The effect of composition (art

or music) on the self-concept of hospitalized children. *Journal of Music Therapy, 42 (1), 49-63.*

Deane, K., Fitch, M., & Carman, M., (2000). An innovative art therapy program for cancer patients. *Cancer Oncology Nursing Journal, 10 (4), 147-151,152-157.*

Dolgin, M. J., Somer, E., Zaidel, N., Zaizov, R. (1997). A structured group intervention for siblings of children with cancer. *Journal of Child & Adolescent Group Therapy, 7(1), 3-18.*

Favara-Scacco, D., Smirne, G., Schiliro, G., & Di Cataldo, A. (2001). Art therapy as support for children with leukemia during painful procedures. *Medical Pediatric Oncology, 36 (4), 478-480.*

Background: Painful procedures endured by children with leukemia may be alleviated by art therapy. It is thought that this nonverbal, creative modality can help children develop coping skills for dealing with pain.

Aim: To test whether art therapy prevents anxiety and fear during painful interventions such as lumbar puncture and bone marrow aspiration.

Method: Design—Experimental design comparing a group who received art therapy protocol with a previous treated group of children who received no services.

Setting—Medical.

Study Participants—32 children aged 2-14 years with leukemia.

Results & Conclusions: Art therapy appeared to promote more cooperative behavior during painful interventions. (D. Kaiser, 8/14/05)

Gabriel, B., Bromberg, E., Vandenvoerkamp, J., Walka, P., Kornblith, A., & Luzzatto, P. (2001). Art therapy with adult bone marrow transplant patients in isolation: A pilot study. *Journal of Psycho-Oncology, 10(2), 114-123.*

Mindell, N. (1998). Children with cancer: Encountering trauma and transformation in the emergence of consciousness. *Arts in Psychotherapy, 25(1), 3-20.*

Aims & Method: Design--Discovery-oriented qualitative study; *Setting*—Swiss oncology center; *Study Participants*—two children with cancer.

Results: Symbols of transformation are described for two children to show the “intense symbolic process...was created to encompass and channel psychic energy as it moved towards life and death” (pp.18-19).

Conclusions: to understand the emergence of archetypal symbols.

Limitations: lacks utility for practitioners; not written so that reader can understand procedures of research process; lacks interpretation of the meaning of study findings.

Strengths: use of triangulation of therapists and supervisors to reduce bias; analysis of weekly reports over a long period of time. (D. Kaiser, 8/14/05)

Monti, D. A., & Peterson, C. (2004, July). Mindfulness based art therapy: Results of a two year study. *Psychiatric Times*, 21(8), 63-65.

Predeger, E. (1996). Womanspirit: A journey into healing through art in breast cancer. *ANS Advances in Nursing Science*. 18(3), 48-58.

Theorell, T., Konarski, K., Westerlund, H., Burell, A-M., Engstrom, R., Lagercrantz, A-M., Teszary, J., & Thulin, K. (1998). Treatment of patients with chronic somatic symptoms by means of art psychotherapy: A process description. *Psychotherapy & Psychosomatics*, 67(1), 50-56.

Wallace, J., Yourgin, P.D., Carolan, R., Moore, H., Sanchez, J., Belson, A., Yorgin, L., Major, C., Granucci, L., Alexander, S., & Arrington, D., (2004). The use of art therapy to detect depression and post-traumatic stress disorder in pediatric and young adult renal transplant recipients. *Pediatric Transplant* 8 (1), 52-59.

Walsh, S. M., Marin, S.C., & Schmidt, L.A., (2004). Testing the efficacy of a creative-arts intervention with family caregivers of patients with cancer. *Journal of Nursing Scholarship*, 36(3). 214-219.

Weldt, C. (2003). Patients' responses to a drawing experience in a hemodialysis unit: A step towards healing. *Art Therapy: Journal of the American Art Therapy Association*, 20(2), 92-99.

Aim & Method: Qualitative Research. People on hemodialysis live longer because of advances in technology; however, there are concerns about the diminished quality of life and the emotional problems these patients experience. During hemodialysis, patients rarely engage in any meaningful activity. The purpose of this study is to investigate eight patients' (volunteers who were right-handed, ages 30 – 75 years, three men and five women, all African-American) responses to drawing experiences while in a hemodialysis unit. "Duration of hemodialysis treatment varied from less than one year to 10 years" (p. 92). The inquiry involved a series of drawings and a series of interviews conducted before and after the drawings. By introducing a meaningful activity such as drawing, it was postulated that patients would be stimulated to talk about issues and experiences and improve their confidence and self-esteem. "Data were collected on two forms: a series of drawing activities [(1) Free drawing; (2) Self-portrait; (3) Draw what you most like)] and a series of [two] interviews" (p. 94). Materials were 9 x 12" white paper, standard pencils with erasers and colored pencils for tasks 1 and 2, and watercolor crayons for task 3. "To increase the validity and reliability of interpretation, all drawings were named and dated and colors were standardized" (p. 92). Interviews were audiotape. The predrawing interviewed "provided information

about education, background, demographics, art experience, and views about the patient's sense of self. A post-drawing interview discussed the participants' responses to the drawings tasks. Information was gathered on aspects that were enjoyable or difficult, ideas and topics drawn, and what the drawings represented" (p. 92). "Interpretative protocols such as those advocated by Adamson, Cousins, Bach (1990), and Furth (1988) were used in conjunction with analytical inductive reasoning to interpret the outcomes" (p. 92). This inquiry describes how patients perceived the situation before and during hemodialysis and explores the relationship between drawing and feelings of well being.

Results: The results indicate that all patients enjoyed the experience of drawing; they became focused on doing the drawings and the hours passed more quickly. (Weltdt, 2003, p. 92; abstract modified by St. John, 8/14/05)

MENTALLY RETARDED / DEVELOPMENTALLY DELAYED

Banks, S., Davis, P., Howard, V. F., & McLaughlin, T. F. (1993). The effects of directed art activities on the behavior of young children with disabilities: A multi-element baseline study. *Art Therapy: Journal of the American Art Therapy Association, 10(4), 235-240.*

Aim & Method: The effects of directed art activities on the behavior of two preschool children and one kindergarten child with developmental delays, as measured by The Vineland Adaptive Scale (Sparrow, Balla, & Ciccheit, 1984) in a rural classroom were examined. A multi-element baseline design across participants was used to compare directed art activities with typical preschool art activities. The target behaviors measured were aggression, eye contact, and social initiation. Each art activity directed by the teacher focused on an affective concept such as anger or happiness. The control condition used the same art materials as the directed art activity, and the children chose how they would use the materials. Baseline data was collected 1-hour per day for five days. During the control and experimental conditions, "data were collected [by a trained paraprofessional] 5 minutes after the art lesson, and again 30 minutes later...as the target behaviors were more likely to occur at that time" (p. 237).

Results: Data analysis was conducted by visual analysis of graphed results. Results indicated that the directed art activity had a larger effect than the control condition on the social condition of two children, while the control condition generated little effect. However, "both experimental and control art activities resulted in therapeutic improvement of social behaviors, across individuals" (p. 238). Neither art activity had a measurable effect on the targeted behavior of the third child. Implications for use by preschool and other teachers were suggested. (Banks, Davis, Howard, & McLaughlin, 1993, p. 235; abstract modified by St. John, 8/14/05)

Bowen, C., & Rosal, M. (1989). The use of art therapy to reduce the maladaptive behaviors of a mentally retarded adult. *The Arts in Psychotherapy, 16(3),*

211-218.

Hiltunen, S. S. (1989). The effects of art/drama therapy experiences on rigidity, body concept and mental maturity in graphic thinking of adolescents with mental retardation. *Art Therapy: Journal of the American Art Therapy Association*, 6(1), 18-25.

