Effect of Art Making on Cancer-Related Symptoms of Blood and Marrow Transplantation Recipients

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Purpose/Objectives: To examine whether a one-hour art-making session during blood and marrow transplantation (BMT) treatment significantly affects therapy-related symptoms, state anxiety, and stress.

Design: A pre- and post-test crossover design.

Setting: An urban outpatient cancer center in the midwestern United States.

Sample: A convenience sample of 20 patients, aged 20–68 years ($\bar{X}$ = 38.5), receiving treatment at a BMT clinic.

Methods: Participants completed a demographic questionnaire, the Therapy-Related Symptom Checklist, and the Spielberger State-Trait Anxiety Index, and provided salivary cortisol samples. After pretesting, individuals were assigned to either a wait list or intervention. Individuals in the wait-list group received the usual treatment before completing the post-test measures. Individuals in the intervention group participated in a one-hour art-making session, after which they completed post-test measures. Participants then crossed over to the other group.

Main Research Variables: Art making, stress, state anxiety, and therapy-related symptoms.

Findings: Therapy-related symptom concerns for the intervention group at post-test were significantly lower than at pretest; no change ocurred in the control group. The salivary cortisol levels were significantly lower at post-test in the intervention and control groups. No change occurred in the anxiety levels of participants in the intervention and control groups. The study hypothesis was partially supported.

Conclusions: Art making decreased therapy-related symptoms (e.g., feeling sluggish, difficulty concentrating). Use of more physiologic indices to measure stress and replication on a larger sample are suggested.

Implications for Nursing: Individuals receiving BMT may benefit from participation in art-making interventions. Art making is easy to implement in a clinic setting and allows for positive interactions between nurses and patients.

High levels of pain, fatigue, and many other symptoms are reported by individuals receiving treatment for cancer (Anderson et al., 2007). To cope with and relieve the side effects of cancer treatment, many individuals turn to complementary and alternative therapies in addition to standard medical treatment (Williams et al., 2006). This article describes the effects of a specific complementary approach, art making, for individuals receiving blood or marrow transplantation (BMT) treatment.

Art Therapy and Art Making

Art therapy is a mental health intervention based on the belief that the creative process involved in artistic self-expression improves and enhances individuals' physical, mental, and emotional well-being (American Art Therapy Association, 2010). Art therapists are master's level professionals who hold a degree in art therapy or a related field (Art Therapy Alliance, 2011). Art therapy is well established for individuals with mental health concerns and is a growing trend in health care for patients with cancer. Evidence suggests that art therapy reduces levels of anxiety and other therapy-related symptoms in patients with cancer and caregivers (Bar-Sela, Atid, Danos, Gabay, & Epelbaum, 2007; Nainis et al., 2006; Thyme et al., 2009; Walsh, Radcliffe, Castillo, Kumar, & Broschard, 2007). Although art therapy may be beneficial for patients with cancer, it can be costly and time consuming. Art therapy must be administered by an art therapist and requires time to verbally process the feelings associated with the art experience. Therefore, art making is a practical alternative to art therapy, as it does not require an art thera-

pist. In art making, participants engage in the process of creating art on their own (Collie, Bottorff, & Long, 2006). Art therapists describe art making as creative expression that brings pleasure, ego strength, and recognition of one's own identity; however, the emphasis in art therapy is on deep thoughts and feelings that may not have been expressed before (Collie, Bottorff, Long, & Conati, 2006). During art making, patients with cancer identify the therapeutic value of working with tactile materials to facilitate emotional expression (Collie, Bottorff, Long, & Conati, 2006). Although emerging evidence suggests art making may be beneficial for patients with cancer (Collie, Bottorff, & Long, 2006; Collie, Bottorff, Long, & Conati, 2006; Deane, Fitch, & Carman, 2000; Heiney & Darr-Hope, 1999), the studies were largely qualitative and focused on patients with breast cancer. Patients undergoing treatment for other forms of cancer also may benefit from art making, particularly patients receiving BMT, as treatment is intense, lengthy, and results in prolonged periods of isolation.

