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Articles

The Efficacy of Art and Writing Therapy: Increasing Positive Mental Health Outcomes and Participant Retention After Exposure to Traumatic Experience

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Abstract

Research has shown that traumatic stress has negative effects on overall health and well-being. Traumatic exposure has been linked to higher rates of psychological and physical health problems. Writing about trauma or stress has been shown to improve health and reduce stress, but can negatively affect mood. The purpose of this study was to examine whether art therapy is as effective as writing therapy in improving psychological and health outcomes. Participants in the writing condition, but not the art therapy condition, showed a decrease in social dysfunction. However, participants who completed artwork reported more enjoyment, were more likely to continue with the study, and were more likely to recommend the study to family and friends. Future research could combine writing and art therapy to determine whether a mixed design would both improve health and maximize participant retention.

Introduction

Research has shown that traumatic experience has negative effects on overall health and well-being (Chatterjee, 1999; Litz, Keane, Fisher, Marx, & Monaco, 1992; Ullman & Siegel, 1996). Parental psychopathology, substance abuse, death, divorce, and sexual or physical abuse are some of the many ways that individuals are exposed to traumatic experience, placing them at a greater risk of physical and psychological dysfunction (Turner & Lloyd, 1995).

The creative arts therapies, like art and writing therapy, have been shown to be effective in helping individuals recover from traumatic experience (Kaduson & Schaefer, 2001; Pennebaker, Colder, & Sharp, 1990; Yamaguchi, 1997). For example, art therapy has been used to reduce acute stress symptoms in pediatric patients who have experienced traumatic injury (Chapman, Morabito, Ladakakos, Schreier, & Knudson, 2001). Art therapy has been utilized in the hospital setting to aid Vietnam veterans in their recovery from posttraumatic stress symptoms (Johnson, 1987). Foa and Kozak (1986) report that reliving a traumatic experience in a supportive environment helps one integrate and work through the experience, preventing further development of psychological disorganization and chronic mental health problems. A plethora of experiments demonstrate that writing about a current or past trauma has specific positive psychological and health benefits (Pennebaker, 1990, 1997; Pennebaker, Colder, & Sharp, 1990; Petrie, Booth, Pennebaker, Davison, & Thomas, 1995; Spera, Buhrfeind, & Pennebaker, 1994; also see Smyth, 1998, for a review). However, after conducting a literature review, little research was found comparing the efficacy of writing therapy to art therapy in reducing the risk of psychological or physical dysfunction after exposure to trauma. Accordingly, the goal of the current study is to compare art therapy to writing therapy to see if art therapy provides similar benefits.

Writing Therapy

There is evidence that writing therapy is effective in reducing stress, improving health, increasing positive affect, and promoting coping skills (Harber & Pennebaker, 1992; Pennebaker & Francis, 1996; Petrie, Booth, Pennebaker, Davison, & Thomas, 1995; Spera, Buhrfeind, & Pennebaker, 1994). Smyth (1998) reviewed over 13 case-controlled writing therapy studies that demonstrated the positive influence of written expression on physical health, psychological well-being, and general physiological functioning (overall effect size, d = .47). This translated into a 23% health advantage for the writing groups over the control groups (61% illness rate in control groups compared to 38% illness rate in experimental groups).

There is good reason to believe that the reduction in reported illness rates is associated with an actual reduction in physician visits and not due to mere differences in the self-

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reporting of illness across conditions. Pennebaker (1990) reviews a number of studies demonstrating that, across situations and populations, writing about stressful or traumatic events is consistently successful in decreasing health problems and rumination over stressful matters. In a prototypical study, Pennebaker et al. (1990) assigned incoming college students to a writing or control group at the beginning of the academic school year. For 3 consecutive days, participants in the writing group were told to write continuously for 20 minutes about their deepest feelings and thoughts associated with coming to college. Those in the writing group made fewer visits to the health center for 1 month after the experiment as compared to the control group.

