

Therapeutic Art:

Transforming Self-Awareness for
Those Impacted by Cancer



IN BRIEF

Community-based therapeutic art workshops provide people who have been impacted by cancer with avenues to express their anxieties, fears, and grief. As with any program, it is important to collect and analyze feedback from participants. Accordingly, this observational, community-based study was conducted to understand participants' in-person and online therapeutic workshop experiences. Study outcomes were participant satisfaction and perception. Overall, 97.8% (89 participants out of 91 total participants) of those in-person and 100% (34 participants out of 34 total participants) of those online found the workshops to be "extremely" or "moderately" helpful vs only "somewhat" or "not" helpful at all. These data support the hypothesis that in-person and virtual community-based therapeutic art workshops have positive psychosocial associations related to one's emotions, coping strategies, creativity, quality of life, and stress levels. Specifically, community-based therapeutic art workshops address quality of life issues for survivors of cancer who may have unmet emotional mental health needs decades after their diagnosis.

Receiving a cancer diagnosis is an emotionally driven, life-changing event for individuals and their loved ones. According to Mazzocco et al, anxiety, fear, and worry impact patients' decision-making in a complex process.¹ Once anticancer treatment begins, anxiety, depression, and unmet needs are associated with decreased physical and emotional health.² Further, long-term effects, such as cognitive changes, fatigue, and sleep disturbances, linger into and throughout survivors' life after treatment.³ Many studies report seeing anxiety and depressive disorders among those who are being treated for cancer, while patients' relationships may also be negatively impacted.³

To address patients' emotions and adverse effects induced by cancer, many people seek creative outlets like art. Art therapy and therapeutic art are distinct concepts (Figure 1, page 51). The American Art Therapy Association defines art therapy as an "integrative mental health intervention involving creative processes, [the] application of psychological theories, and human experiences within a psychotherapeutic relationship."⁴ Facilitated by art therapists, art therapy improves individuals' quality of life and decreases their anxiety and depression.^{5,6} The difference between art therapy and therapeutic art is demonstrated in Figure 1.

Therapeutic art is a long-standing practice of creating items in the absence of psychotherapy.⁷ Participants use creative techniques to become self-aware. Led by facilitators, individuals who participate in therapeutic art are invited to create and experience transformation, as sessions encourage attendees to reflect on the process of creation and sharing.⁸ Additional benefits include social interaction with other participants and feelings of catharsis.⁹

Sites and Insights, a Colorado-based, nonprofit organization founded by Vicki Mackie in 2015, offers therapeutic art sessions

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through patient-centered support for individuals who have been impacted by cancer. Newly diagnosed individuals, long-time survivors, and caregivers may participate free of charge. Complementary art supplies are provided.

Created to support self-discovered needs, this organization initially offered 6-week sessions. As demand increased in 2016, sessions were reduced to 4-week sessions to accommodate more participants and offer the workshops across the Colorado front range. Spanish-speaking sessions were subsequently introduced. In 2018, online sessions were introduced for home-bound individuals and caregivers who could not leave their loved ones. Online sessions have continued during the COVID-19 pandemic, and participants have joined these sessions from as far away as California and New York.

The goal of the workshops (offered over 4 or 6 consecutive weeks) is to provide people impacted by cancer with avenues to express their anxieties, fears, and grief. Multiple innovative methods, including art, color, mindfulness, sensory integration, and complementary therapies are used (see Figure 2, page 52). Commonly used art mediums include watercolors, photography, mixed media, acrylic paints on canvas,

Figure 1. Therapeutic Art vs Art Therapy

Art Therapy	Therapeutic Art
Facilitated by a professionally trained art therapist, which involves a therapeutic relationship with the client.	Facilitated by certified instructors who guide participants through a collaborative, positive, and transformative experience.
Takes place in a safe and confidential space.	Takes place in a safe and comfortable environment.
Main goal is self-expression.	Main goal is to provide a creative and unique way to transform lives using color, art, and mindful healing programs to help process life-changing experiences.
Art supplies are used as tools for self-expression. There is no right or wrong way to make things or to use art supplies.	Innovative art supplies to enhance creativity used with the 5 senses, complementary therapies, mindful techniques, and emotional brain functions.
The focus is usually on the creative process.	The focus is to teach a new language, using color and art when the story is too difficult to put into words.
Artwork is seen as a reflection or extension of its creator; it is used for communication.	The artwork is the result of accessing other areas of the brain to express the imagery that tells the story for their senses, mind, body, and spirit.