Blood and Marrow Transplantation

The U.S. National Marrow Donor Program facilitates more than 3,600 bone marrow transplantations each year (Confer & Robinett, 2008). Bone marrow transplantation typically is used to treat diseases such as lymphoma, leukemia, immune deficiency disorders, aplastic anemia, and some solid tumor cancers. The transplantations require a multistep process that typically includes high doses of chemotherapy or radiation to effectively treat the malignancy and make room in the bone marrow for new cells to grow. The marrow is administered to the patient, similar to a blood transfusion, and is followed by intensive supportive care including the prevention and treatment of infections, side effects of treatment, and complications (University of Maryland Medical Center, 2009).

After a bone marrow transplantation, patients are required to stay in isolation for several weeks. During that time, they often deal with severe side effects such as nausea, vomiting, diarrhea, appetite loss, dry mouth, and pain (Frodin, Borjeson, Lyth, & Lotfi, 2010; Gabriel et al., 2001). The combination of isolation and illness results in a diminished quality of life and patients have reported feelings of depression, anger, and frustration as well as a decrease in positive feelings such as self-esteem and hope (Gabriel et al., 2001).

Therapy-Related Symptoms, Psychological Distress, and Physical Stress

Evidence indicates that individuals receiving treatment for cancer reported high levels of therapy-related symptoms such as pain, fatigue, nausea, depression and other symptoms (Anderson et al., 2007; Carlson et al., 2004; Williams, Williams, Lafaver-Roling, Johnson, & Williams, 2011; Zabora, BrintzenhofeSzoc, Curbow, Hooker, & Piantadosi, 2001). According to Davidson, MacLean, Brundage, and Schulze (2002), individuals who reported being overly fatigued as a result of cancer treatment were 2.5 times more likely to have insomnia. Insomnia affects physical and emotional well-being, as well as the ability to concentrate and cope with stress. Factors contributing to insomnia include pain or discomfort, concerns about family and friends, thoughts about cancer diagnosis, and concerns about finances.

Anxiety, psychological distress, and depression are strongly correlated with insomnia and fatigue for patients with cancer (Redeker, Lev, & Ruggiero, 2000). As many as 55% of individuals undergoing transplantation report depressive symptoms during the process, and the time period from transplantation to 100 days post-transplantation is considered critical for identifying patients with psychological distress (Widows, Jacobsen, & Fields, 2000). The increased stress and anxiety associated with BMT treatment may exacerbate depression of the immune system, placing patients undergoing BMT at even greater risk for secondary, life-threatening complications (de Brabander, Cornelissen, Smitt, Vecht, & van de Bent, 2000). More than two decades of research have established an association between psychological stressors and changes in immune function (Segerstrom & Miller, 2004), which makes it critical to identify treatments effective in lowering psychological distress in patients undergoing BMT. However, patients may not be aware of their level of distress and its seriousness because their focus is often on the physical aspects of cancer (Carlson et al., 2004). Carlson et al. (2004) suggested that measuring levels of distress should be considered a vital sign along with blood pressure, temperature, respiration, pulse, and pain for those with cancer. Identifying and treating distress may improve cancer therapy outcomes and quality of life and decrease healthcare costs (Zabora et al., 2001).