Aim & Method: Subaverage and rigid cognition is the primary dysfunction in mental retardation. This study focuses on the decreasing of rigidity and consequent enhancement of receptive/expressive cognitive functioning in order to clear the channel of and prepare the groundwork for communication of thoughts and ideas in the further therapeutic intervention. Only the cognitively oriented preparatory phase was the focus of this article. An art and drama therapy program was designed for 21 Mentally-Retarded (MR) students (divided into groups of 5 or 6) at the Kennedy Institute, a private special education facility, in Washington, DC. For this study, a 15-week art and drama therapy curriculum (3 sessions per week; total = 29 sessions) using Piaget's theoretical framework of cognitive development was implemented. The curriculum was designed to bombard the cognition of MR participants through graphic, movement, visual and auditory thinking as alternative modalities for verbal thinking. Drawings were assessed regarding body concept, rigidity, and mental maturity to determine the effects of the ...Program on participants' graphic thinking. The pre/post measurement tools were the Goodenough-Harris *Draw-A-Person* test (1963), and the *Bender-Gestalt Test for Young Children* (Koppitz scoring, 1964; 1975) "administered and scored by an outside school psychologist" (p. 20) using "the perseveration score to identify changes in visual-motor rigidity" (p. 20). "The second self drawing (Self 2) was drawn during class evaluation period in-group settings...immediately after the mirror self-confrontation" (p. 20). A "Body-Concept Check List" was used to record the participants' ability to name body parts "during mirror-confrontation" (p. 20). Cognitive abilities were measured using the Silver scales (Silver, 1975a, 1975b, 1977); two raters scored the assessment.

Results: Data show movement from rigidity toward flexibility ("no significant change in either visual-motor maturity or perseveration" ($p > .05$) (p. 20)). Significant differences were found on the Body-Concept Check List ($p < .001$). Significant differences were also found on the *Silver* test: Rater 1 – on ability to select, represent, and artistic/creativity abilities ($p < .001$); Rater 2 scores did not reach significance ($p > .05$). The *Silver* test was later revised to assess "smaller steps in progress" (*Silver Cognitive Evaluation Scale –Form III*) (p. 21). Statistical analysis in general suggested that the subjects had reached the oscillatory stage, fluctuating between rigid and flexible responses. It was conjectured that longer art and drama therapy intervention might firmly establish the acquired new flexible responses. Significant differences in body concept in graphic thinking were observed. This suggests that the art and drama therapy experiences improved students' conceptual knowledge of the body. Some improvement in mental maturity was also measured in Female Figure and Self 2 drawings. (Hiltunen, 1989, p. 18; abstract modified by St. John, 8/14/05)

Miller, P., & Miller, S. (1982). The relationship of task difficulty to mentally retarded students' interest in art. *Studies in Art Education*, 32(2), 22-26.

NORMAL & OUTPATIENT

Collie, K., Cubranic, & Long, B.C., (2002). Audiographic communication for distance counseling: A feasibility study. *British Journal of Guidance & Counseling*, 30(3), 269-284.

Collie, K., & Čubranić, D. (1999). An art therapy solution to a telehealth problem. *Art Therapy: Journal of the American Art Therapy Association*, 16(4), 186-193.

Aim & Method: Telehealth refers to the use of telecommunications technologies to increase equality of access to healthcare, for example to people in remote and rural regions, to people with mobility or energy limitations, and to people whose ability to travel to receive care is limited by responsibilities at home. In this paper, we describe a gap that exists in the area of behavioral telehealth (the delivery of mental health and psychological support services from a distance) and propose that computer-supported distance art therapy can fill the need for behavioral telehealth delivery methods that, like text-only Internet services can reach people in their own homes, and, like videoconferencing can include both audio and visual communication. We worked collaboratively to design and evaluate a computer system that supports distance group art therapy in real time. We argue that art therapy is uniquely suited to behavioral telehealth and provides a low-cost solution to the problems of spanning “the last mile” to individuals’ own homes and of compensating for the absence of visual or non-verbal communication information when communication is conducted with text only.

In art therapy, the therapy is conducted in relation to the images made during the therapy sessions as well as in relation to the art therapist. Images can easily be sent from one location to another and can be discussed and viewed simultaneously by people in different locations. Art images can span geographical distances that may separate consumers from care providers.

Ten co-researchers from the community were invited to use the system we designed, which supports synchronous group Internet art therapy using voice communication and sharable hand-drawn computer drawings, and to discuss their experience during focus groups. The co-researchers were counselors, art therapists, and educators, each with professional and/or personal experience relevant to the topic. A complete description of our participatory design process can be found in the proceedings of the 1998 Participatory Design conference (Collie, Čubranić, & Booth, 1998).

Results: A qualitative analysis of the focus group discussions was conducted to identify main topics. Five key themes that emerged were: ease-of-use and lack of inhibition when using the computer system for making and sharing art; social protocols for talking during an Internet art therapy session and strategies for handling and limiting periods of silence; protection against misrepresentation when there is no direct face-to-

face contact; qualities of computer images that may help or hinder art therapy; and feelings of mastery and control stemming from using a simple, easy-to-learn computer system. The overall consensus was that distance art therapy is viable and could indeed provide solutions to outstanding problems related to distance delivery of mental health and psychological support services. (Collie & Cubranic, 1999, p. 186; abstract modified by St. John & Collie, 8/16/05)

Curry, N. A., & Kasser, T. (2005). Can coloring mandalas reduce anxiety? *Art Therapy: Journal of the American Art Therapy Association*, 22(2), 81-85.

Aim & Method: This study examined the effectiveness of different types of art activities in the reduction of anxiety. After undergoing a brief anxiety-induction, 84 undergraduate students were randomly assigned to color a mandala, to color a plaid form, or to color on a blank piece of paper.

Results: ANOVA results demonstrated that anxiety levels declined approximately the same for the mandala- and plaid-coloring groups ($p < .32$). Both of these groups experienced more reduction in anxiety than did the unstructured-coloring group ($p < .001$). “Follow-up *t* tests revealed again that the mandala group showed larger decreases in anxiety than did the free-form group... ($p < .003$)” (p. 83), as was also the case when plaid- and free-form groups were compared ($p < .03$). These findings suggest that structured coloring of a reasonably complex geometric pattern may induce a meditative state that benefits individuals suffering from anxiety. (Curry & Kasser, 2005, p. 81; abstract modified by St. John, 8/14/05)

Ellenbecker, T., & King, A. (1990). The effects of gender and college major on mood state changes induced through artistic expression. *American Journal of Art Therapy*, 28(4), 106-110.

Aim: A basic tenet of art therapy is that the process of creating art is associated with positive mood change. The present research set out to test this hypothesis and, further, to provide predictors concerning the kind(s) of individuals most likely to derive such benefit from creative art therapy.

Method: A total of 59 undergraduate college students (22 men and 37 women; 19 art majors, 33 non-art majors, and 7 new art majors, “i.e., students who became art majors during the course of the semester” (p. 106)) were administered the *Multiple Affect Adjective Checklist-Revised (MAACL-R)* (Zuckerman & Rubin, 1985) before and after visual art classes at three different periods during a semester (weeks one, seven, and fourteen). The effects of gender and college major on mood state changes were examined, along with relationships between attitudes/beliefs about art (as measured by the ABC-ART Questionnaire) and the magnitude of mood state changes. Students from four different studio art classes, each 150 minutes long, created art during the sessions.