and guided masks. Further, workshops offer mindfulness techniques, such as breathing and meditation, and complementary therapies such as laughing yoga, music therapy, aromatherapy, and chromotherapy. Colors are used to help others express concepts that may be difficult to verbalize and/or write. Colors may also reveal emotions that are submerged in lost or sensitive memories. Concepts, such as psychoneuroimmunology and the effects of emotions on the immune system, are also introduced to workshop participants. Sites and Insights uses evidence-based methods and teaching strategies to help participants discover, explore, share, and reframe their negative emotions into positive emotions (eg, seeking empathy rather than sympathy). The curriculum is then adapted based on participants' suggestions and feedback. The content used in these workshops is illustrated in Figure 2.

Measuring Impact

An observational community-based study was conducted to better understand Sites and Insights' workshop experiences among participants who attended in person or online. Study outcomes were participant satisfaction and perception.

As of December 2021, more than 400 individuals participated in live and virtual therapeutic art sessions with Sites and Insights. Pre-assessments, postassessments, and evaluations were collected from all participants to measure the impact of this programming for people who have been impacted by cancer.

In conjunction with workshop supplies, participants received a preassessment survey that asked about their personal feelings of anxiety, fear, happiness, hope, joy, loneliness, peace, and stress within the previous 30 days. Participants were also asked to rate their feelings on a scale of 1 ("none of the time") to 5 ("all of the time"). This survey further asked about participants' coping tools, such as breath-

ing, creative projects, exercise, meditation, and yoga.

Participants then received a postassessment survey after completing the 4- or 6-week workshop sessions, asking them to rate the same feelings as the preassessment in relation to how well the workshop impacted these feelings on a scale of 1 ("no benefit") to 4 ("extremely beneficial"). Written comments and suggestions were also collected using the assessment.