Research has not fully examined the physiologic response to stress as indicated by hypothalamic-pituitary-adrenal (HPA) axis activation in patients with cancer (Cruess et al., 2000). Salivary cortisol is used as a marker for plasma or serum-free cortisol to assess the activity of the HPA axis in response to stressful stimuli (Brien & Hingerty, 1975; Umeda et al., 1981). Alterations in the HPA axis's functioning have been reported in women with breast cancer, including flattening of the circadian rhythm of cortisol secretion (Touitou, Bogdan, Lévi, Benavides, & Auzéby, 1996) and elevated plasma cortisol levels (van der Pompe, Antoni, & Heijnen, 1996). Whether differences are from disease- or treatment-related effects on endocrine regulation or from the

psychological challenges that patients with cancer must deal with in their daily lives is unknown. No research exists to guide understanding of the HPA axis's functioning regarding patients undergoing BMT. Changes in cortisol are not always associated with increased psychological distress (McVicar et al., 2007; van der Pompe et al., 1996); therefore, psychological distress and physiologic stress must be measured in response to interventions. The current study aims to provide quantitative data about the effects of art making on individuals undergoing BMT treatment. As compared to no intervention (control), a one-hour art-making session during BMT treatment will significantly reduce symptom concerns as measured by the Therapy-Related Symptom Checklist (TRSC), reduce temporary anxiety as measured by the Spielberger State-Trait Anxiety Index (STAI), and reduce physiologic stress as measured by salivary cortisol.

Methods

Design

The current study used a crossover design to increase the potential for detecting treatment effects in a small sample (Portney & Watkins, 2009); the participants served as their own controls. In a crossover design, the same participants complete pre- and post-testing for the control condition and the intervention condition. To control order effects, researchers assigned participants to receive either the intervention or control condition first. Fourteen participants received intervention first, then the control condition; six participants received the control first, then the intervention. To minimize carry-over effects, researchers scheduled at least one day between each condition.

Intervention

Tiles of Hope is an art-making program created specifically for patients undergoing BMT. The program is offered individually to patients and their caregivers in their treatment rooms at the University of Kansas Cancer Center's Outpatient BMT unit. The program began in the fall of 2009 and is implemented on a volunteer basis by occupational therapy faculty and students. In adherence with neutropenic precautions (e.g., no wood handles, sterilization for shared tools), patients undergoing BMT who chose to participate in the program were provided with a ceramic tile, brushes, and paint to create a tile at no cost. The art-making diversionary activity usually lasts 40–60 minutes. Participants were not given instructions about what to paint. Some participants painted tiles to illustrate their emotions and thoughts associated with their cancer journey, and others painted tiles unrelated to their cancer experience. The art is displayed collectively four times per year in the BMT waiting room and in a common area of the hospital.

Sample and Setting

Researchers recruited a convenience sample of 20 participants from the University of Kansas Cancer Center's Outpatient BMT unit. A total of 21 participants consented, with 20 completing the study. One participant was lost to follow-up. Because this was a pilot study, inclusion criteria were intentionally broad and included (a) receiving treatment at the BMT clinic, (b) at least 18 years of age, (c) English speaking, (d) having no obvious signs of impaired cognition, (e) able to provide informed consent, and (f) capable of participating in one hour of art making. Patients were excluded if nurses indicated the patient was unsafe to participate in art making because of severe neutropenia.

Instruments

Three study outcomes—anxiety level, symptom concerns, and physiologic stress level—were measured by the **STAI**, the **TRSC**, and salivary cortisol, respectively.

Spielberger State-Trait Anxiety Index: The STAI is a well-established instrument for measuring anxiety in adults (Spielberger, Gorsuch, & Lushene, 1969). The STAI differentiates between the temporary condition, or state anxiety, and the more general and long-standing quality of trait anxiety. The current study used only the state component of the STAI to measure patients' self-described psychological state before and after participating in the Tiles of Hope program, and before and after a control period. The qualities and feelings assessed by the STAI are apprehension, tension, nervousness, and worry. The STAI has shown stability, test-retest reliability, internal consistency, and has been validated by numerous studies, including those that involved patients with cancer (Spielberger et al., 1969; Spielberger & Vagg, 1984). The STAI was used as an emotional indicator of psychological distress for the current study (Lazarus, 1993).