Results: Evidence emerged that the process of art induced positive mood state changes in most subjects. Anxiety was reduced significantly ($F_{1, 53}=7.52, p<.01$) during the initial testing period and the initial art period. Depression was significantly reduced during the first and second data collection sessions ($F_{1,53}=5.02, p<.05$) and ($F_{1,63}=4.89,$

p<.05). “There was a significant gender main effect for the second testing period ($F_{1,53}=7.21, p<.01$), with males showing more depression than females exposed to the three hour art session” (p. 107). On the measure of hostility, no “significant main effect or interaction differences” were found (p. 107). This also was the finding for the measures of Sensation Seeking and Positive Affect. For the ABC-ART Analysis, an “analysis of variance revealed...changes in Cluster C [feelings of self-efficacy regarding artistic talent] over the course of the semester”....and a “gender-by-test interaction ($F_{1,53}=5.03, p<.05$) was found” (p. 108). Men showed increased responsiveness to the art process, with the positive effects tending to increase over time. Curiously, men also showed significantly enhanced self-efficacy in their artistic abilities as the semester proceeded. Mood alteration was not associated with scores derived from the ABC-ART measures of attitudes and beliefs regarding the art process. (Ellenbecker & King, 1990, p. 106; abstract modified by St. John, 8/14/05)

Evans, G. S., & Corbit, I. E. (1989). Visual transitions as therapy. *Art Therapy: Journal of the American Art Therapy Association*, 6(2), 57-66.

Aim: The study describes a multimodal art therapy procedure using photography, art, movement, video and verbal discussion, *Visual Transitions*, and attempts to provide a theoretical rationale for the procedure as well as statistical evidence for its effectiveness.

Method: A group of volunteers ($N = 11$; 9 women, 2 men, ages 34 – 58, mean = 46) took part in a seven-week program and filled out questionnaires before and after the experience. Three instruments were used: (1)The *Adjective Check List (ACL)* that “assess[es] personality needs and traits...” consisting “of 300 adjectives, organized into 24 basic scales” (p. 60), (2) the *Personal Orientation Inventory (POI)* “a self-report instrument designed to measure personal maturity as based on Maslow’s concepts of self-actualization” consisting “of 150 paired-opposite items of antithetical, self-characterizing statements concerning value and behavior judgments” (p. 60); and (3) a self-report critique designed for this study to “measure the extent of participants’ satisfaction and their comments regarding effectiveness of *Visual Transitions*, consisting of 11 questions and a rating scale from 1 – 5 plus a request for a “brief comment”.

Results: Data show moderate but positive results for the program. On the *POI*, pre-post test results “show that ‘Spontaneity’ and ‘Capacity for Intimate Contact’ were significant at the .07 level...and ‘Existentiality’ showed significance at the .11 level” suggesting tendencies toward improvement (p. 61). On the *ACI*, pre-post test comparison of Favorable Adjectives checked reached the $p > .25$ level; for Personal Adjustment, pre/post test differences reached the level of $p = .16$, both in a positive directions, but not reaching significance. On the Self-Report Critique, the “mean rating per questions was 4.203” (of a possible 5), and a mean of 71.458 of a possible 85 points (p. 62). An appendix provides the “Self-Report Critique” (pp. 65-66). (Evans & Corbit, 1989, p. 57; abstract modified by St. John, 8/14/05)

Fryear, J. L., & Stephens, B. C. (1988). Group psychotherapy using masks and video to facilitate interpersonal communication. *The Arts in Psychotherapy, 15*, 227-234.

Julliard, K., Intilli, N., Ryan, J., Vollmann, S., & Seshadri, M. (2002). Stress in family practice residents: An exploratory study using art. *Art Therapy: Journal of the American Art Therapy Association, 19*(1), 4-11.

Aims & Method: Design—An exploratory study investigating themes and characteristics of artwork; *Setting*—Medical education; *Study Participants*—Family practice residents (N=16).

Results: Results of the 48 drawings analyzed indicated common themes of psychological pressure, anxiety, a sense of being overwhelmed, and in many cases, depression. Drawings of international graduates contained more negative themes. Each participant created three drawings with the first expressing feelings about the last year of residence, the second expressing stress felt in that year, and the third expressing sources of support and rejuvenation. Drawings were evaluated by art therapists blind to the nature of the study; they identified positive and negative themes relevant to stress.

Limitations: small sample size and lack of random assignment reduce generalizability; only one measurement used; no comparison group was used; and author noted problems with drawing directives that may have influenced results.

Strengths: artwork analysis. (Abstract by Kaiser, 8/14/05)

Malone, S. N., & Rosal, M. L. (1993). Journey toward integration: The use of collages to assess the separation and individuation process as an adult identical twin. *Art Therapy: Journal of the American Art Therapy Association, 10*(1), 16-22.

Aim & Method: In this paper, a single subject (AB) design using art therapy to facilitate the separation-individuation process of an adult identical twin is presented. The client was self-referred to a university counseling center. After initial crisis intervention sessions, the problems of dependency and identity were addressed through art therapy. The uniqueness of this study rests with its innovative measurement tool, an inner circles collage that allowed the therapist to chart the client's intrapsychic move toward separation from her identical twin. The client used collages as a means of discovering differences between herself and her twin sister and to identify her own separate and unique sense of self. Hypotheses were: (1) the client would "become less enmeshed with her twin sister at the intrapsychic level", and (2) the client would "become less enmeshed with other family members" (p. 18). The baseline phase was one session in which "the client created the inner circles collage, consisting of a drawing of concentric circles on 12" x 18" white paper on which collage symbols of significant others could be placed, but not affixed" (p. 18). To establish progress, "movement of symbolic shapes of the twin and husband from the inner core of the client" was measured in millimeters from 0 to 8 for each of 11-week treatment sessions. Prior to this treatment, the client also was assessed using the *House-Tree-Person (HTP)* test (Buck, 1981), and the *Kinetic Family*

Drawing (KFD) (Burns & Kaufman, 1972). No posttest was conducted using these measures.

Results: Visual analysis of the graphed results show increase in separation for both the twin and husband symbols beginning in the 5th session. By the 11th session, both symbols were about 6.5 millimeters apart, and away from her inner core. (Malone & Rosal, 1993, p. 16; abstract modified by St. John, 8/14/05)

Manheim, A. R. (1998). The relationship between the artistic process and self-actualization. *Art Therapy: Journal of the American Art Therapy Association, 15(2), 99-106.*

Aim: This study explores the role creativity plays in personal growth and development and responds to Maslow's (1963) call for practical techniques that promote health. A literature review and qualitative study were conducted to examine possible parallels between creativity, self-actualization, and the three-dimensional art experience.

Method: At the beginning or midway through the 8-week courses, a 16-item questionnaire, designed for the study, "was distributed to students [N = 65] in seven continuing education art classes at three local art schools" (p. 102) where instruction focused on three-dimensional media. Questionnaires measured "students' perceptions regarding the impact of the creative process in the studio and in their daily functioning" (p. 102).

Results: Most (98.4%) reported, "art enhanced their lives" (p. 103). Results suggested a relationship between creating three-dimensional artwork and self-actualizing growth, with the most frequently reported residual effects being an increased sense of openness (68.3%) and self-acceptance (65.1%). While the majority of those surveyed reported that this creative realm enhanced their lives, findings suggested that those who were particularly motivated found their life more globally enriched beyond the walls of the art studio (p = .00134). (Manheim, 1998, p. 99; abstract modified by St. John, 8/14/05)

Omizo, M. M., & Omizo, S. A. (1989). Art activities to improve self-esteem among native Hawaiian children. *Journal of Humanistic Education and Development, 27, 167-176.*

Pizarro, J. (2004). The efficacy of art and writing therapy: Increasing positive mental health outcomes and participant retention after exposure to traumatic experience. *Art Therapy: Journal of the American Art Therapy Association, 21(1), 5-12.*

Aim: Is art therapy treatment of trauma-exposure as or more effective than writing therapy in improving psychological and health outcomes?