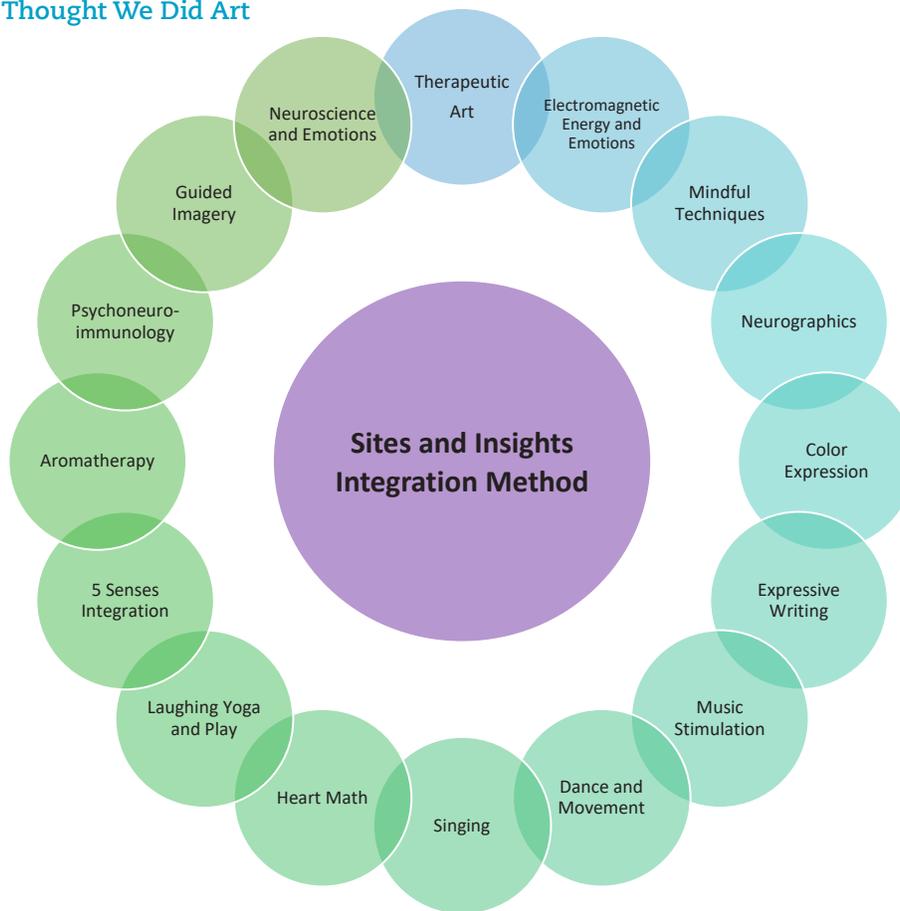
Data Collection and Analysis

The descriptive summaries present the mean (standard deviation) and median (Q1, Q3), with the online vs in-person and pre- vs post-therapy questionnaires being summarized separately. Any responses of "not applicable" to survey questions are considered as missing data. Mean values with a 95% confidence interval (CI) are also visualized as bar graphs, where bounds are truncated to the possible range of responses (eg, a max score of 5 for the presurvey questionnaire and 4 for the posttherapy questionnaire). All analyses and figures were completed in R v4.1.0 (Vienna, Austria).

Calculated Results

At the time the data were analyzed, a total of 95 participants completed the in-person workshop and provided feedback. An additional 34 total participants participated in the online version of the workshop and provided feedback. In-person workshop participants (N = 95) reported using meditation (35.8%), yoga (23.2%), breathing (47.4%), exercise (54.7%), and creative projects (37.9%) as coping tools within the previous 30 days. For the online workshops, participants (N = 34) reported using meditation (33.3%), yoga (9.1%), breathing (42.4%), exercise (30.3%), and creative projects (45.5%) in the previous 30 days. The median [25th percentile, 75th percentile] number of coping
(Continued on page 53)

Figure 2. And You Thought We Did Art



THERAPEUTIC ART: Provides a creative process in helping participants improve mental health and wellness.

NEUROSCIENCE AND EMOTIONS: The interplay of emotions and cognition. How stress, anxiety, and other kinds of emotions can profoundly influence key elements of cognition, including selective attention, working memory, and cognitive control

GUIDED IMAGERY: A technique in which a person focuses on positive images in his or her mind. It can help reach a relaxed, focused state and help reduce stress and give a sense of well-being.

PSYCHONEUROIMMUNOLOGY: The study of the effect and interactions of the mind, neural, and endocrine function on health and resistance to disease and immune system.

AROMATHERAPY: A type of complementary and alternative medicine that uses plant oils that give off strong pleasant aromas (smells) to promote relaxation, a sense of well-being, and healing.

5 SENSES INTEGRATION: Combining all 5 senses for the purpose of touching the subconscious mind, which activates the participants senses and arouses creativity.

LAUGHING YOGA AND PLAY: Enhances brain structure and function. Promotes executive functioning; the process of learning that helps us focus while ignoring distractions. Reduces and manages toxic stress while building resilience. Decreases symptoms of depression and anxiety.

HEART MATH: A technology that is an innovative approach to improving emotional well-being.

ELECTROMAGNETIC ENERGY AND EMOTIONS: Thoughts and feelings are an electromagnetic force inside all of us. Thoughts are the electric part of our internal electromagnetic force. Feelings and emotions are the magnetic part.

MINDFUL TECHNIQUES: A type of meditation in which you focus on being intensely aware of what you are sensing and feeling in the moment, without interpretation or judgement. Practicing mindfulness involves breathing methods, guided imagery, and other practices to relax the body and mind and help reduce stress.

NEUROGRAPHICS: A creative process that uses a drawing technique linking the conscience with the subconscious. Said to be a way that leads to transformation.

COLOR EXPRESSION: A way to use color to express emotions through intuitiveness without judgement or preconception.