Therapy-Related Symptom Checklist: The TRSC is a 25-item checklist that participants use to rate the severity of their therapy-related symptoms (e.g., nausea, shortness of breath, pain, feeling sluggish). Each symptom is rated on a five-point scale from 0 (none) to 4 (very severe) (Barry & Dancey, 2005). Higher scores on the TRSC indicate greater frequency and severity of symptoms. Cronbach alphas of the total scale and the four-item subscales were all greater than 0.7, indicating good internal consistency reliability (Kirkova et al., 2006; Williams et al., 1997, 2010). The instrument has good construct and discriminant validity for patients treated with radiation, chemotherapy, or combined therapy (Piamjariyakul et al., 2010; Williams et al., 2010).

Salivary cortisol: Cortisol, a hormone secreted by the adrenal cortex in response to perceived or actual stressors, is released into plasma, and the major portion (about 90%) immediately binds to circulating

proteins, such as albumin and corticosteroid-binding globulin (Stone et al., 2001). The remaining 5%–10% circulates in a free form. The free form of cortisol, which is bioactive and available to various tissues for use, also diffuses into saliva and undergoes circadian changes parallel to adrenal activity and plasma cortisol levels during a 24-hour period (Stone et al., 2001; Vedhara et al., 2003). Salivary cortisol is used as a marker for plasma or serum-free cortisol to assess the activity of the HPA axis in response to stressful stimuli (Brien & Hingerty, 1975; Umeda et al., 1981). Salivary cortisol levels were selected as an indicator of physiologic stress for this study because of the noninvasiveness and ease of sampling and storage of saliva (Kirshbaum & Hellhammer, 1999).

In the current study, researchers collected saliva from patients in both the intervention and control groups using a SARSTEDT Salivette® provided by the Mayo Clinic. BMT nurses collected the saliva samples to ensure adherence to research protocol. The cancer center's laboratory services stored the samples and sent them to the Mayo Clinic for analysis. For this study, salivary cortisol is used as an indicator of physiologic stress levels before and after the tile painting intervention and control conditions. To control for diurnal effects, data were collected from 9 am to noon.

Demographic data form: Researchers collected information on age, gender, cultural background, marital status, education, diagnosis, treatment, and type of transplantation.

Data collectors were a certified therapeutic recreation specialist, three nurses, and two occupational therapy students in their last year of schooling. The certified therapeutic recreation specialist served as primary investigator and trained the occupational therapy students to administer the TRSC and STAI. The nurses were trained to collect salivary cortisol. Data collectors were prepared with written protocols for data collection and simulated data collection trials to ensure fidelity.

Procedures

The study was approved by the cancer center's protocol review and monitoring committee and the university's human subjects committee prior to conducting research. Researchers discussed research protocols with each participant in a private room and obtained written, informed consent prior to gathering the data. After obtaining consent, a researcher alternately assigned the participant to either the control or intervention condition (unless treatment scheduling interfered with assignment). Participants completed baseline data, which included self-reported demographic information sheets, TRSC and STAI-S (subscale measuring state anxiety) forms, and provided a salivary cortisol sample.

For participants receiving the intervention, the Tiles of Hope personnel set the patient up to paint on a ceramic tile. Those personnel were not part of the research team. After one hour, or earlier if the patient finished the artwork activity, the researcher returned to administer and collect post-test measures. After completing baseline data, participants in the control group waited for one hour while receiving treatment as usual. After the hour, post-test data were collected.

The researcher then scheduled a second visit with each patient. For the second visit, consistent with a crossover design, the participants were assigned to the condition they had not yet received.