Method: Forty-five undergraduate students were randomly assigned to one of three conditions: write-stress, art-stress, and art-control. A baseline questionnaire was used to record demographic information. Three measurement tools were used in pre/post testing: The General Health Questionnaire-28 (Goldbert & Hillier, 1979) and the global

Measure of Perceived Stress (Cohen, Kamarck, & Mermelstein, 1983), the Physical Symptoms Inventory (Wahler, 1968), and the Shortened Version of the Profile of Mood States (Shacham, 1983). In addition, a Participant Satisfaction Questionnaire was used to assess satisfaction after the last session and one month later. Efficacy questions assessed how “enjoyable” and “helpful” participating in the study had been. Treatment consisted of two one-hour sessions, scheduled from 1 – 10 days apart.

Results: Results showed a decrease in social dysfunction under the writing condition as compared to the art therapy conditions ($p < .01$). However, satisfaction (related to retention) was better in the art-stress and art-control groups ($p < .01$). (Pizarro, 2004, p. 5; P. St. John, 8/14/05)

Limitations: only two sessions were held; ability to generalize was limited by use of college students who were volunteers; self-report measures used are sometimes unreliable.

Strengths: The study used four measures that have at least good psychometric characteristics. The GHQ-28 consists of scales that have concurrent validity ranging from .70 to .73, has good reported internal consistency. The FMPS has demonstrated internal consistency and test-retest reliability of .85 at 2 weeks and .55 at 6 weeks. The PSI has good internal consistency, has been standardized on a variety of adult populations, and has established test-retest reliability. The shortened POMS has high internal consistency and a high correlation with the original version. The study also used a participant satisfaction form after the final session and at a one-month follow-up. (D. Kaiser, 8/14/05)

Saunders, E. J., & Saunders, J.A. (2000). Evaluating the effectiveness of art therapy through a quantitative, outcomes-focused study. *The Arts in Psychotherapy*, 27, 99-106.

Limitations: no control group, no randomization, no psychometric properties reported for Initial Therapeutic Relationship, methods of statistical analysis not reported.

Strengths: good sample size, extended period of time for data collection.
(Abstract by Kaiser, 8/14/05)

POST TRAUMATIC STRESS DISORDER & TRAUMA

Chapman, L. M., Morabito, D., Ladakakos, C., Schreier, H., & Knudson, M. M. (2001). The effectiveness of art therapy interventions in reducing Post Traumatic Stress Disorder (PTSD) symptoms in pediatric trauma patients. *Art Therapy: Journal of the American Art Therapy Association*, 18(2), 100-104.

Aim: Although post traumatic stress disorder (PTSD) in children as been extensively studied during the past 15 years, little research exists regarding the efficacy of treatment interventions.

Method: This report describes an outcome-based art therapy research project currently conducted at a large urban hospital trauma center. Included are the theoretical rationale and overview of an art therapy treatment intervention called the Chapman Art Therapy Treatment Intervention (CATTI) designed to reduce PTSD symptoms in pediatric trauma patients. Use in this study, the CATTI was evaluated for efficacy in measuring the reduction of PTSD symptoms at intervals of 1 week, 1 month, and 6 months after discharge from the hospital. “The study is a prospective, randomized cohort design. Subjects were [58] [31 in the art therapy treatment group; 27 in the control group) children 7 to 17 years [mean = 10 years] who had been admitted to a Level I Trauma Center for traumatic injuries...of sufficient severity to require” a minimum hospitalization of 24 hours (p. 101) [mean length of stay = 4.4 days] and who scored ≤ 12 on the PTSD-I. Exclusion criteria were admissions for “burns, child abuse, and severe head injury...(Abbreviated Injury Scale ≥ 3 ” (p. 101). Baseline measurement tools were: (1) University of California at Los Angeles Post Traumatic Stress Disorder Index (PTSD-I) Child or Adolescent Version (Rodriguez, Steinberg, & Pynoos, 1997), (2) University of California at Los Angeles Post Traumatic Stress Disorder Index (PTSD-I) Parent Version (Rodriguez, Steinberg, & Pynoos, 1997), (3) Post traumatic Stress Disorder Diagnostic Scale (Foa, 1995), (4) Family Environment Scale (Moos & Moos, 1994), and (5) Nursing Checklist (three shifts) (modified version of PTSD RI-Parent Version).

Results: An early analysis of the data does not indicate statistically significant differences [statistics were not reported in the article; visual examination of graphs was provided] in the reduction of PTSD symptoms between the experimental and control groups. However, there is evidence [no statistics provided in article] that the children receiving the art therapy intervention did show a reduction in acute stress symptoms. Graphed results (no statistics) were provided for mean PTSD-RI Scores at baseline, 1 week, and 1 month. Mean scores for 6 months were not given. Percent of change in each group was given comparing baseline to 1 week and baseline to 1 month. It was difficult to determine the exact percentage based on the graphs and numerical data was not provided in the article. However, it was apparent that the mean PTSD-RI scores decreased for both the control and intervention groups, although more so for the intervention group. (Chapman, Morabito, Ladakakos, Schrerer, & Knudson, 2001, p 100; abstract modified by St. John, 8/14/05)

Limitations: only preliminary data was reported; data was only reported for one measure; it used a fairly small sample size; only mild to moderate injuries were reported for the sample.

Strengths: use of multiple measures, random assignment, measurements at three points in time. (Limitations & Strengths by Kaiser, 8/14/05)

Cicione, R.M., Fontaine, L.A., Williams, C.N. (2002). Trauma Relief Unlimited: An outcome study of a new treatment method. *Trauma and Loss: Research and Interventions*, 2(2), 25-33.

Grigsby, J. P. (1987). Single case study: The use of imagery in the treatment of posttraumatic stress disorder. *The Journal of Nervous and Mental Disease*, 175(1), 55-59.

Howard, R. (1990). Art therapy as an isomorphic intervention in the treatment of a client with Post-Traumatic Stress Disorder. *American Journal of Art Therapy*, 28(3), 79-86.

Aim: This paper describes the use of art therapy with a woman who developed traumatic neurosis or Post-traumatic Stress Disorder (PTSD) subsequent to childhood victimization through physical and sexual assault.

Hypothesis: It was hypothesized that art therapy could be used as an isomorphic intervention in the treatment of PTSD. Isomorphism is defined as a match of the style of therapeutic intervention to the style of the problematic pattern manifest in PTSD; both involve imagery and distancing processes. As such, art therapy could be an effective tool for increasing the client's ability to connect historic imagery and current feelings, with the attendant benefits of an increased level of comfort in dealing with the original trauma as well as heightened self-esteem.

Method: The observation/treatment/observation (ABA) was the single-subject research design used. The *Beck's Depression Inventory* was the pre-post-test assessment instrument. In addition, instruments developed to monitor feelings and imagery were used over the 9-week treatment period. These were the *Feelings Inventory (FI)* (used three times weekly), the *Imagery Inventory (II)* (used as needed), and the *Construct Chart (CC)* (used daily by both the client and therapist); these are provided in the article (pp. 82-93). Materials were "easily controlled media like markers, collage, and construction paper, and fluid media like tempera paints" selected by the client.

Results: indicated a reduction in stress and increased self-awareness. Pre-test BDI score was 17 (borderline clinical depression); post-test was 13 (mid-range mild mood disturbance). Graphed results of the FI, II, and CC are not given. (Howard, 1990, p. 79; Abstract modified by St. John, 8/14/05)

Morgan, C. A., & Johnson, D. R. (1995). Use of a drawing task in the treatment of nightmares in combat-related post-traumatic stress disorder. *Art Therapy: Journal of the American Art Therapy Association*, 12(4), 244-247.

Aim: Treatment of nightmares in two Vietnam veterans who met DSM-III-R criteria for post-traumatic stress disorder (PTSD) (established by Spitzer & Williams [1985] Structured Clinical Interview for Diagnosis) was conducted comparing a drawing task with a writing task.