One drawback to these writing strategies is that many participants report higher levels of anxiety and negative mood directly after writing. This negative affect lasted, in some cases, for up to 3 months after the study was completed (Pennebaker, 1990). Although those individuals experiencing negative affect still derive equal or even greater health benefits and report decreased rumination in the long term (Smyth, 1998), the amount of negative emotions experienced during treatment may discourage individuals from continuing with their treatment. This unintended side effect of writing therapy may, in the end, defeat the potential benefits of the treatment.

Art Therapy

Art therapy has been used as a treatment for trauma resulting from war, terminal illness, natural disaster, and family crisis (Rubin, 1999). For instance, Yamaguchi (1997) utilized art therapy in the treatment of Hiroshima bombing survivors. Using the techniques of painting and sculpture, survivors were able to work through fear, anger, resentment, and isolation. Improvement was measured by the amount of verbal disclosure about the art piece (pictures or sculptures of what they saw during the bombing). Thus, whereas at the beginning of the treatment survivors were not willing to discuss their war experience, by the middle and end of the treatment individuals were sharing experiences and engaging in greater group discussion (Yamaguchi, 1997). Art therapy has also been used in hospital settings to help patients cope with the diagnosis of terminal illness. For instance, Rockwood and Graham-Pole (1997) used painting, drawing, sculpture, and craft-making as therapy. As a result of this treatment, patients reported better mood, less frequent distress, loneliness, and anxiety. Other benefits included improved patient cooperation and morale and fewer barriers among staff, patients, and family members (Rockwood & Graham-Pole, 1997). Further, art therapy has been used to help families of divorce resolve disputes and custody battles and to help couples communicate (Landgarten, 1987). Finally, art therapy has been used in a wide range of situations, from helping immigrants with acculturation to helping workers with stress reduction, because art therapy can be a relaxing and nonthreatening activity (Rubin, 1999).

One advantage of art therapy over writing or talk therapies is that art products (e.g., sculpture or drawings) do not require literacy or verbal fluency, yet they can convey emotion, relate a story, and stimulate verbal expression. Thus, individuals who lack the skills to communicate through writing, or are uncomfortable about verbal expression, may be encouraged to disclose by first engaging in an art project about their stressful or traumatic experience.

Client Satisfaction

When treating individuals who have been exposed to traumatic stress, another important variable to consider is client satisfaction with the intervention. Ratings of client satisfaction and increased positive affect are related to participation in treatment and the likelihood that treatment will be completed successfully (Bieschke, Bowman, Hopkins, & Levine, 1995; LaSala, 1997; Petersson, Berglund, Brodin, Glimelius, & Sjoeden, 2000). A review of recent art therapy interventions surveying psychiatric and nonpsychiatric populations demonstrated that art therapy contributes to positive change in self-esteem and teacher-rated social skills and to significant improvement in global health (Reynolds, Nabors, & Quinlan, 2000).

The Present Study

This study compared the efficacy of art and writing therapy in reducing the effects of traumatic exposure by increasing psychological and health benefits and maximizing participant retention in treatment. The study included two experimental conditions, writing about stressful or traumatic events and drawing about stressful or traumatic events, and a control condition, drawing a still life. The art and writing conditions were then compared to the control condition regarding efficacy for improving psychological health, participant satisfaction with treatment, decreasing physical symptoms, and stress reduction.

It was hypothesized that: (1) the write-stress and art-stress conditions would be significantly more effective in improving self-reported mental health and reducing physical symptoms than the art-control group (because in both conditions participants would be confronted with the memory of the traumatic event and challenged to process or work it through); (2) participants in both the write-stress and art-stress conditions would exhibit negative mood during and after the experiment (because of increased processing of the event); and (3) the participants in both art groups would rate their experience as more enjoyable, be more willing to return to therapy, and be more likely to recommend a friend for this type of treatment (because art can be a nonthreatening and relaxing activity).

