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# A Qualitative Analysis of Quantitative Assessments in Art Therapy Research with Patients with Cancer in a Medical Setting

Jill Levenberg

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A Qualitative Analysis of Quantitative Assessments  
In Art Therapy Research With  
Patients with Cancer In  
A Medical Setting

by

Jill Levenberg

A research paper presented to the

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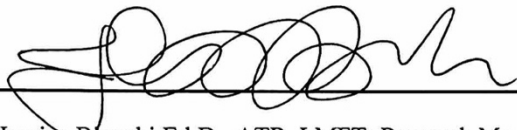
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requirement for the degree  
MASTER OF ARTS

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**Signature Page**

A handwritten signature in cursive script, reading "Jill Levenberg", written above a horizontal line.

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### **Abstract**

This paper uses a qualitative approach to explore quantitative assessment tools and their use in art therapy research with patients with cancer. An archival method was used to gather articles on cancer research which were compiled from peer-reviewed journal articles available online. The author used a systematic analysis to select articles that met the specific research criteria of working with cancer patients in a medical setting, included the implementation of art therapy, and the administration of a pre- and post-test. Twenty-two quantitative assessments fit these criteria. Further exploration was conducted on the five most common assessment tools. These five assessments were further analyzed for emergent themes and characteristics. These common traits were that all of the assessments were self-report questionnaires, four out of five were Likert scales, the assessments were chosen for their accessibility, and many of the research studies were not accessible to a diverse population. It was concluded that these quantitative assessment tools are helpful in art therapy as they contribute towards creating quantifiable results in the research. It may be useful to implement these assessment tools in further art therapy research with cancer patients in order for art therapy to be more frequently employed in medical settings.

### **Dedication**

This research is dedicated to all those who have been impacted by a cancer diagnosis. May you find strength and comfort in your journey through your battle. It is also dedicated to the staff, students, and community at LMU's MFT Art Therapy Graduate Program, which is constantly striving to challenge itself to make a positive impact on the world around them.

### **Acknowledgements**

I thank my LMU professors for their wisdom, dedication and passion. I thank Dr. Jessica Bianchi for her relentless patience, guidance and support in this endeavor.

To my family, I have endless gratitude.

I thank my sons, who all had to make concessions and sacrifices in order for me to complete this degree. You did so willingly and (more or less) gracefully.

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## **Introduction**

### **The Study Topic**

Cancer is well known to be an exhaustive disease with a chronic course, and its extensive consequences can lead to significant impairments in patients' physical and mental well-being. The National Comprehensive Cancer Network (2018) has defined cancer-related distress as “a multifactorial unpleasant emotional experience of a psychological, social, and/or spiritual nature that may interfere with the ability to cope effectively with cancer, its physical symptoms” (Managing Stress and Distress, 2018).

The NCCN has emphasized the importance of distress management, which can deliver a more comprehensive care to cancer patients. The recommended strategy for alleviating distress in connecting patients to various coping techniques through psycho-social support programs (Lee, et al., 2017). Several studies have suggested that cancer patients can benefit from certain complementary therapy or psychological interventions in conjunction with standard medical treatments. Of the various complementary psychological therapies in use, art therapy has been found to be effective for alleviating symptoms and improving patients' quality of life and ability to cope with distress (Lee, et al., 2017). (more)

Art therapy is a clinical intervention based on the belief that the creative process involved in the making of art is healing and life enhancing. It is used to help patients and their families increase awareness of self, cope with symptoms, and adapt to stressful and traumatic experiences (Nainis, et al., 2006).

This research project investigates quantitative assessment measures that aim to explore the impact of art therapy directives on patients with cancer. Specifically, the quantitative measures represented in this study provide information on whether the art therapy interventions

utilized were associated with any improvements on the cancer patient's psychological or physical distress that is common in with this diagnosis.

The research is guided by an archival research approach that systematically analyzes the literature that references quantitative assessments to measure the impact of art therapy interventions in cancer research. Specifically, this research aimed to uncover which assessments were being administered the most frequently with this population and emergent themes that were observed with these assessments. This was done through an evaluation of the structures of the assessment tools, how the tools were being used, the impact that they had, which art directives were used with which assessments, and how the assessments were used with different populations.