Hypothesis: The hypothesis was that the isomorphism between visual imagery and the visual modality of nightmares would provide a more effective means of transforming and integrating the traumatic material into normal cognitive schemas.

Method: In a 12-week intervention in which drawing and writing were alternated (ABAB or BABA), both subjects reported reduction in frequency and intensity of their nightmares under the drawing condition. Each week participants rated four variables:

“Frequency of the recurrent nightmare, Intensity of the nightmare, and Startle upon awakening from the nightmare were rated on 5-point Likert scales (0 – 4). Difficulty going back to sleep after a nightmare (more than one hour) was indicated by a yes/no response. An overall measure of Nightmare Severity was created by multiplying frequency by intensity of nightmares” (p. 245).

Results: When writing and drawing conditions were compared there was a significant decrease under the drawing condition for both participants (Frequency: $p < .01$; Intensity: $p < .01$; Severity: $p < .01$.; Sleep Problem: $p < .001$; Startle: $p < .001$). Findings provide support for more extensive study of art therapy methods in post-traumatic stress disorder. (Morgan & Johnson, 1995, p. 244; Abstract modified by St. John, 8/14/05)

Morgan, K.E. & White, P.R., (2003). The functions of art-making in CISD with children and youth. *Int J Emerg Ment Health, 5(2), 61-76.*

Schreier, H., Ladakakos, C., Morabito, D., Chapman, L., & Knudson, M. M. (2005). Posttraumatic stress symptoms in children after mild to moderate pediatric trauma: A longitudinal examination of symptom prevalence, correlates, and parent-child symptom reporting. *Journal of Trauma-Injury Infection & Critical Care, 58(2), 353-363.*

PRISON / INCARCERATION

Ackerman, J. (1992). Art therapy intervention designed to increase self-esteem in an incarcerated pedophile. *American Journal of Art Therapy, 30(4), 143-149.*

Aim: Art therapy was introduced into the treatment program of an incarcerated sex offender.

Hypothesis: The hypothesis of this A-B-A single case study design states that art therapy would (a) increase the subject’s self-image and body image, and (b) decrease somatic complaints.

Method: “During the first observation (A1) period, pretest measures were administered. The treatment phase (B) consisted of 10 intervention sessions with self-monitoring assessments. Post-test assessments were completed during the second observation period (A2)” (p. 145). Four measures were used: “Two of these measures [were] the *Tennessee Self-Concept Scale* and *Human Figure Drawings (HFD)*[for both genders]” and “evaluated by Ogdon’s (1977) analysis” (p. 146). The other two measures: “Daily Log Sheet” and “Self-Monitoring of Somatic Complaints” were designed for this study. The art therapy sessions focused on improving the subject’s view of self and strengthening self-identify (Nucho, 1982).

Results: Visual analysis of graphed results showed a decrease in physical complaints from Sessions 1 – 4 with maintenance of “1” through Session 7, decrease to

“0” in Session 8, increase to “4” in Session 9, and return to “1” in the last session. Ratings of pre-post test HFDs showed “an increase in figure integration on both male and female figures. Much more attention to detail was evident in the post-treatment drawings” (p. 147). No quantitative results were provided. The Daily Log “contained an increase in positive feeling statements about self and body....improved personal hygiene....and making it to pill call time....failures included being tardy for work and smoking too much” (p. 147). No quantitative results were provided for these findings. Results indicated improvement in self-concept, self-efficacy, and body image, with a decrease in somatic complaints. (Ackerman, 1992, p. 143; Abstract modified by St. John, 8/14/05)

Ferszt, G. G., Hayes, P. M., DeFedele, S., & Horn, L. (2004). Art therapy with incarcerated women who have experienced the death of a loved one. *Art Therapy: Journal of the American Art Therapy Association, 21(4), 191-199.*

Aim: Although the number of women entering prison has continued to soar over the past two decades, little attention has been paid to them in health care research. Research with incarcerated women who are grieving has received even less attention. This pilot study was based on the results of previous studies as well as the authors’ combined clinical experience in the prison setting and with art therapy.

Method: Individual 1-hour art therapy sessions were offered to eight incarcerated bereaved women for a period of eight weeks. A variety of materials were used with a specific purpose. The women were interviewed before and after the art therapy was implemented. Prior to treatment, each woman participated in a 1 ½ to 2-hour semi-structured interview that was audiotaped. “The women were encouraged to tell about their experiences in their own voices and to take an active role in the interview process itself” (p. 193). About two weeks after treatment, a 45-minute interview provided the women with “the opportunity to describe their personal experiences and responses in regard to the art therapy sessions” (p. 193).

Results: Methods of data analysis were not reported. According to the authors, seven of the women described positive outcomes following the art therapy intervention and recommended that the program be continued and increased in length. (Ferszt, Hayes, DeFedele, & Horn, 2004, p. 191; Abstract modified by St. John, 8/14/06)

Gussak, D. (2004). Art therapy with prison inmates: A pilot study. *Arts in Psychotherapy, 31(4), 245-259.*

Hartz, 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: Journal of the American Art Therapy Association, 22(2), 70-80.*

Aim & Method: This exploratory, quasi-experimental study compared the impact of two art therapy approaches on the self-esteem of 27 female juvenile offenders. Participants took part in an art psychotherapy or art as therapy group intervention. Self-

esteem was measured post-treatment with a questionnaire of 20 questions designed by the authors (Hartz AT-SEQ). Pre and post intervention, the measure was the *Harter Adolescent Self-Perception Profile* (Harter, 1988), a 45-item, Likert scale, that consisted of eight domains of self-esteem and Global Self-Worth, as a separate domain.

Results: After intervention, no significant differences were found on the Hartz AT-SEQ. Both groups reported increased feelings of mastery, connection, and self-approval. Only scores for participants who scored low on pretest for the *Profile* were calculated for post-test differences. On Harter's *Profile* both groups showed an increase in global self-worth ($p < .05$). However, the art psychotherapy group showed a significant increase in domains of close friendship ($p < .05$) and behavioral conduct ($p < .05$), whereas the art as therapy group did so in the domain of social acceptance ($p < .05$). Measures of appearance and of behavioral conduct approached significance ($p < .10$). Findings suggest that for these low-self-esteem participants, art therapy can be an effective treatment intervention to raise self-esteem. This implies an approach can be selected to build greater trust and self-disclosure or to foster general group cohesion, based on client needs. (Hartz, 2005, p. 70; Abstract modified by St. John, 8/14/05)

PSYCHIATRIC & RESIDENTIAL TREATMENT

Borchers, K. K. (1985). Do gains made in group art therapy persist? *American Journal of Art Therapy*, 23(3), 89-91.

Aim: Over the past two decades treatment of the chronically mentally ill has shifted from long hospital stays to short stays coupled with aftercare in a community setting. Rapid discharge policies on the part of hospitals dictate effective community-based outpatient services to minimize readmissions to the hospital, the “revolving-door” phenomenon.

Aftercare (post-hospital) services for persons with severe and chronic mental illness are designed to enhance—or at least, maintain—patients’ level of functioning and thereby prolong their stay in the community. A combination of supportive therapy, psychotherapy, socialization, interdisciplinary therapies, and psychotropic medications characterize aftercare.

Art therapy seems particularly suited for aftercare patients since many of them have trouble communicating in words. Also, since art therapy can focus on the expression of reality, it may counteract the tendency of chronically mentally ill patients to withdraw into fantasy. However, not all therapists recognize art therapy as a form of treatment with long term benefits (Richardson & Gnanapragasam, 1979). The research described below addresses itself to the value of art therapy as a method of treatment in aftercare and attempts to determine whether the gains made in such treatment have a lasting effect.

