

ROLE OF ART IN MEDICINE: THE ROAD TO HEALING

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Abstract: Art has played an important role in medicine for centuries. Engagement in artwork and creative activities, also known as art therapy, can be a simple and cost-effective solution that benefits everyone in the healthcare industry, including patients. While art is generally known to be healing, the effects of art therapy on patients is largely unknown by physicians and therefore, is not discussed with patients as part of routine management. In this review article, we assess the literature on art therapy interventions and find art therapy to be beneficial to patients, as well as their caretakers and healthcare providers. More research is needed on the subject.

Keywords: Art, Medicine, healing, mind, health, comprehensive medicine.

1. INTRODUCTION

Art has been a part of medicine since the 3rd century, where in Ancient Greece, Alexandria was a hub of medical research and many drew illustrations of anatomy, surgery, obstetrics, and plants with medicinal properties. For several decades, color has played an important role in healthcare settings. The color green first appeared in 1914⁽¹⁾, when Harry Sherman, a surgeon in San Francisco, California, found that the white colored drapes and garments reduced his ability to discriminate anatomical features during surgery⁽¹⁾. Today, color plays an important role in the healthcare settings like the colors on hospital walls, ambulance and mortuary vans, and, of course, medications.

The cost of healthcare has driven research to reduce hospital stays and improve chronic disease outcomes using non pharmacological methods in the form of comprehensive medicine. Prolonged hospitalization is associated with high mortality and chronic disease, most commonly cardiovascular disease, is a nationwide burden, especially in the elderly^(2,3). Chronic disease is also associated with depression³ and anxiety⁴ which further contribute to negative health outcomes. Children with various diseases were studied recently in the context with art therapy⁽⁴⁾. Engagement in artwork and creative activities, also known as art therapy, can be a simple and cost-effective solution that benefits everyone in the healthcare industry, including patients.

In fact, art has taken a special place in medicine where hospitals are considering art therapy as a means to accelerate healing in specific patient populations. Art generally known to promote healing, however, art therapy and its benefits still remain largely unknown to healthcare providers and is not routinely discussed with patients as part of their disease management.

In this review article, we assess the literature on art therapy interventions and describe its effects on disease states. We highlight studies that have provided evidence to support the use of art therapy in select patient populations.

2. METHODOLOGY

A search of the literature was conducted on PubMed using the following search terms: art, art therapy, medicine, healing, depression, anxiety, geriatric, elderly, mind, health, chronic disease, cancer, women. From this search, articles were selected and included in the review. We included articles that used art therapy as an intervention in non psychiatric healthcare settings, focusing on patients in the United States and Europe. We excluded articles that discussed topics other than its application to medicine.

The application of art in medicine:

The World Health Organization (WHO) defines health as a state of complete physical, mental, and social well-being rather than mere absence of disease. In the United States, medical professionals and leaders in medicine have recognized the role that art plays in health and medicine^(5,6), which has led to the development of programs emphasizing art as a therapeutic modality. Many studies have investigated the use of different artistic techniques, like sand play⁽⁷⁾, clay-molding⁽⁸⁾, drawing⁽⁹⁾, wheelchair art⁽¹⁰⁾, mandala art therapy⁽¹¹⁾, and different types of visual art⁽²⁴⁾, on patients with various disease states and healthcare settings.

Art therapy in the inpatient setting:

A landmark 1984 study by Dr. Roger Ulrich found that patients who were placed in rooms with a view of trees through a window recovered from gallbladder surgery sooner compared to those who were in a room with a view of a brick wall⁽¹³⁾. In 1999, the medical profession took note of Dr. Ulrich's work and the benefits of art therapy⁽¹⁴⁾.

A small 1992 study⁽¹⁵⁾ by Miller et al. studied the effect of nature on the pain levels of burn victims by using videos of landscapes during dressing changes. Patients reported lower pain intensity when combined with standard pain medications as opposed to receiving medications alone. This study had important implications, given that 75% of burn victims are inadequately treated for their pain and that simple measures provided through art can have powerful effects on pain management. Similarly, a 2003 study by Diette et al found that bedside nature-themed murals reduced pain for patients undergoing bronchoscopy¹⁶. It is studies like these that have inspired health care settings to incorporate art into the design of their buildings, like the University of California, San Francisco (UCSF) Medical Center at Mission Bay.

In a 2006 article, Staricoff compared the use of art therapy techniques in the hospital setting⁽¹⁷⁾. He concluded that art therapy improves clinical outcomes in patients, as well as enhances the work environment and results in subsequent job satisfaction. Therefore, healthcare workers may also benefit from art therapy.

Art and music therapy reduces hospital stays^(17,18,19,20). In one study, surgical or critical care patients participated in guided imagery or had a picture of a landscape on their wall during hospitalization. The intervention group had a decreased need for narcotic pain medications when compared to the control group, and had spent fewer days in the hospital⁽²⁰⁾.