EXPRESSIVE WRITING: Shown to impact a wide range of health outcomes, such as stress, mood, immune system response, and outcome from cancer treatment.

MUSIC STIMULATION: Enhances intelligence, improves mental health, self-esteem, confidence, and quality of life. Used to relax, boost and lift mood, and improve concentration. Used to aid in insomnia, helping to encourage and induce a deeper sleep.

DANCE AND MOVEMENT: Broad range of health benefits clinically effective at improving body image, self-esteem, focus, attention, communication skills and self-awareness. Reduces stress, fears, and anxieties, and lessens feelings of isolation, body tensions, chronic pain, and depression.

SINGING: Lowers stress, boosts immunity and lung function, enhances memory, improves mental health, and helps cope with physical and emotional pain.

(Continued from page 51)

tools those surveyed used was 2 [1,3] and 1 [1,3] for in-person and online participants, respectively.

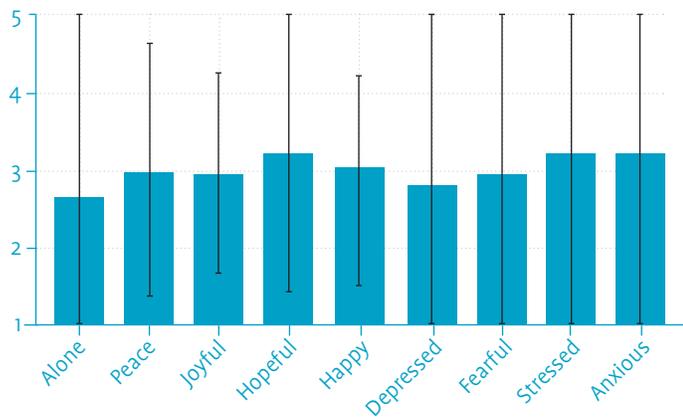
Overall, 97.8% (n = 89) of in-person and 100% (N = 34) of online participants found the workshop to be “extremely” or “moderately” helpful vs “only somewhat” or “not” helpful. The same proportions of participants also reported the workshop as “extremely” or “moderately” enjoyable. Within the in-person workshop participant population, 44% reported no background in art prior to participating in the workshop, with 48% reporting some and 8% reporting extensive

backgrounds in art. Similar art-related backgrounds were reported among online participants; 44% had no, 53% had some, and 3% had extensive backgrounds in art. Even though nearly half of participants had no background in art, nearly all felt the workshops were helpful and enjoyable.

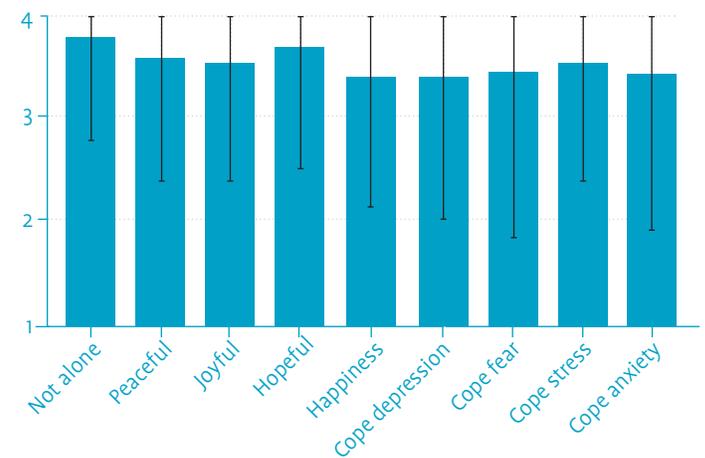
Figure 3 (below) presents the pre- and post-workshop average scores with a truncated 95% confidence interval for both in-person and online workshops; larger values represent a greater frequency in experiencing the feelings discussed in the preworkshop survey (1 “not

Figure 3. Bar Plots of Average (95% CI) Pre- and Post-Workshop, Self-Reported Scores by In-Person and Online Workshop Participants