Original Study – Method: “In the latter part of 1979 group art therapy was instituted as a treatment adjunctive to the medical support services of a large central psychiatric clinic in a large metropolitan area. The clinic’s forty patients were randomly

assigned to one of two groups, those selected to receive art therapy, constituted the Experimental group. The remaining half of the patients were designated the Control group. A total of ten art therapy sessions were held, with each session lasting an hour and a half. Most of the clinic's patients had been hospitalized earlier for a major psychiatric illness and were now relatively stabilized on psychotropic medicines" (p. 89). Participants were pre and post-tested. The *Rosenberg Self-Esteem Scale* (Rosenberg, 1965) was used to measure self-esteem. The *Progress Evaluation Scales* (Ihilevich & Gleser, 1979) were used to measure social interaction, as seen in "personal, social, and community adjustment" (p. 89). "In addition, the *therapists* of the patients in both groups were asked to evaluate each client (using the Progress Evaluation Scales) at the beginning and at completion of the group art therapy program. A one-way analysis of variance was used "to determine if there were significant differences between the pre- and post-test scores for both the Progress Evaluation Scales (PES) and the Rosenberg Self-Esteem Scale....[F]or the Experimental group...patients' scores on the 'Attitude Toward Self' scale of the PES show[ed] significant improvement ($p > .01$) from pre- to post-test" (p. 89). No significant change was found for the Control or Dropout groups. "The Experimental group (unlike the Control and Dropout groups) also was rated *by the therapists* as significantly improved in terms of the 'Getting Along with Others' scale of the PES ($p > .01$). A slight, but not significant improvement in self-esteem was found for the Experimental group; the Control and Dropout groups also showed slight improvements on this measure.

Follow-Up Study – Aim: Follow-up Study of Wehling and others' research (1980). Do benefits of art therapy continue after treatment itself?

Hypothesis: "the gains of the Experimental group as determined at the conclusion of the first study (that is, improved self-esteem as rated by the patients and better social adjustment as rated by the therapists) would still be evident nine months after the art therapy sessions had ended" (p. 89).

Method: The sample consisted of 24 of the original 28 patients who had completed the pre- and post-tests on the original study. These patients completed the PES, as did their therapists. Means were reported for two variables: "Getting Along with Others(GET)" and "Attitude Toward Self (ATS)". Only patients, not therapists, completed the *Rosenberg Self-Esteem Scale*.

Results: Only "the Experimental group registered higher scores for the variables ATS and GET on the post-test at the conclusion of the art therapy sessions than they registered at the beginning (pre-test), in the follow-up trial nine months later their scores still exceeded those of the pre-test trial, although not at a statistically significant level....for both the patients' self-ratings and the therapists' ratings" (pp. 89-91). However, the hypothesis was supported because the Experimental group maintained its gains over time. "[O]n the Rosenberg Self-Esteem scale, *all three* groups showed improved self-esteem both as measured in the post-test and the follow-up test. Thus all findings must be interpreted with caution" (p. 90). Means are reported on tables but outcomes of calculations of significance level are not provided. (Borchers, 1985, p. 89; Abstract modified by St. John, 8/14/05)

Frager, D. C., Coyne, L., Lyle, J., Coulter, P. L., Graham, P., Sargent, J., & Allen, J. G. (1999). Which treatments help? The patient's perspective. *Bulletin of the Menninger Clinic*, 63(3) 388-400.

Green, B. L., Wehling, C., & Talsky, G. J. (1987). Group art therapy as an adjunct to treatment for chronic outpatients. *Hospital & Community Psychiatry*, 38(9), 988-991.

Grodner, S., Braff, D. L., Janowsky, D. S., & Clopton, P. L. (1982). Efficacy of art/movement therapy in elevating mood. *Arts in Psychotherapy*, 9(3), 217-225.

Hoshino, J., Silbert, R., Knapp, N., & Weaver, K. A. (1998). A comparative analysis of pre- and post-electroconvulsive therapy drawings. *Arts in Psychotherapy*, 25(3), 189-194.

Kymissis, P., Christenson, E., Swanson, A. J., & Orlowski, B. (1996). Group treatment of adolescent inpatients: A pilot study using a structured therapy approach. *Journal of Child & Adolescent Group Therapy*, 6(1), 45-52.

Miller, C. (1993). The effects of art history-enriched art therapy on anxiety, time on task, and art product quality. *Art Therapy: Journal of the American Art Therapy Association*, 10(4), 194-200.

Aim & Method: The effects of an art history enrichment art therapy task on anxiety, time on task, and at product quality among 13 chronic adult psychiatric day hospital patients were investigated using a repeated-measures, quasi-experimental design. State-anxiety was measured with the *State-Trait Anxiety Inventory* (Spielberger, 1983). Art product organization level was assessed with the *Art Description Scales* (Miller & Miller, 1992). The author to the nearest 5 minutes measured time on task. Two 1 ½ hour sessions were conducted one week apart to reduce the “practice effect.” Under the control condition, participants were asked to “paint freeform shapes” (p. 196). Under the experimental conditions, participants were given a short lecture on Kandinsky and viewed his work, then asked to structure the painting: draw “three curving lines across the paper that intersect with each other at a few points” (p. 196).

Results: The results indicated the art history enrichment task reduced anxiety ($p < .05$) and increased time on task ($p < .002$). Art organization level tended toward a significant increase ($p = .075$) compared with a control condition. The findings are congruent with the literature concerning supportive art therapy and suggest that the use of art history enrichment in art therapy may be helpful with this population. (Miller, 1993, p. 194; Abstract modified by St. John, 8/14/05)

Ruddy, R. & Milnes, D.,(2003). Art therapy for schizophrenia or schizophrenia-like illnesses. *Cochrane Database Syst Rev.* (2), CD003728.

Shennum, W. (1987). Expressive therapy in residential treatment: Effects on children's behavior in the treatment milieu. *Child & Youth Care Quarterly*, 16(2), 81-90.

Tibbetts, T. J., & Stone, B. (1990). Short-term art therapy with seriously emotionally disturbed adolescents. *The Arts in Psychotherapy*, 17, 139-146.

SCHOOL / ACADEMIC

Chin, R. J., Chin, M. M., Palumbo, P., Palombo, C., Bannasch, G., & Cross, P. M. (1980). Project Reach Out: Building social skills through art and video. *The Arts in Psychotherapy*, 7, 281-284.

Darrell, E., & Wheeler, M. (1984). Using art therapy techniques to help underachieving seventh grade junior high school students. *Arts in Psychotherapy*, 11(4), 289-292.

Harvey, S. (1989). Creative arts therapies in the classroom: A study of cognitive, emotional, and motivational changes. *American Journal of Dance Therapy*, 11(2), 85-100.

Pleasant-Metcalf, A. M., & Rosal, M. L. (1997). The use of art therapy to improve academic performance. *Art Therapy: Journal of the American Art Therapy Association*, 14(1), 23 – 29.

Aim: The increased divorce rate in the United States has become a source of concern for children and adolescents. It is estimated that in 1990, one out of every three children under the age of 18 years will have divorced parents (Hargreaves, 1991). Recent research found that children and adolescents from divorced families might experience decreased academic performance.

Method: In this paper, the effectiveness of individual art therapy with a 12-year-old female whose academic performance decreased after her parents divorced is examined. An AB single subject design was implemented. To study changes in self-concept the Piers-Harris Children's Self-Concept Scale (CSCS) was administered as a pre/post test. Academic performance was based on "three trimester report card periods...: (1) the final report card of the sixth grade, (2) the first trimester of the seventh grade, and (3) the second trimester of the seventh grade" (p. 25). Ten individual art therapy treatment sessions over a 5-week period focused on problem-solving skills and self-concept as a means of improving school performance.