Data Analysis

The data were analyzed using predictive analytics software, version 18.0. Descriptive statistics were used to analyze the demographic information. To address the research hypothesis, paired t tests were used to examine the differences on all three measures (TRSC, STAI, salivary cortisol) within groups, and between pre- and post-test (e.g., the change in salivary cortisol from pre- to post-test for the intervention group and control group). To compare the intervention and control condition, independent t tests were used. Researchers

Table 1. Sample Characteristics

Characteristic	n
Cultural background	
Caucasian	14
African American	2
Latino or Hispanic	2
Biracial	2
Marital status	
Married	6
Single	5
Divorced	3
Unknown	6
Education	
High school graduate or GED	8
Some college, technical degree, or associate of arts	7
College degree	5
Diagnosis	
Acute myeloid leukemia	8
Acute lymphoblastic leukemia	5
Multiple myeloma	2
Hodgkin lymphoma	1
Non-Hodgkin lymphoma	1
Lymphoma (other)	2
Testicular cancer	1
Treatment	
Pretransplantation	7
Post-transplantation	8
No transplantation	5
Type of transplantation (N = 15)	
Allogeneic	12
Autologous	3

N = 20, unless otherwise noted

calculated the difference from pre- to post-test for each condition (e.g., intervention TRSC, control TRSC, intervention STAI, control STAI, intervention salivary cortisol, control salivary cortisol) and used independent t tests to determine the magnitude of the differences between the control and intervention conditions on all the outcome measures.

Results

Sample Characteristics

Participants were 20–68 years of age ($\bar{X}$ = 38.5) and mostly Caucasian (70%) with acute myeloid leukemia (40%). Ten men and 10 women participated in the study. Seventy-five percent of the participants either had received or were scheduled to receive a transplant, with 60% of them receiving allogeneic transplantation (see Table 1). No significant differences existed in age, gender, ethnicity, or diagnosis between the participants who received the intervention first or the control first. To reduce the risk of carry-over effects, participants waited at least 24 hours between conditions. The average number of days between intervention and control conditions was 6.8 days, with a range of 1–28 days.

Symptom Concerns

As measured by the TRSC, a one-hour art-making session was hypothesized to reduce symptom concerns (occurrence and severity). The TRSC mean score ($\bar{X}$ = 26.55) at baseline in the intervention group became lower ($\bar{X}$ = 20.1) at post-test, which was significant on the paired t test (t = 2.8, p = 0.01) (see Table 2). However, the change in self-reported therapy-related symptom concerns (occurrence and severity) in the control group was not significant (t = 1.78, p = 0.09). In addition, an independent t test showed that a significant difference existed between the intervention and control conditions in the magnitude of change reported from pre- to post-test (t = 6.2, p < 0.01). Table 3 shows additional analyses of selected individual TRSC symptoms; compared to baseline, the following symptoms were significantly lower at post-test: feeling sluggish, difficulty concentrating, shortness of breath, and pain.

As measured by the STAI, a one-hour art-making session was hypothesized to reduce state anxiety. Paired t tests indicated no significant difference in anxiety scores from pre- to post-test in the intervention or control group.

Finally, as measured by salivary cortisol levels, a one-hour art-making session was hypothesized to reduce stress levels. Salivary cortisol was analyzed by the Mayo Clinic, and results were entered into the data set as a numerical value if 50 ng/dl or greater; results less than 50 ng/dl were assigned the value 49. Because data collection could occur from 9 am to noon and salivary cortisol is influenced by diurnal variations, t tests were conducted to determine if a difference existed between the control and intervention condition in the time of day salivary cortisol was collected. Analysis revealed no significant difference in the time of day cortisol was collected.

Paired t tests showed a significant decrease in salivary cortisol from pre- to post-test for the intervention (t = 2.58, p = 0.02) and control group (t = 2.79, p = 0.01). Independent t tests showed a significant difference between intervention and control groups in the amount of change between salivary cortisol levels recorded from pre- to post-test (t = 3.41, p < 0.01).

