Art therapy for relief of symptoms associated with HIV/AIDS

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Symptom management for persons living with HIV/AIDS is an extremely important component of care management. The importance of pharmacologic interventions for management of symptoms is well recognized, and non-pharmacologic strategies such as art therapy are gaining interest in lay and professional communities. The aim of this research project was to test the feasibility and effectiveness of art therapy for relief of symptoms experienced by people living with HIV/AIDS. In this randomized clinical trial of art therapy, the primary objective was to assess change in physical and psychological symptoms. Participants were recruited from a large urban hospital’s inpatient population and outpatient HIV clinic. Seventy-nine people with a diagnosis of HIV infection provided socio-demographic information, participated in either a one-hour art therapy session or viewed a videotape about art therapy, and completed pre- and posttest measures of psychological and physical symptoms. Two separate analysis of covariance models were used to identify if the treatment condition influenced psychological and physical symptoms, after adjusting for pretest score, age, gender, and race/ethnicity. The analyses showed that physical symptom mean scores were better for those who participated in the art therapy compared to those who viewed the videotape, and this difference between conditions was statistically significant (p <0.05). Thus, the study demonstrated the potential benefits of one session of art therapy in relation to symptoms associated with HIV/AIDS.

Keywords: art therapy; alternative and complementary therapies; symptom management; non-pharmacologic therapy

Introduction

Symptoms associated with HIV can be physical as well as the psychological. People living with HIV/AIDS (PLWHA) experience fatigue, pain, peripheral nerve dysfunction, nausea, loss of appetite, depression, and headache (Carr & Cooper, 2000). Common symptoms of pain and fatigue can limit abilities in completing required activities, which in turn can compound psychosocial distress (Simmonds, Novy, & Sandoval, 2005). With the development of Highly Active Anti-Retroviral Therapy (HAART), life expectancies have increased, as well as adverse side effects, creating a greater need for chronic illness management and palliative care (Metadillogkul, Jir-athitikal, & Bourinbaiar, 2005).

Individuals often seek alternatives to pharmacologic care to relieve symptoms associated with HIV/AIDS and its treatment. One such non-pharmacologic strategy is art therapy, a complementary therapy being used successfully with medical patients to help manage symptoms. Art therapy is a clinical intervention based on the belief that the creative process involved in the making of art is healing (Nainis et al., 2006). Studies have suggested that art therapy can lead to increased awareness of self, as well as improved ability to cope with symptoms, stress, and traumatic experiences (American Art Therapy Association, 2003; Nainis, 1999; Trauger-Querry & Haighi, 1999). Specifically, art therapy may enhance the effects of pain medication through disassociating pain from psychological distress (Malchiodi, 1998). Research has also found that art therapy lowers stress and gives patients an alternative focus other than their illness (Malchiodi, 1998). Art therapy is also known to shift mental frameworks of patients from a distressed state to a more reassured state of mind (Nainis, 1999). For some, the emotions experienced while dealing with a highly stigmatized illness such as HIV can be difficult to express verbally, and so art therapy can provide a route of non-verbal expression. In addition, the process of creating art can provide relief and support, and the art product can be used to capture and confront issues related to the illness (Bussard & Kleinman, 1991). For PLWHA, creative arts therapies

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can provide an avenue of acceptance and value for individual self-expression (Alldridge, 1993).

Research studies are beginning to demonstrate art therapy’s effectiveness. Our previous study suggested that a session of art therapy was helpful in reducing pain and anxiety symptoms in cancer inpatients (Nainis et al., 2006). In one of the first art therapy projects for PLWHA, the AIDS Memorial Quilt served as a tangible expression of the emotional struggle that accompanies HIV/AIDS (Powelson, 2003). In addition, Edwards (1994) found that PLWHA created artwork that reflected the emotional states dependent on their stage of illness. Hrenko (2005) found that art therapy was valuable for children diagnosed with HIV/AIDS in a therapeutic day camp. Another study found that art therapy was helpful for Native Americans living with HIV/AIDS who had difficulty articulating these emotions (Bien, 2005). Furthermore, art therapy provided a coping resource for people who were recently diagnosed with HIV/AIDS (Piccirillo, 1996). Finally, drawing helped a sample of PLWHA illustrate their dreams, which enabled them to come to a more peaceful acceptance of their illness (Muff, 1996).