Results: Results indicate a notable increase (data analysis was based on visual analysis of graphed raw scores) on all seven self-concept subtests and in academic performance. Art therapy was found to be a useful school-based intervention for this client. (Pleasant-Metcalf & Rosal, 1997, p. 23; Abstract modified by St. John, 8/14/05)

Pond, S. St. C. (1998). Acceptance and belonging: The promotion of acceptance and belonging within group art therapy: A study of two lonely third grade students. *American Journal of Art Therapy*, 36(3), 81-89.

Aim & Method: Two third grade students, one boy and one girl, participated in an eight-week art therapy intervention plan designed to address their reported loneliness. Both were members of a seven-member art therapy social skills group in a school setting, designed to help children examine their attitudes and beliefs about relationships. Three art therapy interventions, employing a variety of media, focused on relationships in general, relationships within the group, and on strategies for meeting personal needs within the group. Both participants completed Asher's *Children's Loneliness Scale (CLQ)* (Corcoran & Fisher, 1994), before and after the intervention. In addition, they completed a direct measure, the *Self Inventory of Loneliness (SIL)* (developed for this study; presented on p. 84 of article; 5-point Likert self-report scale), on a bi-weekly basis to assess feelings of connectedness with others. Co-led, group art therapy was designed to promote "social skills and self esteem" and treatment focused "on understanding relationships and communication" (p. 84). "...eight forty-minute sessions held...a ninth sessions was added...to complete the final group intervention" (p. 85). Treatment was based on cognitive-behavioral theory.

Results: Results were mixed for both children. On the CLQ, both children's scores increased, suggesting "feelings of increased loneliness" (p. 86). On the SLQ, "Michelle's ratings fluctuated throughout the assessment period" (p. 86) with a final rating improving by 1 point. "The ratings for Charles were inconsistent, but indicated improvement in some areas" (p. 86) with a final rating improving by 2 points. (Pond, 1998, p. 81; Abstract modified by St. John, 8/14/05)

Rosal, M. L. (1993). Comparative group art therapy research to evaluate changes in locus of control in behavior disordered children. *The Arts in Psychotherapy*, 20, 231-241.

Rosal, M. L., McCullouch-Vislislis, S., & Neece, S. (1997). Keeping students in school: An art therapy program to benefit ninth-grade students. *Art Therapy: Journal of the American Art Therapy Association*, 14(1), 30-36.

Aim & Method: The pilot study discussed in this article involved the integration of art therapy into the ninth-grade English classroom of an urban high school. The three goals of the study were to reduce dropout rates, to decrease school failure, and to improve students' attitudes about school, family, and self. The data from three measures indicated that the pilot project was successful in reaching its goals. The discussion of artwork illustrates the success of the program, and ideas for future programming and research are

outlined. Participants were “50 students... from two ninth-grade English classes at an urban public high school” ages 13 –15 years. Students were pre/post tested using the 52-item *Jefferson County Public Schools Student Attitude Inventory (SAI)* to measure issues related to school, family dynamics, and perception of self. Data also were gleaned from reports cards and number of dropouts per academic year.

Results: A *t*-test analysis showed significant changes from pre to post test ($p \leq .001$) “in the attitudes of the students” (p. 32). “None of the 50 students dropped out or failed ninth grade” (p. 33). (Rosal, McCullouch-Vislisel, & Neece, 1997, p. 30; Abstract modified by St. John, 8/14/05)

**Rousseau, C., Drapeau, A., Lacroix, L., Bagilshya, D., & Heush, N.(2005).
Evaluation of a classroom program of creative expression workshops for
refugee and immigrant children. *J Child Psychol Psychiatry*, 46(2),180-185.**

**Silver, R. A., & Lavin, C. (1997). The role of art in developing and evaluating
cognitive skills. *Journal of Learning Disabilities*, 10, 416-424.**

**Stanley, P., & Miller, M. (1993). Short-term art therapy with an adolescent male.
The Arts in Psychotherapy, 20(5), 397-402.**

**White, K. & Allen, R. (1971). Arts counseling in an educational setting: Self-concept
change among pre- adolescent boys. *Journal of School Psychology*, 9, 218-224.**

SEXUAL ABUSE / ABUSE

**Brooke, S. L. (1995). Art therapy: An approach to working with sexual abuse
survivors. *The Arts in Psychotherapy*, 22, 447-466.**

Limitations: small sample size and lack of random assignment reduce generalizability, only one measurement used, only one variable examined. (D. Kaiser, 8/14/05)

Strengths: Evidence suggesting that art therapy improves aspects of self-esteem. (D. Kaiser, 8/14/05)

**Carr, M. B., & Vandiver, T. A. (2003). Effects of instructional art projects on
children’s behavioral responses and creativity within an emergency shelter.
Art Therapy: Journal of the American Art Therapy Association, 20(3), 157-
162.**

Aim & Method: The effects of instructional art projects on children’s behavioral responses and creativity were compared in a sample of ten 4- to 13-year-old children residing in an emergency shelter. Children participated in three art projects selected to elicit self-expression, empathy, and mastery. The projects differed in the amount of instructions and materials. One project involved multiple instructions and materials;

another involved few instructions; and the third involved no preliminary stimulation or instructions and allowed the children to choose their subject and materials. Measurement tools were: (1) “A checklist, [that] included the dependent variables, [that] recorded the children’s behavioral responses and creative/design elements (Figure 1)” (p. 109). Presence or absence of responses and elements were recorded (1 = presence; 0 = absence); possible range = 0 – 11 positive for behavioral and artistic elements; 0 – 2 for negative behavioral responses. Behavioral observation was during the three 1-hour, weekly art therapy sessions. Artwork produced during each session was analyzed using a Design Elements scale, based on Torrance (1988) and Lauer (1979).

Results: “Correlated *t* tests were performed to compare the differences in means on positive and negative outcome of children’s behavioral responses and creative/design elements among the three projects” (p. 160). It was found that children produced more formed expressions and creative/design elements and less chaotic discharge and stereotypic art through the art project that involved few instructions and few materials ($p < .04$, one-tailed) versus involved, “multiple instructions and materials” (p. 161). The same effect was found for measures of “less chaotic discharge and stereotypic art” ($p < .03$) and when compared with “no instructions and allowed for the child’s choice of materials” ($p = .04$, one-tailed). (Carr & Vandiver, 2003, p. 157; P. St. John, 8/14/05)

Limitations: small sample, lack of randomization, lack of control group, use of only one rater who was not blind to the study.

Strengths: provide preliminary evidence on degree of structure, amount of media leading to positive behaviors and by implication resilient attributes. (Abstract by Kaiser, 8/14/05)

Peacock, M. E. (1991). A personal construct approach to art therapy in the treatment of post sexual abuse trauma. *American Journal of Art Therapy*, 29(4), 100-109.

Aim: Individual art therapy was introduced into the treatment of a 40-year-old woman suffering from Post Sexual Abuse Trauma (PSAT) (Briere & Runtz, 1987). The hypothesis in this A-B-A single subject study states that art therapy would facilitate increased awareness and expression of feelings, and would alleviate anxiety, depression, and low self-esteem. Personal construct psychology provided a framework for assessment and treatment.

Method: Through art experiences the client addressed intrusive imagery, released affect related to childhood trauma, reframed and integrated abreacted intrusive imagery, and achieved increased self-awareness and control. “Three standardized measures were used to assess changes in levels of self-esteem, anxiety, and depression. In addition, a repertory grid was administered pre- and posttreatment, and a daily self-report form was used throughout treatment” (p. 101). The pre-post test instruments were: (1) *The Index of Self-Esteem (ISE)* (Hudson, 1982), the *Self Rating Anxiety Scale (SAS)* (Zung, 1971), and the *Self-Rating Depression Scale (SDS)* (Zung, 1965). (All instruments are provided in the article, pp. 102-103). Treatment consisted of daily art therapy sessions (excluding Sunday) “for the remaining 10 days of Jane’s hospitalization” (p. 103). Nine treatment

tasks are given in the article (p. 104). “During the early sessions, collage and markers were provided for structured cognitive tasks. As treatment progressed, the art materials and tasks were adjusted to allow engagement with traumatic memories”...alternating “fluid expression with controlled problem solving tasks” (p. 104).