This study aims to offer future studies in the field of art therapy and cancer research a series of quantitative assessments that are effective in measuring the outcomes of the art therapy directives with cancer patients and their caretakers in a medical setting.

### **Significance of the Study**

A cancer diagnosis and treatment entail major changes in a person's life. Approximately one third of inpatients and a quarter of outpatients suffer from major depression or anxiety disorder (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007). Cancer patients are subject to high levels of psychological distress due to the life-threatening nature of the disease (Geue, Richter, Buttstädt, Brähler, & Singer, 2013). Patients' distress may affect their ability to cope with the disease and the side-effects of treatment. Distress may also impact recovery rates (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007).

Numerous studies on the effect of art therapy have demonstrated a significant effect on the reduction of the aforementioned symptoms. It has been well documented that art therapy can be a helpful tool for cancer patients and their families (Nainis, et al., 2006). An expanding body of evidence suggests that art making can be beneficial to the overall health of patients with cancer (Collie, 2011). The therapeutic benefits include stress reduction, pain reduction, boundary strengthening, improved self-esteem, meaning-making, and improved well-being (Collie, 2011) (Nainis, et al., 2006) (Wood, Molassiotis, & Payne, 2011).

In a growing number of hospitals, patients of all ages are using art to process their experiences and reduce stress. Art therapy programs are utilized in outpatient and inpatient treatment, complementary medicine, wellness programs, and palliative programs (Art therapy and Healthcare).

The positive effect of art therapy fostered an increase in the number of empirical studies over the years (Metzl, 2008). However, heterogeneous measures complicate the comparison of results in art therapy research. Research on the effectiveness of art therapy directives rely on multiple methods such as client interviews, focus groups, and various questionnaires. There are also art therapy assessments, such as the Formal Elements Art Therapy Scale (FEATS) or the Person Picking an Apple from the Tree (PPAT) (David, 2016).

A lack of internal consistency within research methodology prevents the drawing of specific conclusions about its effectiveness with oncology inpatients (Nainis, et al., 2006). In order for art therapy to become an acceptable complementary treatment in the larger medical community that can translate to other modalities in the social sciences, empirical evidence of its success needs to be quantifiable (Slayton, D'Archer, & Kaplan, 2011).

Quantitative measurements may bring some consistency into the field of research of art therapy with cancer. Quantitative methods use numbers for interpreting data and are distinguished by their emphasis on numbers, measurement, and statistical analysis. They offer various types of data collection (i.e. questionnaires and tests). Large numbers of cases analyzed using quantitative design have the potential to reach a wider audience. As such, quantitative assessment tools are a popular method for gathering data in psychological research (Reis, 2009).

The objective of this research is to provide an analysis of current quantitative assessment tools that measure the effectiveness of art therapy interventions with cancer patients. These findings may be replicable in future research with cancer patients in a medical setting. It is possible that repeated use of these assessments can lead to a more homogenous language within the art therapy field that can translate to other modalities in the social sciences. A greater recognition of art therapy as a quantifiable treatment method with results that are proven to be effective outside of the art therapy arena could be more frequently employed in additional medical settings.

### **Background of the Study Topic**

A cancer diagnosis and treatment entail profound changes in people's lives that require significant adjustment and extensive coping skills. Thus, psycho-oncological support services are an essential part of medical care for cancer patients. Psychotherapy can be an important intervention in helping patients with cancer cope with the changes in their lives. These interventions can range from primary verbal types of psychotherapy to creative therapies like art, music, and dance (Geue, Richter, Buttstädt, Brähler, & Singer 2013).

The aim of psycho-oncological interventions are to support coping processes and to improve cancer patients' mental health and quality of life. Art therapy is a type of psycho-oncological intervention (Gueu, 2017). Art therapy is often recognized, within medical settings, as a mind–body intervention and included under the umbrella of complementary and alternative medicine (Wood, Molassiotis, & Payne, 2011).