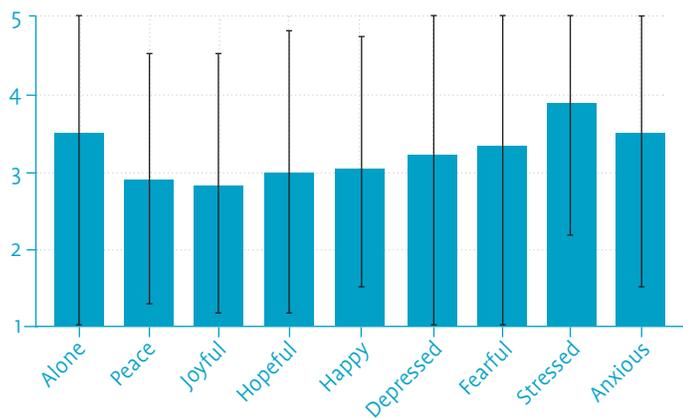
In-Person Preworkshop: Mean Scores with 95% CI



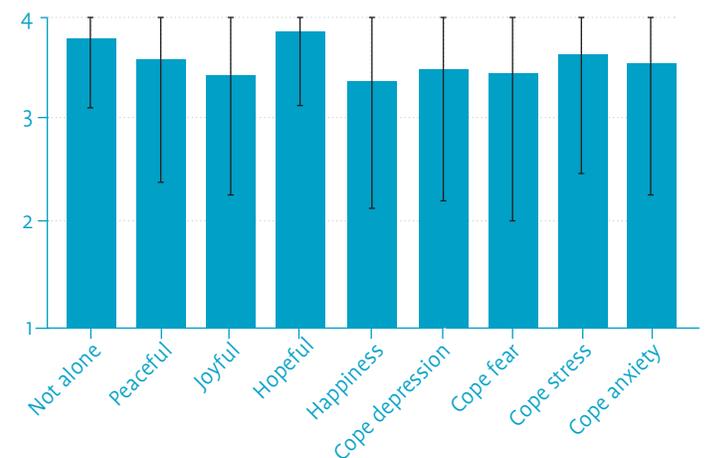
In-Person Postworkshop: Mean Scores with 95% CI



Online Preworkshop: Mean Scores with 95% CI



Online Postworkshop: Mean Scores with 95% CI



at all,” 2 “somewhat,” 3 “sometimes,” 4 “a lot,” and 5 “all the time”) or in finding the workshop helpful in achieving the given feeling or coping strategies in the post-workshop survey (1 “did not help at all,” 2 “helped somewhat,” 3 “helped moderately,” and 4 “extremely helpful”). In general, average preworkshop survey scores for both in-person and online participants were around 3 (sometimes) across all emotions, with 95% CIs covering much of the range in responses. This suggests that most participants “sometimes” felt each emotion that was addressed, but there was also large variability across participants given the wide CI. After completing the workshop, however, most participants felt that the experience was helpful for them in feeling positive emotions or developing coping mechanisms for negative emotions. Further, average scores ranged from 3.5 to 4, with tighter 95% CIs. This indicates that, on average, participants found the workshop to be extremely helpful, and there was less variability in their responses.

Table 1 (below) summarizes the postworkshop surveys, organized by in-person and online experiences. The median score across all questions was the maximum possible score, showing that participants found the workshop to be “extremely” helpful and that it provided several tools to help. Further, the 25th percentile for each question is either the maximum score of 4 or a response of 3, for self-perceived moderate benefit or helpfulness of the workshop. Overall, these high scores show that participants had a positive experience while in the workshops.

Participants further shared gratitude and praise for the workshops in their anecdotal feedback. Notable feedback included being challenged to creatively and safely express and release feelings, feeling supported to grow, gaining new and hopeful perspectives, looking forward to additional sessions, and achieving a sense of peace. Participants also expressed feelings of joy, as well as feelings of belonging and connection with others they may never have met and who were also impacted by serious medical conditions like cancer.

What Do These Data Really Show?

The above data show an overwhelming positive proof of concept. Community-based, therapeutic art workshops were successfully conducted with positive results. In-person and online participants found these workshops overwhelmingly positive, and more than 90% found them to be helpful. Furthermore, the online workshops facilitated cross-country participation during the COVID-19 pandemic.