These studies represent art therapy’s promise as a non-pharmacological strategy to relieve symptoms associated with HIV/AIDS, and thus we set out to build upon this line of research. Our goal was to test the feasibility of an art therapy intervention with PLWHA for a future, full-scale randomized clinical trial. In order to examine the intervention’s feasibility, we compared patients’ physical and psychological symptoms after participating in a one-hour session of art therapy or a one-hour videotape about art therapy. Although one one-hour session is not the typical course of art therapy, this “small dose” of art therapy was ideal to test the feasibility of implementing a clinical trial of a behavioral intervention in the inpatient and outpatient clinic setting. We hypothesized that a single session would provide some relief of physical and psychological symptoms through creating art, providing an alternative focus, and the support of an art therapist.

Methods

Participants

Participants were inpatients and outpatients seeking treatment from the HIV clinic at a large, urban academic medical center. Recruitment fliers were placed in the HIV clinic waiting room and exam rooms. An advanced practice nurse recruited participants over the course of six months. Participants were included in the study if they were over 18 years of age, cognitively intact, capable of participating in art therapy for approximately one hour, and able to communicate in English. A stratified randomization procedure was used to assign participants to two conditions: one in which they participated in a session of art therapy or one in which they viewed a videotape about art therapy. Furthermore, the study was approved by the Institutional Review Board after a full committee review.

Measures

Participants were asked standard demographic information, along with questions about previous art therapy experiences. We used the Edmonton Symptom Assessment Scale (ESAS: Chang, Hwang, & Feuerman, 2000) to assess general physical functioning such as pain, tiredness, and nausea. Participants indicated each symptom’s severity on a scale of 0 to 10. The sum of the nine symptoms assessed made up the total ESAS score, ranging from 0 to 90. The lower the total score was, the better the symptomatology. Chang, Hwang, and Feuerman (2000) examined test–retest reliability and reported that the ESAS had a Spearman correlation coefficient of 0.86 at two days and 0.45 at one week, and they found that Cronbach’s alpha for the instrument was 0.79.

In addition, we used the state portion of the State–Trait Anxiety Index (STAI: Spielberger, Gorsuch, & Lushene, 1969) to measure psychological symptoms. The state portion contains 20 items which assess the severity of anxiety symptoms such as calmness, nervousness, and tenseness at a given point in time. The sum of these items was used as the STAI total score, with scores ranging from 20 to 80. The higher the total score was, the better the symptomatology. Spielberger (1983) examined test–retest reliability, and reported that the state portion of the State–Trait Anxiety Inventory (STAI) had a Pearson correlation coefficient of 0.16 for women and 0.33 for men after one hour. He suggested that measures of internal consistency (Cronbach’s alpha) would be more meaningful indices of reliability for the state portion of the STAI since “state” scores are more susceptible to changing in short periods of time, and he reported that the state portion of the STAI had a Cronbach’s alpha of 0.93 for men and 0.93 for women. Tanaka-Matsumi and Kameoka (1986) reported a negative correlation ($r = -0.23$, $p < 0.001$) between the state portion of the STAI and the Marlowe-Crowne Social Desirability Scale.

Procedures

After study procedures were explained, a research assistant obtained written informed consent,
demographic information, and then interviewed the participant with the ESAS and the state component of the STAI. These questions were read verbally to the participant and the research assistant recorded the responses. Upon completion of the survey items, participants assigned to the “control” condition viewed a one-hour long videotape on the uses of art therapy. Participants assigned to the intervention condition participated in a one-hour long art therapy session with a licensed art therapist (N.N.).