According to Wood, Molassiotis, and Payne (2011) “Art therapy is a form of psychotherapy that uses the expressive qualities of visual mark making within the context of a therapeutic relationship to effect personal change with the aim of increasing well-being and psychological functioning” (p.137). It can help manage some of the difficult symptoms that often accompany a cancer diagnosis (Wood, Molassiotis, & Payne, 2011).

Art therapy helps people to process experiences that are hard to articulate verbally and is suitable for patients with various diagnoses, ages and levels of education (Nainis, et al., 2006). Pictures, metaphors, and symbols can help in the expression of these experiences (Gueu, 2017). Art therapy may also be associated with a sense of empowerment (Wood, Molassiotis, & Payne, 2011). It uses the expressive qualities of art making with the aim of improving well-being and psychological functioning (Rhondali, Lasserre, & Fibert, 2013). Art making has been utilized in

treating patients with cancer to help them work with feelings of anger, fear, and emotional repression (Puig, 2006).

Art therapy can effect changes in behavior, support personality development, and coping strategies. This can activate the patient's own inner-resources (Gueu, 2017). It has demonstrated evidence for its efficacy in reducing common symptoms experienced by cancer inpatients. (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007).

However, art therapy is a complex intervention. Its evaluation can be challenging because of the multiple components involved (Rhondali, Lasserre, & Fibert, 2013). Conducting research using quantitative assessments with a proven validity is essential. Research using quantitative assessments can allow for a more homogenous language within the art therapy field that can map onto other modalities of the social sciences. Art therapy can become accessible to a wider range of this population and possibly bring some relief to the emotional or physical symptoms they experience after the diagnosis, in treatment, and throughout the recovery process.

## Literature Review

### Introduction

Cancer patients are a group of people that are extremely vulnerable to psychological distress. Responses to having this life-threatening disease can range from normal feelings of vulnerability, sadness, and fear to disabling problems, such as anxiety, depression, and social isolation (López, Ferrandis, Vaillo, & Galdòn, 2012). According to current estimates, approximately 25% of cancer patients meet the criteria for major depression or anxiety disorders (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007). These disorders can influence a patient's compliance with their medical treatment and is connected to extended hospital stays (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007). Some studies have even suggested that depression and anxiety can have a direct effect on the patient's prognosis and mortality (Hamer, Chida, & Molloy, 2009).

Recently, there has been a focus on how art therapy might positively impact several of the disabling symptoms mentioned above, specifically depression and anxiety. In an effort to build the body of research and possible contributions of art therapy in the field of medicine, this literature review will explore quantitative assessment tools that have been implemented to measure the impact of art therapy on patients who have cancer within a medical setting. It will then study the format of the assessment tools, how they are used, and which populations they are used with in the studies.

The literature review will begin by providing a brief background on the literature that discusses how art therapy has been implemented with patients with cancer and their caregivers. After grounding the reader in the topic of art therapy and cancer, this review will present an

extensive list of quantitative assessment tools that have been used to measure the impact of art therapy on a range of symptoms experienced by people who have cancer. This information will also be presented in a table for easier readability and to begin exploration and analysis of the types of quantitative assessment tools being used. Following the table, studies and corresponding articles will be reviewed chronologically in an effort to begin to illuminate how quantitative measures have progressed in the last 15 years. The purpose of this review will serve as a reference for future research where the researcher will have access to effective and appropriate quantitative assessment tools to be used with a unique population.

### **Art Therapy and Cancer**

Irene Rosner David states that “the benefits of art therapy in medical settings are to alleviate emotional intensity, instill mastery, cultivate self-esteem, contribute to effective adaptation and enhanced coping with diagnoses and prognoses, as well as to provide diagnostic insights (David, 2016, p. 443). Art therapy helps people express difficult experiences that are hard to verbalize. It is helpful for a variety of diagnosis and all age levels (Nainis, et al., 2006) (Geue, Richter, Buttstädt, Brähler, & Singer, 2013).