Study Limitations

There are several limitations regarding the data collection and measurement for these community-based workshops. No formal statistical planning occurred prior to beginning the workshops. The ranges for the pre- and postworkshop surveys were different (0 to 5 for the preworkshop survey and 0 to 4 for the postworkshop survey). There were also subtle differences with the wording used in each survey. In

Table 1. Postworkshop Responses by In-Person and Online Participant Experiences, Summarized by Mean (Standard Deviation) and Median (25th Percentile, 75th Percentile)

QUESTION	IN-PERSON WORKSHOP			ONLINE WORKSHOP		
	n	MEAN (SD)	MEDIAN (Q1, Q3)	n	MEAN (SD)	MEDIAN (Q1, Q3)
Did you find the workshop helpful?	91	3.89 (0.38)	4.00 [4.00, 4.00]	34	3.97 (0.17)	4.00 [4.00, 4.00]
Do you feel the workshop gave you a new tool to use in different areas of your life?	91	3.75 (0.49)	4.00 [4.00, 4.00]	34	3.82 (0.39)	4.00 [4.00, 4.00]
Do you feel the workshop gave you new insight to your emotions and/or feelings?	91	3.84 (0.45)	4.00 [4.00, 4.00]	34	3.88 (0.41)	4.00 [4.00, 4.00]
Do you feel the workshop helped you cope with what you are presently experiencing?	90	3.79 (0.46)	4.00 [4.00, 4.00]	34	3.85 (0.36)	4.00 [4.00, 4.00]
Do you feel the workshop helped with the quality of your life?	91	3.53 (0.69)	4.00 [3.00, 4.00]	33	3.70 (0.47)	4.00 [3.00, 4.00]
Do you feel the workshop helped you discover more of your creativity?	91	3.85 (0.42)	4.00 [4.00, 4.00]	34	3.94 (0.24)	4.00 [4.00, 4.00]
Did the workshop help with your stress?	90	3.51 (0.60)	4.00 [3.00, 4.00]	34	3.76 (0.50)	4.00 [4.00, 4.00]
Did the workshop help with your anxiety?	90	3.52 (0.66)	4.00 [3.00, 4.00]	29	3.86 (0.35)	4.00 [4.00, 4.00]
Overall, did you enjoy the workshop?	90	3.93 (0.29)	4.00 [4.00, 4.00]	34	3.97 (0.17)	4.00 [4.00, 4.00]

the future, modifications should be made to support more rigorous comparisons. Additionally, the pre- and postworkshop survey scores were quite similar.

Conclusions

In-person and virtual community-based, therapeutic art workshops have positive psychosocial associations with people who have been impacted by cancer. Such community-based workshops acknowledge emotions like anxiety and sadness and help address the psychosocial needs for those who have been diagnosed with cancer and their loved ones.¹⁰ These workshops address quality of life issues for chronic cancer survivors, who may continue to have emotional and mental health needs decades after their diagnosis.¹¹

Community-based, therapeutic art workshops also provide an opportunity for people affected by cancer to feel heard, known, and respected outside the cancer program or practice, clinic, or hospital.¹² Virtual therapeutic art workshops reach many more people, who may not otherwise be able to participate (ie, those who are immunocompromised, homebound, and living in rural areas). Ultimately, workshops that seek to address unmet needs and foster peer-to-peer support should be further explored and shared. 

Vicki Mackie is director and founder of Sites and Insights in Centennial, Colorado; this is a volunteer (unpaid) position. Xinyi Yang, MSPH, is research assistant at University of Colorado Anschutz Medical Campus and Alex Kaizer, PhD, is assistant professor at the University of Colorado School of Public Health, Department of Biostatistics and Informatics, in Aurora, Colorado. Carlin Callaway, DNP, RN, ACNP-BC, ACNS-BC, AOCNP, is an advanced practice provider in the Medical Oncology Survivorship Clinic at the University of Colorado Hospital, UHealth-Oncology Services in Aurora, Colorado. For more information about Sites and Insights visit, www.sitesandinsights.org and/or email: vicki@sitesandinsights.org.

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