The art therapist went through a standardized script that described art therapy and asked about the patient’s symptoms and what he or she had been experiencing related to their treatment. After learning more about the patient, the art therapist offered the participant the art materials (i.e., paint, glitter glue, color and graphite pencils, markers, beads), and the participant chose which materials they wanted to work with during the session. After the participant selected the materials, the art therapist assured the participant that he or she could use the materials any way, that there is no wrong way to do the therapy, and that the therapist would help in any way possible. As the participant created the artwork, the therapist helped the participant process the meaning of the work by asking questions such as, “Were you thinking anything in particular while you were making this? Do any of your choices have special meaning?” The therapist and participant would then discuss the thoughts and feelings elicited. Near the end of the hour, the art therapist would guide the discussion to a close, and the art therapist would offer the participants art materials to work with after the session ended.

Upon completion of the therapy or videotape session, the research assistant re-administered the ESAS and STAI, and asked if he or she had any feedback about the videotape or art therapy session. The research assistant wrote down each participant’s feedback verbatim. After completing study procedures, participants were paid $25. All participants were then invited to a weekly art therapy group taking place at the medical center.

For patients who needed follow-up or had adverse events, social work and psychotherapy services were available to all patients participating in the study. In addition, we had an ongoing art therapy group in which all participants could participate, whether randomized to the art therapy or videotape conditions.

Data analysis
Analysis of covariance (ANCOVA) was used in order to evaluate differences between participants scores from the intervention and videotape conditions. We chose the ANCOVA methodology in order to better understand the effect of art therapy while adjusting for the socio-demographic variables of gender, age, and race/ethnicity. The primary outcome variable was the posttest ESAS score. We conducted a power analysis based on procedures outlined by Cohen (1992) and Friedman, Furberg, and DeMets (1998). In order to calculate power, we obtained effect sizes from ESAS mean score differences and standard deviations from our previous study of art therapy with cancer patients. With power set at 80% and a two-sided significance level (alpha) set at 0.05, we estimated that we needed a sample size of 80 to detect a meaningful difference between the two conditions.

We conducted two ANCOVAs. In the first analysis, pretest ESAS total scores, gender, age, and race/ethnicity were analyzed as covariates, and status in the videotape or intervention condition served as the independent variable. In the second ANCOVA, pretest STAI total scores, gender, age, and race/ethnicity were analyzed as covariates, and status in the videotape or intervention condition served as the independent variable. In addition, we examined selected individual posttest item scores from the ESAS and STAI. We were interested in whether the individual symptoms of pain, tiredness, nausea, depression, calmness, and nervousness would respond to art therapy. Similar ANCOVA analyses were performed to explore whether art therapy improved these symptoms in comparison to the videotape. SPSS for Windows version 15 (SPSS, 2006) was used to conduct the statistical analyses.

Results
Study participants were enrolled and completed study procedures over a six-month time period. Overall, 79 PLWHA participated in the study. Thirty-nine participants viewed the videotape and 40 participants received one session of art therapy. Seventy-five percent of the participants were men, and 25% women. Sixty-six percent identified themselves as African-American, 22% as European-American, 10% as Latino, and the remaining 2% as Asian-American or Native American. The average age of participants was 42 years old (SD = 10 years). Complete demographic information on the participants is shown in Table 1.

Three participants completed the pretests but withdrew before completing the study procedures. Two participants withdrew because of drowsiness (one cited medication as a cause of the drowsiness), and another withdrew when their physician came to his bedside for a consultation. These cases
represented less than 5% of those enrolled. Thus, their pretest scores were used in the analysis, and we did not impute for missing data.

**Physical and psychological functioning**

Separate ANCOVA analyses were performed in order to determine of participants’ race/ethnicity, gender, or age influenced ESAS and STAI scores. Only the participants’ age influenced the outcome variables when included in the model as a covariate.

For the first ANCOVA, which examined ESAS total scores, the overall model was statistically significant ($R^2 = 0.60$, $F(3, 67) = 33.87$, $p < 0.001$). This analysis demonstrated that symptoms reported on the ESAS improved for those who participated in the art therapy compared to those who watched a videotape of art therapy ($b = -5.07$, $p < 0.05$), when the scores were adjusted for pretest score and age. Figure 1 shows the adjusted mean total posttest ESAS scores for participants in the art therapy and videotape conditions.