Several studies have suggested that cancer patients can benefit from certain types of complementary therapy or psychological interventions in conjunction with medical treatments (Richardson, Sander, Palmer, & Greisinger, 2000). “Of the various complementary psychological therapies in use, art therapy has been found to be effective for alleviating symptoms and improving patients’ quality of life and ability to cope with distress” (Lee, et al.,



2017, p. 707). More recently, a growing body of research has studied the efficacy of art therapy interventions more systematically (Geue, Richter, Buttstädt, Brähler, & Singer, 2013).

This literature review aims to explore the types of quantitative assessment tools that are being used in art therapy research with cancer patients and their caregivers. I reviewed approximately 70 research articles that used different quantitative psychological assessments tools to measure the effectiveness of art therapy interventions in a medical setting. Specifically, I searched for research that had used a pre-test and a post-test to measure changes in distress in the participants. I found 43 articles that fit the criteria of using non-art therapy quantitative assessments to measure the effectiveness of art therapy interventions with a variety of diagnoses. These articles are listed chronologically according to publication in the following Table. The literature review then examines the specific articles that address art therapy and patients with cancer within a medical setting. This more specific information is in Table A2 (p.92).

Table 1

*Quantitative Assessments in Art Therapy Research*

Title	Author	Test Type	Journal	Year
The Human Figure Drawing with Donor and Nondonor Siblings of Pediatric Bone Marrow Transplant Patients	Packman, Wendy L.; Beck, Vanessa L.; Van Zutphen, Kelly H.; Long, Janet K.; Spengler, Gisele	Koppitz System	Journal of the American Art Therapy Association	2003
Testing the Efficacy of a Creative-Arts Intervention with Family Caregivers of Patients of Cancer	Walsh, Sandra M.; Martin, Susan Culpepper; Schmidt, Lee A.	Mini-POMS; BAI, The Derogatis Affects Balance Scale (DABS)	Journal of Nursing Scholarship	2004

Title	Author	Test Type	Journal	Year
Effects of art therapy with prison inmates: A follow-up study	Gussack, David	Beck Depression Inventory-Short Form (BDI-II)	The Arts in Psychotherapy	2006
A randomized, controlled trial of mindfulness-based art therapy (MBAT) for women with cancer.	Monti, Daniel A.; Peterson, Caroline; Kunkel, Elisabeth J. Shakin; Hauck, Walter W.; Pequignot, Edward; Rhodes, Lora; Brainard, George C.	Symptomatic Checklists, SCL-90; Medical Outcomes Study Short-Form Health Survey;	Psycho-Oncology	2006
Relieving Symptoms in Cancer: Innovative Use of Art Therapy	Nainis, N., Paice, J. A., Ratner, J., Wirth, J. H., Lai, J., & Shott, S.	Edmonton Symptom Assessment Scale (ESAS); Spielberger State-Trait Anxiety Index (STAI-S);	Journal of Pain and Symptom Management	2006
Evaluation of an art therapy offer for oncological patients in an acute hospital: A pilot study	Grulke, Norbert; Bailer, Harald; Stähle, Stephanie; Kächele, Horst	EORTC QLQ-30, POMS, HADS	The Arts in Psychotherapy	2006
Art therapy improved depression and influenced fatigue levels in cancer patients on chemotherapy	Bar-Sela, G., Atid, L., Danos, S., Gabay, N., & Epstein, R.	Hospital Anxiety and Depression Scale (HADS) and the Brief Fatigue Inventory (BFI)	Psycho-Oncology	2007
The Effect of an Art Psychotherapy Intervention on Levels of Depression and Health Locus of Control Orientations Experienced by Black Women Living with HIV	Field, Wirika; Kruger, Carine	Beck Depression Inventory– II (BDI-II)	South African Journal of Psychology	2008
Art therapy for relief of symptoms associated with HIV/AIDS	Rao, Deepa; Nainis, Nancy; Williams, Lisa; Langner, Daughon; Eisin, Audra; Paice, Judith;	Edmonton Symptom Assessment Scale; State-Trait Anxiety Index (STAI)	AIDS Care	2009