Method

Participants

Forty-five undergraduate students participated for monetary compensation or course credit (see Table 1 for demographic information). Participants were assigned randomly to one of the three conditions (write-stress, art-stress, art-control). Four participants did not return follow-

Table 1
Demographic Information

Condition	Number of Participants	Age Range and Mean Age	Mean Years of College
Write-stress	15, 5 males and 10 females	18-20, 18.47	1.27
Art-stress	15, 8 males and 7 females	17-37, 19.87	1.36
Art-control	15, 5 males and 10 females	18-20, 18.67	1.80

up surveys, leaving a final sample of 41 participants at follow-up.

Instruments

All participants completed a baseline questionnaire containing demographic information on gender, age, native language, and year in school. In addition, all participants completed the General Health Questionnaire-28 (Goldberg & Hillier, 1979), 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).

The General Health Questionnaire (GHQ)

The GHQ-28 (Goldberg & Hillier, 1979) is a 28-item questionnaire that assesses whether a person is functioning at an average level of health and whether any distressing symptoms are affecting health. Participants indicate whether they are currently experiencing symptoms by rating items on a 4-point scale ranging from "not at all" to "much more than usual." The GHQ was standardized on a "healthy" population (those not expressing psychological or physical disturbance) and on psychiatric patients. In this study, the shortened, 28-item version of the GHQ was utilized. This test is divided into four subscales: "somatic symptoms," "anxiety and insomnia," "social dysfunction," and "severe depression." All scales have concurrent validity with psychiatrists' ratings ranging from .70 to .73 (Goldberg & Hillier, 1979). This instrument is ideal for quick administration and has good internal consistency (Cronbach's α =.81). It can distinguish persons at risk for acute psychological distress from normals (Kind & Gudex, 1994).

The Global Measure of Perceived Stress (GMPS)

The GMPS (Cohen, Kamarck, & Mermelstein, 1983) measures how stressful a person considers his or her life situations to be. For this study, a truncated 10-item version of the GMPS was used. Participants rate items on a 4-point scale ranging from "never" to "very often." Cohen, Kamarck, and Mermelstein (1983) have shown that this scale is internally consistent (Cronbach's α = .85), and the test-retest reliability was .85 at 2 weeks and .55 after 6 weeks.

The Physical Symptoms Inventory (PSI)

The PSI (Wahler, 1968), a 28-item test, measures the degree to which individuals report physical complaints (14 items measure the frequency of physical symptoms and 14 items measure the severity of these same physical symptoms). It was developed from the Cornell Medical Index "medical symptoms," the Minnesota Multiphasic Personality Inventory Hypochondriasis Scale, and items suggested by a panel of clinicians. Internal consistency for the PSI is good (Cronbach's α = .85). It has been standardized on adult psychiatric patients, college students, seminary students, and adults seeking treatment for physical disabilities. Test-retest reliability was obtained for two of the student groups and one psychiatric group. Short-term stability (1 day to 1 week) ranged from .69 to .94. Longer-term stability (13 weeks) ranged from .45 to .84.

The Profile of Mood States (POMS)

After each session, a shortened version of the POMS (Shacham, 1983) was administered to ascertain whether participants in each group had different mood states. This test measures mood states that are short lived and distinct. The shortened version is a 37-item adjective checklist that the participant rates on a 5-point scale from "not at all" to "extremely." Higher scores indicate more intense emotion in a particular category. The five subscales in the shortened POMS include "depression," "activity/vigor," "confusion," "tension," and "fatigue." The shortened version was standardized on cancer patients complaining of pain symptoms. This test is a valid substitute for the original version of the POMS as there is a high correlation between the scales on the shortened version of the POMS and the original version ($r > .95$). The internal consistency of the scales for the shortened version ranges from .80 to .90 for Cronbach's α.

Participant Satisfaction Questions

Questions assessing participant satisfaction with the study were asked at the end of the last session and at the 1-month follow-up; three questions about study efficacy were asked only at the 1-month follow-up (Table 4). Participants were asked if they felt less stressed after completing the study, if they would recommend it to a friend, and if they would continue with the study if it were offered again. The efficacy questions focused on how enjoyable and how helpful participants found the study to be and, after the study, how often they had spoken about their experience. High ratings on questions very similar to these have been shown to indicate that clients are more likely to stay connected to treatment (Bieschke, Bowman, Hopkins, & Levine, 1995).