In the second ANCOVA analysis, the posttest STAI scores were analyzed after adjusting for pretest scores and age ($R^2 = 0.61$, $F(3, 67) = 35.44$, $p < 0.001$). STAI scores improved for those who participated in the art therapy session when compared with those who watched the videotape, but the mean score differences between the art therapy and videotape conditions were not statistically significant. Figure 2 shows the adjusted mean total posttest STAI scores for participants in the art therapy and videotape conditions.

**Individual symptoms**

We also explored whether individual symptoms were affected by one session of art therapy. Specifically, we examined whether pain, tiredness, nausea, depression, calmness, and nervousness were improved or worsened by art therapy compared to the videotape condition. The ANCOVA analyses indicated that differences in the mean scores for these symptoms in the art therapy and videotape conditions were not statistically significant.

**Discussion**

This study demonstrated the potential benefits of art therapy in a clinical trial feasibility study of art therapy for PLWHA. In addition, we showed the potential benefits of art therapy in an ethnically and racially diverse sample of PLWHA.

Specifically, our study found that participants’ physical and psychological symptoms improved more for people who participated in one session of art therapy than for people who watched a videotape about art therapy. These results suggest that art therapy may provide an improved ability to cope with symptoms associated with HIV and AIDS. There are several mechanisms through which art

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**Table 1. Sample characteristics (total $N = 79$).**

<table>
<thead>
<tr>
<th>Sample (%)</th>
<th>Mean (SD)</th>
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<tbody>
<tr>
<td>Age (years)</td>
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<tr>
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<td>90</td>
</tr>
<tr>
<td>Outpatient</td>
<td>10</td>
</tr>
</tbody>
</table>

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**Figure 1.** Edmonton Symptom Assessment Scale (ESAS) scores for participants in the two conditions. The difference between groups was statistically significant ($p < 0.05$). The scores shown here are the mean total scores on the posttest ESAS, adjusted for participants’ age and total score on the pretest ESAS, which could range from 0 to 90. Lower scores indicated better physical functioning. The error bars represent the 95% confidence interval.
therapy may have improved coping skills. One way is that art therapy may provide an alternative focus for the patient – while working on art, the participant focuses on the art rather than their physical and psychological symptoms (Malchiodi, 1998). In addition, the art therapy may provide a place where patients can express their symptoms rather than keeping the pain or anxiety bottled-up inside (Aldridge, 1993). Participants’ statements after participating in the art therapy such as, “the paints helped to release tension” and “it took my mind off of stuff that’s going on in my life” suggest that art therapy can be beneficial in as an alternative focus and way of expressing feelings associated with their condition.

The results also suggest that physical symptoms may be more sensitive to change than psychological symptoms immediately after receiving one art therapy session. There are several possible explanations for this. First, one session of art therapy may not be enough to improve psychological symptoms. One participant stated that although he was glad that he participated in the art therapy session, he felt that his emotions were stirred up by the session. Another participant said, “I got the opportunity to see my emotions on paper”. These participants’ responses suggest that art therapy may help participants begin to identify their feelings, and further sessions may help to resolve the issues that have been stirred up by their condition.

Our study had some limitations. First, the study involved only one session of art therapy, and multiple sessions may have yielded relief over a longer period of time. In addition, future studies of art therapy that involve multiple sessions could reveal that art therapy reduces psychological as well as physical symptoms. Second, our study recruited both inpatients and outpatients, but our sample included predominantly inpatients. We may have obtained different results if we had enrolled primarily outpatients with less symptom burden. Third, it is possible that our findings could reflect the social aspects of the therapy, and that the participants could be benefiting from the social nature of art therapy. One way to further understand what is driving our findings is to compare the art therapy with another therapy involving social interaction, such as cognitive-behavioral therapy. These limitations can be addressed in future, randomized clinical trials. In addition, future studies could examine the mechanisms by which art therapy works, whether it works by giving patients an avenue of symptom expression, an alternative focus, or other methods.

This study provided evidence for art therapy’s potential benefit as a non-pharmacological strategy to relieve symptoms associated with HIV/AIDS. The present study was designed as a feasibility study for a full-scale randomized clinical trial. As such, promising results found here open an avenue for future clinical trials involving multiple sessions of art therapy, investigating the duration of art therapy’s effect.

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