Title	Author	Test Type	Journal	Year
The effects of an art education program on competencies, coping, and well-being in outpatients with cancer—Results of a prospective feasibility study	Singer, Susanne; Götze, Heide; Buttstädt, Marianne; Geue, Kristina; Momengalibaf, Azahdeh; Böhler, Ursula	Family-System-Test (FAST); “Hospital Anxiety and Depression Scale” (HADS); “Trier Coping Scales”	The Arts in Psychotherapy	2010
The use of a group mural project to increase self-esteem in high-functioning, cognitively disabled adults	Trzaska, Jessica Detlefsen	The Tennessee Self-Concept Scale, 2nd edition (TSCS:2)	The Arts in Psychotherapy	2012
What research evidence is there for the use of art therapy in the management of symptoms in adults with cancer? A systematic review	Wood, Michele J. M.; Molassiotis, Alexander; Payne, Sheila	hand search found 12 studies	Psycho-Oncology	2012
Changes in Cerebral Blood Flow and Anxiety Associated with an 8-week Mindfulness Program in Women with Breast Cancer	Monti, Daniel A.; Kash, Kathryn M.; Kunkel, Elisabeth J. S.; Brainard, George; Wintering, Nancy; Moss, Aleezé S.; Rao, Hengyi; Zhu, Senhua; Newberg, Andrew B.	Symptom Checklist-90-Revised (SCL-90-R)	Stress and Health: Journal of the International Society for the Investigation of Stress	2012
Art therapy among palliative care in patients with advanced cancer	Rhondali, W., Lasserre, & Fibert, M.	Edmonton Symptom Assessment Scale (ESAS)	Palliative Medicine	2013
Evaluating effectiveness of arts and health programs in primary health care: A descriptive review.	Tesch, Leigh; Hansen, Emily	Evaluated 20 different assessment tools	Arts & Health: An International Journal of Research, Policy and Practice	2013

Title	Author	Test Type	Journal	Year
Psychosocial benefits of a novel mindfulness intervention versus standard support in distressed women with breast cancer	Monti, Daniel A.; Kash, Kathryn M.; Kunkel, Elisabeth J.; Moss, Aleeze; Mathews, Michael; Brainard, George; Anne, Ranni; Leiby, Benjamin E.; Pequinot, Edward; Newberg, Andrew B.	Symptoms Checklist-90-Revised; Medical Outcomes Study Short-Form Health Survey	Psycho-Oncology	2013
An art therapy intervention for cancer patients in the ambulant aftercare – results from a non-randomized controlled study	Geue, K.; Richter, R.; Buttstädt, M.; Brähler, E.; Singer, S.	Hospital Anxiety and Depression Scale (HADS); Freiburg Questionnaire on Coping with Illness; Perceived Adjustment to Chronic Illness Scale (PACIS);	European Journal of Cancer Care	2013
A case study on the effects of the creative art therapy with stretching and walking meditation—Focusing on the improvement of emotional expression and alleviation of somatization symptoms in a neurasthenic adolescent.	Kim, Soonja; Ki, Junghee	20-Item Alexithymia Scale, TAS-20; Symptom Checklist-90 Revision (SCL-90-R)	The Arts in Psychotherapy	2014

Title	Author	Test Type	Journal	Year
Effect on scores of depression and anxiety in psychiatric patients after clay work in a day hospital	e Morais, Aquil�ia Helena; Naz�rio Dal�cio, M�rcia Aparecida; Vizmann, Shirley; de Carvalho Bueno, Vera L�cia Ribeiro; Roecker, Simone; Jodas Salvagioni, Denise Albieri; Eler, Gabrielle Jacklin	Spielberger's State-Trait Anxiety Inventory, Beck Depression Inventory	The Arts in Psychotherapy	2014
Recognizing Emotions: Testing an Intervention for Children with Autism Spectrum Disorders	Richard, Donna Abely; More, William; Joy, Stephen P.	The Diagnostic Analysis of Nonverbal Accuracy 2–Child Facial Expressions (DANVA 2-CF)	Art Therapy	2015