Materials

All participants were given a blank journal to use for art or writing. The write-stress group was given the choice of two writing utensils—a black fine-point ballpoint pen and a blue fine-point ballpoint pen. Both art groups were given the above-mentioned supplies as well as drawing materials in assorted colors: 8 fine-point markers, 12 colored pencils, 12 chalk pastels, and 8 oil pastels.

Procedure

Two 1-hour sessions were scheduled for each participant. The sessions were at least 1 day apart and at most 10 days apart. At the first session, each participant filled out and signed a consent form. Participants were asked to fill out the series of questionnaires about general health and perceived stress. They were then asked to engage in a directed creative arts activity: either drawing or writing depending on the experimental condition. It was explained that they could, if they wished, discuss how they felt after each session.

Participants in the experimental conditions were given the following instructions adapted from Pennebaker et al. (1990, p. 531).

> What I would like to have you write/draw about for the next two sessions is your most stressful or traumatic current or past experience. In your writing/drawing, I want you to really let go and explore your very deepest emotions and thoughts. You can write/draw about the same experience on both days or about different experiences each day. In addition to a stressful experience, you can also write/draw about major conflicts or problems that you have experienced or are experiencing now. Whatever you choose to write/draw, however, it is critical that you really delve into your deepest emotions and thoughts. Ideally, we would also like you to write/draw about significant experiences or conflicts that you have *not* discussed in great detail with others. Remember that you have 2-hour time slots to write/draw. You might tie your personal experiences to other parts of your life. How is it related to your childhood, your parents, people you love, who you are, or who you want to be? Again, in your writing/drawing, I ask that you make an effort to examine your deepest emotions and thoughts.

Instructions given to the control group were also adapted from Pennebaker et al. (1990, p. 531).

> What I would like you to draw about over the next two sessions is your interpretation of this [photograph of a] still life. In your drawing, I want you to be as objective as possible. There are many ways to represent a still life. You may draw in a realistic manner, you may draw in an abstract manner, however you feel most comfortable drawing. Use whatever materials you feel most comfortable using. You are not being judged on the quality of your artwork, so please, don't be concerned about what the finished product looks like.

For examples of the participant's work from each condition, see Figures 1, 2, and 3 for the write-stress, art-stress, and art-control conditions, respectively. At the end of the session, all participants were given the POMS to assess their mood. The second session was identical to the first, but included the participant satisfaction questions. If participants reported or acted depressed or agitated at the end of either session, the researcher suggested that they see someone at the mental health clinic and offered to accompany them there. (This only happened in one case, and the person was already in therapy at the clinic.)

After 1 month, a follow-up packet that contained the same instruments administered at baseline was mailed to

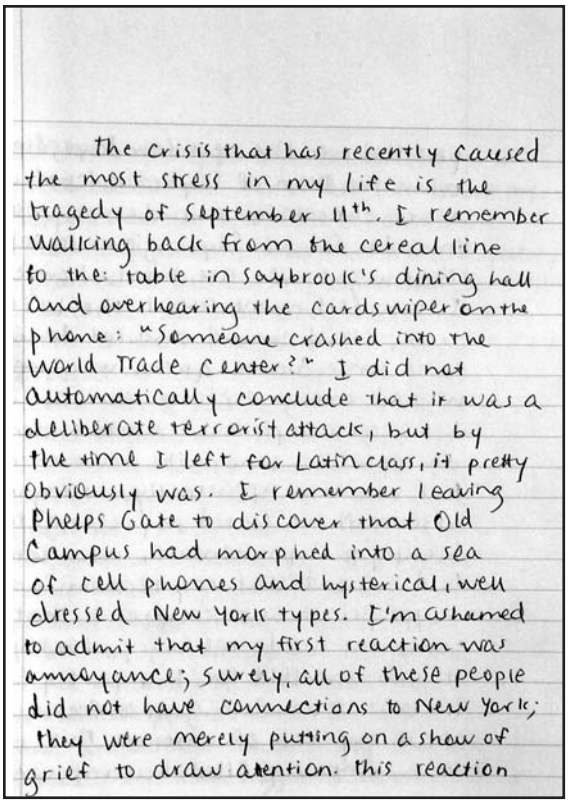
The crisis that has recently caused the most stress in my life is the tragedy of September 11th. I remember walking back from the cereal line to the table in Saybrook's dining hall and overhearing the cards wiper on the phone: "Someone crashed into the World Trade Center?" I did not automatically conclude that it was a deliberate terrorist attack, but by the time I left for Latin class, it pretty obviously was. I remember leaving Phelps Gate to discover that Old Campus had morphed into a sea of cell phones and hysterical, well dressed New York types. I'm ashamed to admit that my first reaction was annoyance; surely, all of these people did not have connections to New York; they were merely putting on a show of grief to draw attention. this reaction