Results: Results indicated positive change in all areas except depression; art changes and subjective observation suggested positive changes in that area as well. This study demonstrated the effectiveness of art therapy and personal construct theory. (Peacock, 1991, p. 100; Abstract modified by St. John, 8/14/05)

Pifalo, T. (2002). Pulling out the thorns: Art therapy with sexually abused children and adolescents. *Art Therapy: Journal of the American Art Therapy Association, 19(1), 12 – 22.*

Aim & Method: A 10-week treatment that integrated art therapy and group process was designed to target short- and long-term effects of sexual abuse in child and adolescent victims. The *Trauma Symptom Checklist (TSCC)* (Briere, 1995) was used for pre and post testing. Three groups of girls (ages 8-10 years; 11 – 13 years; and 14 – 17 years) (total N = 13) were tested for level of dysfunction. Treatment targeted symptoms associated with trauma: anxiety, depression, posttraumatic stress, anger, dissociation, and sexual preoccupation and distress.

Results: Results show a reduction in symptoms commonly associated with sexual abuse. Significant differences were found on three of the 12 subscales: Anxiety ($p < .03$), Posttraumatic Stress ($p < .02$), and Dissociation-Overt ($p < .03$). All other subscales show a decrease in symptomatology in total group scores, but not large enough to reach significance. (Pifalo, 2002, p. 12; Abstract modified by St. John, 8/14/05)

Limitations: small sample size and lack of random assignment reduce generalizability, only one measurement used, no comparison group was used. (D. Kaiser, 8/14/05)

Strengths: all participants had reduction in trauma symptoms with 3 scales showing statistically significant reduction. (Limitations & Strengths by Kaiser, 8/14/05)

Waller, C. S. (1992). Art therapy with adult female incest survivors. *Art Therapy: Journal of the American Art Therapy Association, 9(3), 135-138.*

Aim: “Very little systematic research has compared different types of treatment for adult victims of sexual assault” (Resnick & Schnicke, 1990, p. 488). Art therapy research in the treatment of sexual abuse has mainly been concerned with the content of art expressions produced by clients (Spring, 1984); Ticen, 1990). Therefore, comparative studies of art therapy and group verbal therapy have the potential of aiding therapists in treating this population.

Method: Fifteen adult female incest survivors participated in this study that employed a control group (individual psychotherapy) ($n = 3$) and two experimental groups: verbal techniques ($n = 7$) and art therapy (drawing, painting, and verbal processing) ($n = 5$). Each group “met for eight weeks in 90 minute sessions” (p. 135). “After two and eight weeks all participants...” rated the significance of the curative

factors of catharsis, cohesion, and insight in their treatments using “The Curative Climate Instrumental Instrument (Fuhriman, 1986)” (p. 136). “This instrument is a 14-item, five-point Likert Scale...” (p. 136) “...developed by Fuhriman based on Yalom’s Q Sort (1975). A one-way ANOVA compared control and experimental groups’ ratings and “[t]he Sandler’s A-Statistic was used to determine changes in each group’s ratings of the subscales after the six-week period.

Results: “Hypothesis 1 stated that art therapy will increase the value of insight in adult female incest survivors”; it was confirmed ($p < .005$); Hypothesis 2, that value of catharsis would increase was confirmed ($p < .025$); Hypothesis 3, that value of cohesion would increase was confirmed ($p < .025$); and Hypothesis 4, “that the art therapy group would value insight more than either the control or the verbal group after eight weeks” was *not* confirmed (p. 136). The results of this study indicate that group art therapy, using a series of structured tasks, increased the value assigned to each of these curative factors. On the rating of insight, there was little change in either the verbal or control group. On the rating of catharsis, there was increase in the verbal group but little change in the control group. On the rating of cohesion, the verbal group decreased its value and the control group increased its value. “Further research can aid clinicians in formulating additional treatment interventions and understanding more about how the process of art therapy functions” (p. 138). (Waller, 1992, p. 135; Abstract modified by St. John, 8/14/05)

Limitations: small sample size and lack of random assignment reduce generalizability, only one measurement used.

Strengths: used control and 2 experimental groups. (Limitations & Strengths by Kaiser, 8/14/05)

TRAUMATIC BRAIN INJURY

Lazarus-Leff, B. (1998). Art therapy and the aesthetic environment as agents for change: A phenomenological investigation. *Art Therapy: Journal of the American Art Association*, 15(2), 120-126.

Aim & Method: Although most social scientists are likely to agree with the idea that the environment influences behavior and vice versa, in practice people are often considered as if they were independent of their environment. This article describes a phenomenological investigation of environmental art therapy as an agent for change. The study tested the hypothesis that improving the aesthetic quality of the environment of a 29-year old, functionally dependent person with traumatic brain injury shows a corresponding positive effect in the attitudes and behaviors of the resident’s family system. The family’s purposeful manipulation of the environment and creation of a “Talking Book” appears to enhance adjustment to their son. The latter was assessed to have made gains in cognitive functioning. Study interventions may have contributed to these gains through alternations in the human and nonhuman environment. Measurement tools were the Kinetic-Family-Drawing (KFD), administered to the participant’s parents

(with whom he lived) during the second meeting and at the end of the study to “detect what changes had occurred in the family dynamics specific to” the participant (p. 123).

Results: Subjective comparisons were made between the two sets of drawings. (Lazarus-Leff, 1998, p. 120; Abstract modified by St. John, 8/14/05)

RESEARCH - RELATED ARTICLES

Anderson, F. E. (2001a). Needed: A major collaborative effort. *Art Therapy: Journal of the American Art Therapy Association, 18*(2), 74-78.

Anderson, F. E. (2001b). Benefits of conducting research. *Art Therapy: Journal of the American Art Therapy Association, 18*(3), 134-141.

Bergland, C., & Gonzalez, R. M. (1993). Art and madness: Can the interface be quantified? The Sheppard Pratt Art Rating Scale – An instrument for measuring art integration. *American Journal of Art Therapy, 31*(3), 81-90.

Burt, H. (1996). Beyond practice: A post-modern feminist perspective on art therapy research. *Art Therapy: Journal of the American Art Therapy Association, 13*(1), 12-19.

Carolan, R. (2001). Models and paradigms of art therapy research. *Art Therapy: Journal of the American Art Therapy Association, 18*(4), 190-206.

Gantt, L. (1986). Systematic investigation of art works: Some research models drawn from neighboring fields. *American Journal of Art Therapy, 24*(4), 111-118.

Julliard, K. (1998). Outcomes research in healthcare: Implications for art therapy. *Art Therapy: Journal of the American Art Therapy Association, 15*(1), 13-21.

Kaplan, F. F. (2001). Areas of inquiry for art therapy research. *Art Therapy: Journal of the American Art Therapy Association, 18*(3), 142-147.

Knapp, N. M. (1992). Tabulated review of diagnostic use of art as a preliminary resource for research with Alzheimer’s Disease. *American Journal of Art Therapy, 31*(2), 46-62.

Mushram, C. (2001). The potential contribution of art therapy to social science research. *Art Therapy: Journal of the American Art Therapy Association, 18*(4), 210-215.

Tinnin, L. W. (1994). Transforming the placebo effect in art therapy. *American Journal*

of Art Therapy, 32(3), 75-78.

Vick, R. M. (2001). Introduction to special section on research in art therapy: Where does an idea begin? *Art Therapy: Journal of the American Art Therapy Association*, 18(3), 132-133.

Wadeson, H. (1978). Some uses of art therapy data in research. *American Journal of Art Therapy*, 18(1), 11-18.