Title	Author	Test Type	Journal	Year
Humor, Self-Attitude, Emotions, and Cognitions in Group Art Therapy with War Veterans	Kopytin, Alexander; Lebedev, Alexey	Symptomatic Checklists, SCL-90; Questionnaire of Depressive Conditions; Integrative Anxiety Test; Questionnaire of Depressive Conditions; General Condition-Activity-Mood Test; World Health Organization Quality Symptomatic Checklists, SCL-90; Questionnaire of Depressive Conditions; Integrative Anxiety Test; General Condition-Activity-Mood Test; World Health Organization Quality of Life Questionnaire	Journal of the American Art Therapy Association	2015
Do we have predictors of therapy responsiveness for a multimodal therapy concept and aerobic training in breast cancer survivors with chronic cancer-related fatigue?	Kröz, M.; Reif, M.; Zerm, R.; Winter, K.; Schad, F.; Gutenbrunner, C.; Girke, M.; Bartsch, C.	Cancer Fatigue Scale (CFS-D); Pittsburgh Sleep Quality Index; Self-Regulation Scale (SRS); the Internal Coherence Scale (ICS) and the European Organization of Research and Treatment Health-Related Quality of Life Core Questionnaire scale	European Journal of Cancer Care	2015
Social action art therapy as an intervention for compassion fatigue	Reim, Emily Ifrach; Miller, Abbe	The Compassion Fatigue Self-Test; Psychological Stress Measure 9 (PSM-9)	The Arts in Psychotherapy	2016

Title	Author	Test Type	Journal	Year
Creative art therapy to enhance rehabilitation for stroke patients: a randomized controlled trial	Kongkasuwan, Ratcharin; Voraakhom, Kotchakorn; Pisolayabutra, Prim; Maneechai, Pichai; Boonin, Jiraporn; Kuptniratsaiku, Vila	Abbreviated Mental Test; Barthel Index; Hospital Anxiety and Depression Scale (Thai version); Thai Quality of Life Questionnaire	Sage Journals	2016
Propiedades psicométricas del Inventario de Depresión de Beck II en pacientes con cáncer.	Vázquez, Óscar Galindo	Beck Depression Inventory (BDI-II); HADS	Psicología y Salud	2016
Art therapy and cognitive processing therapy for combat-related PTSD: A randomized controlled trial	Campbell, Melissa; Decker, Kathleen P.; Kruk, Kerry; Deaver, Sarah	PTSD Checklist-Military Version; BDI-II	Art Therapy	2016
Effects of Mandala Art Therapy on Subjective Well-being, Resilience, and Hope in Psychiatric Inpatients	Kim, Hyejin; Kim, Sunman; Choe, Kwisoon; Kim, Ji-Su	Concise Measure of Subjective Well-being (COMOSWB); Resilience Scale that Wagnild and Young (1993) designed; Schizophrenia Hope Scale-9 (SHS-9)	Archives of Psychiatric Nursing	2017
Do cancer patients with high levels of distress benefit more than less distressed patients from outpatient art therapy?	Gueu, K., Riekof, S., Buttstaedt, & Singer, S.	Hospital Anxiety and Depression Scale (HADS); European Organization for the Research and Treatment of Cancer Quality of Life Core Questionnaire EORTC QLQ-C30	European Journal of Oncology	2017
A combined intervention of art therapy and clown visits to reduce preoperative anxiety in children	Dionigi, Alberto; Gremigni, Paola	Modified Yale Preoperative Anxiety Scale	Journal of Clinical Nursing	2017