Art therapy in patients with chronic disease:

Patients with chronic disease report art therapy benefiting them in their health and well-being⁽²¹⁾. Another benefit, from the physician standpoint, is the opportunity to understand patients who have trouble expressing themselves. In 2004, Dr. Marily Guillemain used drawings from 32 women with heart disease to understand their disease experience⁽⁹⁾. In this study, each participant was asked to draw an image that represented her heart disease. Analysis of the drawings included color use, spatial organization, and composition. Through the drawings, three themes were identified: the heart drawn at the center, the heart drawn in the living body, and heart disease in the social context, all of which represented the participants' understanding of the disease as well as the emotional experience of having the disease. Not every patient can verbalize what it feels like to live with chronic disease. It is with these patients that drawing can provide important insight that may change management.

In a prospective cohort study, investigators measured the effects of art therapy, including activities like artwork, crocheting, crafts, seasonal displays, poetry, and playing a musical instrument, on dialysis patients at the University of Florida⁽²²⁾. It is known that with time, hemodialysis patients have poor treatment compliance secondary to impaired quality of life and depression. After 6 months of the intervention, patients demonstrated improved Medical Outcomes Study 36-Item Short Form Health Survey (SF-36) scores, Beck Anxiety Inventory scores, as well as improved social functioning, bodily pain, and physical role functioning scores, albumin levels, higher phosphate and lower calcium levels, compared to baseline. This is perhaps the one of the few studies that describe physiological changes in a chronic disease that could be attributed to art therapy.

Art therapy during the treatment for cancer:

In a 2007 study, investigators evaluated how visual art-making affected the well-being of women with cancer. Participants reported cancer-related disease burdens, such as fear for the future, pain, sleeplessness, loss of their role in society, restriction of daily activities, reduced self-confidence, and altered social relationships⁽²³⁾. They engaged in different artistic expressions: textiles, making cards, collage, pottery, watercolor and acrylic painting. Investigators found that art therapy, promoted the focus on positive life experiences, helping them cope with their fears; improved their self-worth and identity

by their ability to complete challenging tasks; preserved their social identity, as they no longer felt defined by cancer; facilitated self-expression, especially during challenging experiences, like chemotherapy. Many other studies have described the effects of art therapy on women with cancer.^(24,25,26,27), reporting that art therapy aided in relaxation and symptom reduction, likely due to the patient's ability to express and release negative emotions commonly felt during cancer therapy.

In a clinical trial, researchers at Northwestern Memorial Hospital, explored the effects of art therapy on cancer symptoms in adult patients. After just one 1-hour session, participants showed significant improvements in the Edmonton Symptom Assessment Scale scores and the Spiel Berger State-Trait Anxiety Index scores. They liked the session so much that they wanted to continue with the therapy⁽²⁸⁾.

There is also evidence of the benefits of art therapy to caregivers of cancer patients. Investigators at South Miami Hospital tested the effects of art therapy on the family members of cancer patients. After 6 months of completing art therapy activities at the bedside, participants reported an increase in positive emotions, and a decrease in stress and anxiety symptoms. In addition, they experienced improved communication with the healthcare providers and the patient⁽¹²⁾.

3. DISCUSSION

The articles discussed above are just a handful of studies that look into the benefits of art therapy to patients. This review is not all inclusive, and more research has been added since the publication dates of the studies. There are various studies⁽²⁹⁻³⁹⁾ that have concentrated on psychiatric subjects⁽²⁹⁻³⁸⁾ and field of stress management⁽³⁹⁾ using creative arts therapy and have proven beneficial but there are not many such studies in non psychiatric diseases. Additionally, there are limitations to the studies, such as small sample sizes and the risk of bias, which may preclude art therapy's role in the management of every patient.

Despite their limitations, the studies show that art therapy improves the lives of patients, their caregivers, and healthcare providers alike. Art is a vehicle of expressing emotions and a healthy way to cope with serious illness. It can help patients express themselves in a way that can otherwise be too difficult to verbalize. It reduces the number of days in the hospital, and improves pain symptoms, clinical outcomes, mood symptoms, and quality of life.

4. CONCLUSION

Although art therapy has been used for more than a century and has established its profession since 1964⁽⁴⁰⁾, much of the published work remains to be largely unknown by the medical community. More studies are needed using markers of diseases to answer whether art therapy can have a significant impact on common chronic diseases, like type 2 diabetes, hypertension, dyslipidemia, and chronic rheumatologic conditions, and if long-term improvements, if any, can be achieved through art therapy. Perhaps one day, if long-term benefits of art therapy can be proven, then it may be prescribed by healthcare providers, like diet and exercise.

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