Figure 1
Write-stress Conditions:
The Events of September 11, 2001

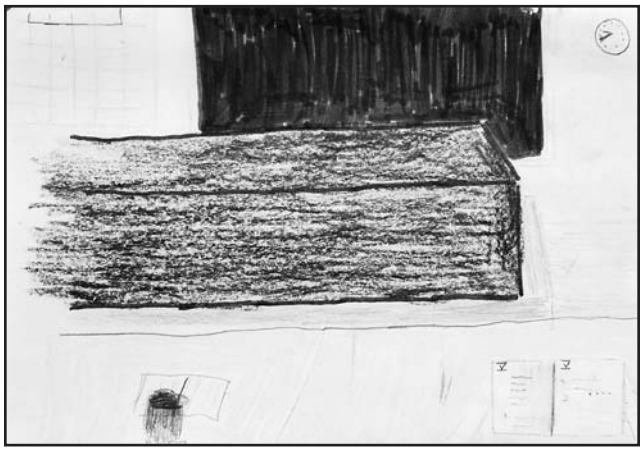

Figure 2
Art-stress Condition: Funeral

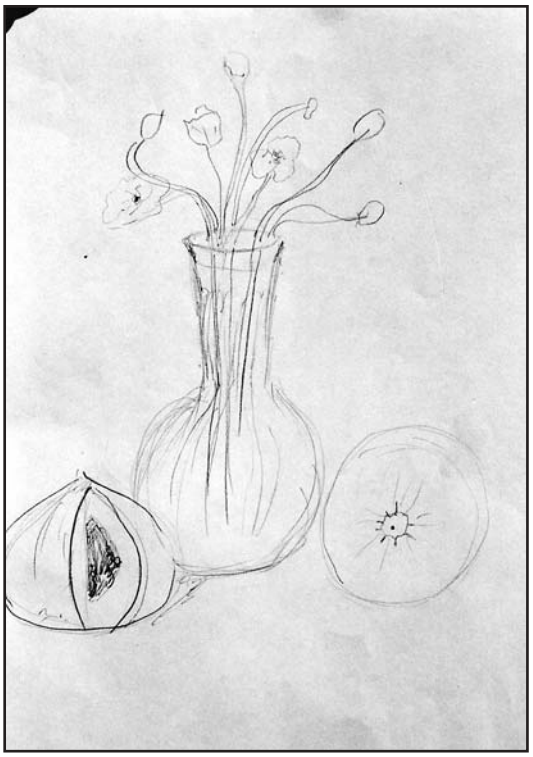

Figure 3
Art-control Condition: Still Life

each participant. This follow-up packet included a note reminding them of the study and thanking them for their participation as well as a dollar as an incentive to send back the survey. The packet included the GHQ, the PSI, the POMS, the GMPS, the number of health center visits, the study efficacy questions, and the participant satisfaction questions.

Results

General Health Questionnaire and Physical Symptoms Inventory

To test the hypothesis that both the write-stress and art-stress groups would be more effective than the art-control group in increasing positive mental health outcomes, differences between groups on the GHQ and the PSI were examined.