Discussion

Study results showed that, after intervention, participants reported a significant decrease from pre- to post-test in mean scores of therapy-related symptoms. The symptom score decrease may be a result of art making distracting patients from their cancer experience. A systematic review of behavioral interventions by Redd, Montgomery, and DuHamel (2001) indicated that involving an individual in an interesting and engaging activity diverts the individual's attention away from the invasive procedure. The review also suggested that the distraction typically lasts as long as the patients are actively engaged in the experience. During the current study, individuals were engaged in a one-hour art-making session. Whether the decrease in symptom concerns carried over after the distraction activity of art making was completed is unknown.

Patients reported a decrease in individual symptoms on the TRSC, such as feeling sluggish and difficulty concentrating. That finding is important, as interventions

Table 2. Paired t Test for All Measures: Pre- and Post-Test

	Pretest		Post-Test				
Measure	$\bar{X}$	SD	$\bar{X}$	SD	df	t	p
TRSC intervention	26.55	17.24	20.1	14.48	19	2.8	0.01*
TRSC control	33.45	39.66	30.3	36.22	19	1.78	0.09
STAI intervention	46.75	5.73	48.65	7.78	19	–0.98	0.34
STAI control	47.95	5.37	47.3	5.55	19	0.88	0.39
Salivary cortisol intervention	117.89	88.54	81.33	39.85	17	2.58	0.02*
Salivary cortisol control	160.53	200.55	107.88	130.16	16	2.79	0.01*

* Significance p < 0.05 (two-tailed test)

STAI—Spielberger State-Trait Anxiety Index; TRSC—Therapy-Related Symptom Checklist

Table 3. Therapy-Related Symptom Checklist Selected Symptoms: Decrease From Pre- to Post-Test

	Pretest		Post-Test				
Measure	$\bar{X}$	SD	$\bar{X}$	SD	df	t	p
Feeling sluggish	2.36	1.39	1.64	1.28	13	2.92	< 0.01**
Difficulty concentrating	1.6	1.3	1.07	1.03	14	2.78	< 0.01**
Shortness of breath	1.73	1.22	0.4	0.91	14	2.09	0.03*
Pain	1.8	1.37	0.93	1.16	14	3.17	0.00***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Note. Significant on a one-tailed test

for fatigue have not been adequately studied in patients with cancer (National Institutes of Health State-of-the-Science Panel, 2004). Evidence suggests exercise can reduce symptoms and side effects (Andersen et al., 2006). However, patients receiving BMT may not have the necessary energy to complete those exercise programs. A study comprised of a semistructured interview with 18 patients after stem cell transplantation in the first 100 days of recovery revealed that activity engagement was a way for individuals to promote health, reconnect with previous lifestyle activities, and increase stamina for daily activities (Lyons et al., 2010). Art making may be a good outlet for patients with low energy who wish to engage in activities.

Results with the measure of anxiety (STAI) were nonsignificant from pre- to post-test for intervention and control conditions, suggesting that art making does not reduce anxiety as a symptom of psychologic distress. However, salivary cortisol levels significantly decreased from pre- to post-test for the intervention and control conditions, which may indicate a decrease in physiologic stress. The decrease also may be because of the natural cycle where salivary cortisol levels peak between 8 am and 10 am, and then gradually decrease throughout the day (Walsh et al., 2007).

Previous research suggested that the nature of an intervention may be associated with self-reported anxiety and physiologic stress. In a study of mindfulness-based stress reduction, Marcus et al. (2003) reported no differences in self-reported anxiety or stress after intervention, but participants had significantly lower physiologic stress after the intervention, similar to the current results. In the current study, some participants chose to paint about their cancer experience, which may have brought greater awareness of thoughts and feelings, such as anxiety, related to receiving treatment for a potentially fatal disease. The heightened awareness may be reflected in the self-reported anxiety (STAI) of participants, but, as reflected by salivary cortisol levels, it seems that greater awareness of one's cancer experience does not increase physiologic stress.