A series of analysis of covariance (ANCOVA) calculations were conducted on the four subscales of the GHQ using baseline scores as covariates. There was a significant difference among groups on the social dysfunction subscale, F (2, 37) = 3.17, p = .05. (See Table 2 for adjusted mean scores and standard error values.) A post hoc Fisher's least significant difference (LSD) test revealed that the write-stress condition provided a significant decrease in social dysfunction compared to the art-stress condition ($p < .01$) and to the art-control condition ($p < .05$). There were no differences across groups on the other subscales—somatic symptoms, anxiety and insomnia, and severe depression.

Table 2
The Social Dysfunction Subscale of the General Health Questionnaire: Adjusted Means and Standard Error Values

Condition	Number of Participants	Mean	Standard Error
Write-stress	15	1.92	0.09
Art-stress	12	2.26	0.10
Art-control	14	2.08	0.09

Table 3
Profile of Mood States Combined Score After Session 1, Controlling for Baseline: Adjusted Means and Standard Error Values

Condition	Number of Participants	Mean	Standard Error
Write-stress	15	2.169	.119
Art-stress	12	1.990	.119
Art-control	15	1.544	.115

The PSI was also examined by conducting an ANCOVA comparing conditions at follow-up using baseline scores as covariates. However, there were no significant differences among groups for the frequency of reporting symptoms, F (2, 37) = 1.31, *ns,* or the severity of symptoms, F (2, 37) = .55, *ns*.

Global Measure of Perceived Stress

In this study, a GMPS score was created by taking the average of the 10 items (Cronbach's α = .86). To test the prediction that both the write-stress and art-stress conditions would be more effective in reducing stress than the art-control condition, an ANCOVA was conducted, controlling for stress at baseline on the GMPS. There were no significant differences among the groups, F (2, 37) = .10, *ns*. Responses to the question "Did this treatment make you feel less stressed?" asked after the second session and at 1-month follow-up were combined (r = .56, p = .001) to yield an alternative measure of stress. A one-way analysis of variance (ANOVA) conducted on this variable failed to reach significance, F (2, 42) = 1.93, *ns*.

Profile of Mood States

To test the hypothesis that mood was affected by experimental condition, a negative-affect score was created by taking the average of the six POMS subscales (the "vigor/activity" subscale was reverse-coded) at baseline, after the first and second sessions, and at follow-up (Cronbach's α for the combined items ranged from .78 to .87). An ANCOVA was then conducted on the POMS negative-affect score after the first session, controlling for mood at baseline. This revealed that participants differed in their overall negative

affect at the end of the first therapeutic session, $F(2, 39) = 7.69$, $p < .05$. This effect was driven by the tendency for participants in the writing group to experience greater overall negative affect (see adjusted mean scores in Table 3). ANCOVAs were also conducted on the negative affect scores at the end of the second session and at follow-up (again controlling for negative affect at baseline). These revealed no significant differences in negative affect by experimental group ($F < 1.7$, $p > .12$, for both calculations).

Participant Satisfaction

Finally, it was expected that the art-stress and art-control participants would be more satisfied with their experience. To test this hypothesis, participants were asked to respond to six questions (see Table 4) rated on a 5-point scale (1= not at all, 5= extremely) measuring participant satisfaction. An overall participant satisfaction score was developed by averaging all of the above participant satisfaction items at follow-up (Cronbach's $\alpha = .84$). As hypothesized, a planned contrast revealed that the two groups that were asked to generate art (art-stress and art-control) reported significantly better overall satisfaction with treatment than the write-stress group, $t(38) = 2.75$, $p < .01$. (See Table 5 for means and standard deviations.)