Limitations

The current analysis was a pilot study with a number of limitations; therefore, results may not be generalized. The study included a small, diverse sample of patients receiving allogeneic and autologous transplantations. Participants were at different points in their treatment protocol (pre- and post-transplantation), and some had comorbidities that may have influenced results. Second, although the crossover design provided more data on a small sample, the potential for the outcome's effects to carry over from the prior condition is a limitation. That was controlled to some extent by the alternate initial assignment of participants to intervention and control conditions with the first 10 participants of the study. However, completely randomized group assignments would have been a better approach. Because research was scheduled during the times when the art-making program was available, more participants (n = 14) started with the intervention rather than the control condition. Once participants completed the first session, it often was difficult to reach them for the follow-up session. That led to a large range of the number of days between conditions (range = 1–28), which also may have influenced results.

Data were collected during the hours when most patients undergoing BMT were available for the intervention and limited to morning hours (9 am to noon) to control for diurnal variations in salivary cortisol. Salivary cortisol peaks in the morning and drops dramatically and steadily throughout the day until it reaches its lowest level at around midnight. Results may have differed if the intervention were offered at different times of the day.

The small study included several data collectors, which allowed clinical nurses and students the opportunity to learn research skills and allowed the primary investigator the opportunity to train a team to conduct future larger studies. However, it is also a potential source of error. All researchers received training and simulated practice time to increase fidelity and reduce error.

Implications for Nursing

A randomized, controlled trial using a larger sample and a parallel group design is recommended. The use of other physiologic measures such as blood pressure and pulse, in addition to salivary cortisol levels, also is recommended. Because results of physiologic (cortisol) and self-reported (state anxiety) stress differed in this study, future research might include other measures of psychological distress. Future research also should measure extraneous variables (e.g., type

of transplantation, phase of treatment, comorbidities) or control them with more stringent inclusion and exclusion criteria. In addition, qualitative information regarding patients' insights about the art-making experience could increase researchers' understanding of the art-making process and its effects.

In the hospital or outpatient clinic, art-making sessions can be replicated easily and integrated into patients' routine care. The art-making process does not require extra work or time from the nursing staff when the program is facilitated by allied health professionals. If art-making services are not available, nurses could consider contacting a recreational therapy or occupational therapy education program in a nearby university. Tiles of Hope receives discounted supplies from a local ceramics supplier and tiles are fired at no cost by a local coffee and ceramics shop. Nurses desiring more information about developing an art-making program can contact the primary author of this article.

During celebrations (e.g., nurses week) and special events, the nurses and staff of the BMT clinic where the study was conducted were offered the opportunity to paint a tile. Tiles created by nurses and staff are displayed annually in appreciation of their services. Nurses who paint and display their own tiles have a shared experience with patients, which can promote positive interactions. When nurses see patients painting tiles, they often ask about the art and share information about painting their own tiles. Nurses also encourage patients who may feel reluctant to paint by talking about their experience or asking them about the tiles that are displayed.

Art making presents minimal physical risk when precautions are followed; however, nurses should be aware that patients may express negative thoughts or feelings with their art. With the Tiles of Hope program, when the art suggests a concern, personnel notify the social worker so he or she can informally check in with the patient. To respect confidentiality, specific details about the art are not shared. Art making does not typically interfere with patient care. Occasionally, art making is interrupted by tests or treatment; however, Tiles of Hope personnel will hold the tile and offer the opportunity to complete it at another time, often the next day. Art-making sessions are well-received from patients and nursing staff and are easy to incorporate into care.

Conclusions

Although BMT can be life saving, it also causes severe side effects and results in prolonged isolation, diminishing patients' quality of life. Art making can be safe, easy to implement, and decrease therapy-related symptoms associated with cancer treatment. If health care continues to focus only on the medical aspects of treatment, patients surviving cancer may live with the stress, anxiety, and depression associated with cancer treatment. Art making has the potential to decrease those problems and increase patients' quality of life during BMT treatment.

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Digital Object Identifier: 10.1188/12.ONF.E353-E360

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