Implications for Art Therapy Research

There was a significant decrease in social dysfunction within the write-stress group ($p = .05$). These results replicate what Pennebaker found in his research—that writing about a stressful or traumatic experience improves mental health outcomes at a later time (Smyth, 1998). However, participants in the art groups did not demonstrate similar health benefits. It may be, as Pennebaker (1997) argues, that the organization of thought provided by writing is responsible for the observed health benefits of writing. Generating art, on the other hand, may not provide sufficient cognitive organization and, therefore, may not be able to provide the same positive health benefits.

Past research has shown that writing about a stressful or traumatic experience, while conducive to improved mental and physical health, can have negative effects on mood sometimes lasting up to several months (Pennebaker, 1990). These mood effects were replicated in this study; participants in the writing group reported the greatest amount of negative affect. These results make sense—we would expect that thinking about a stressful event puts one in a bad mood. This may be further evidence that writing causes greater processing of negative events, and that it is the increased thinking and organizing of thoughts that lead to both negative affect and better health outcomes (Pennebaker, 1997). However, as argued above, these unintended affective consequences of writing therapy may be fatal to the therapeutic process. Individuals may be discouraged from continuing therapy because they experience such negative affect. In addition, because they may not be aware of the health consequences of writing therapy, clients may be less satisfied with treatment.

Table 4
Postsession Questions

Did this treatment make you feel less stressed?
Would you recommend this study to a friend or family member?
Would you continue with this study if it was offered to you again?
* How enjoyable did you find this study?
* How helpful did you find this study?
* Since you participated in the study, how often have you talked about your experience?

* These questions were asked only at 1-month follow-up.

Table 5
Overall Participant Satisfaction Score: Means and Standard Deviations

Condition	Number of Participants	Mean	Standard Deviation
Write	15	2.52	.776
Art-Stress	12	2.98	.684
Art-Control	14	3.36	.694

Indeed, this possibility was a reality in the present experiment. Participants who engaged in writing therapy found it less enjoyable, were less likely to continue with therapy, were less likely to recommend treatment to a friend or family member, felt more stressed, and were less likely to share the experience with others than were participants in both art conditions. This has important implications for our knowledge of the usefulness of art therapy. Whereas the present study was unable to demonstrate concrete health benefits from art therapy (although some drawbacks of the implementation may have limited the ability to uncover such effects), it is clear that art therapy techniques have the ability to encourage treatment and retain clients once they have begun. Writing therapy, after all, is of little value if clients discontinue treatment after one session. Based on the present findings, future research could combine writing and art therapy to determine whether a mixed design would improve mental health while maximizing participant retention.

One limitation of this study was the length between the experimental sessions and the follow-up. There may not have been enough time to find a substantial difference in physical symptom reporting and perceived stress. Also, the current study relied on self-reports of mental and physical health outcomes. Research has shown that self-reports of health information are sometimes unreliable (Pizarro, Schneider, & Salovey, 2002). Future research should allow for longer follow-up periods and the review of medical

records. Another limitation was the use of healthy college students for the study sample; this makes the generalization of study results to clinical populations impossible. However, this brief study paves the way for future research of this kind to be conducted in the clinical setting.

Overall, the results of this small study are promising—brief sessions of writing therapy can reduce social dysfunction, and participating in an art activity may encourage participants to return to, and continue with, treatment. Combined treatments, in which writing therapy is paired with art sessions, may encourage participants to continue therapy and may make therapy a more enjoyable experience.

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Name_____

Old Address_____

Old Phone Number_____

New Address_____

City_____ State_____ Zip+4_____

New Phone Number_____

E-mail Address_____ Effective Date_____

I hereby authorize AATA to publish in any form or medium the above listed information.

_____ _____

Signature Date

Calendar of Events

November 10-14, 2004
American Art Therapy Association, Inc. (AATA) 35th Annual Conference
Creative Fire: Identity, Passion, Professionalism
Town & Country Hotel, San Diego, CA
Contact: 1-888-290-0878 or e-mail: info@arttherapy.org

November 16-20, 2005
American Art Therapy Association, Inc. (AATA) 36th Annual Conference
Hilton Atlanta, Atlanta, GA
Contact: 1-888-290-0878 or e-mail: info@arttherapy.org