Title	Author	Test Type	Journal	Year
The effect of drawing and writing technique on the anxiety level of children undergoing cancer treatment	Altay, Naime; Kilicarslan-Toruner, Ebru; Sari, Çigdem	State Anxiety Inventory	European Journal of Oncology Nursing	2017
Art therapy based on appreciation of famous paintings and its effect on distress among cancer patients	Lee, J., Choi, M. Y., Kim, Y. B., Sun, J., Park, E. J., & Kim, J. H.	Hospital Anxiety and Depression Scale (HADS), Hamilton Depression Rating Scale (HDRS), and Edmonton Symptom Assessment Scale (ESAS)	Quality of Life Research	2017
The effect of logotherapy on the expressions of cortisol, HSP70, Beck Depression Inventory (BDI), and pain scales in advanced cervical cancer patients.	Soetrisno; Sulistyowati, Sri; Ardianto, Adhitya; Hadi, Syamsul	Beck Depression Inventory-Short Form (BDI-II)	Healthcare for Women	2017
Effects of clay art therapy on adult outpatients with major depressive disorder: A randomized control trial.	Nan, J. K., & Rainbow, T. H.	BDI-II	Journal of Affective Disorders	2017
"A Manual-Based Phenomenological Art Therapy for Individuals Diagnosed with Moderate to Severe Depression (PATd): A Randomized Controlled Study"	Blomdahl, Christina; Guregård, Suzanne; Rusner, Marie; Wijk, Helle	Montgomery-Åsberg depression rating scale (MADRS-S), Rosenberg self-esteem scale (RSES)	Psychiatric Rehabilitation Journal	2018
Art therapy improves mood, and reduces pain and anxiety when offered at bedside during acute hospital treatment	Shella, Tamara	Roger's Happy Sad The Arts in Psychotherapy	The Arts in Psychotherapy	2018



Title	Author	Test Type	Journal	Year
A Pilot Study of a Mindfulness-Based Art Therapy Intervention in Outpatients with Cancer	Meghani, Salimah H.; Peterson, Caroline; Kaiser, Donna H.; Rao, Hengyi	Short-Form Health Survey; The Pittsburgh Sleep Quality Index; Edmonton Symptom Assessment Scale; Antonovsky's Sense of Coherence Orientation to Life Questionnaire; Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being	American Journal of Hospice & Palliative Medicine	2018
The Application of Art Therapy to Reduce the Level of Depression in Patients with Hemodialysis	Fatmawati, A., Rachmat, S. M., & Rafiyah, I.	BDI-II	Belitung Nursing Journal	2018
The efficacy of creative arts therapies to enhance emotional expression, spirituality, and psychological well-being of newly diagnosed Stage I and Stage II breast cancer patients: A preliminary study	Puig, Ana; Lee, Sang Min; Goodwin, Linda; Sharrard, Peter	Profile of Mood States (POMS)	The Arts in Psychotherapy	2006
Education of Creative Art Therapy to Cancer Patients: Evaluation and Effects	Visser, Adriaan	European Organization for Research and Treatment of Cancer [EORTC], Profile of Mood State [POMS]	Journal of Cancer Education	2008
Art therapy improves experienced quality of life among women undergoing treatment for breast cancer: a randomized controlled study	Svensk, A.; Öster, I.; Thyme, K.E.; Magnussun, E.; Sjöden, M.; Eismann, M.; Aström, S.; Lindt, J.	WHOQOL-BREF; ORTC Quality of Life Questionnaire (QLQ)-BR2	The Arts in Psychotherapy	2009

Title	Author	Test Type	Journal	Year
A non-randomized trial of an art therapy intervention for patients with hematological malignancies to support post-traumatic growth	Singer, Susanne; Götze, Heide; Buttstädt, Marianne; Ziegler, Corinne; Richter, Robert; Brown, Anna;	Stress-Related Growth Scale (SRGS)	Journal of Health Psychology	2012
The effects of Self-Book© art therapy on cancer-related distress in female cancer patients during active treatment: A randomized controlled trial	Radl, Donna; Vita, Maureen; Gerber, Nancy; Gracely, Edward; Bradt, Joke	Perceived Emotional Distress Inventory (PEDI); Distress Thermometer (DT); Patient-Reported Outcomes Measurement Information System Brief Psychological Well-being test; Functional Assessment of Chronic Illness Therapy Spiritual Well-Being (FACIT-Sp)	Psycho-Oncology	2018

**Importance of Assessment Tools**

As the field of art therapy expands, there is a growing need for empirical evidence that can translate to other disciplines. Quantitative Assessment tools have been an effective way of gaining empirical data in other areas of psychological research. They have been tested with cancer patients in different settings and used with patients in in-patient and out-patient situations.

Several international organizations, such as the International Psycho-Oncology Society (IPOS), the National Institute for Clinical Excellence (NICE), and the National Comprehensive Cancer Network (NCCN), recommend “the implementation of the routine screening programs for detecting and managing psychological distress in cancer population” (López, Ferrandis, Vaillo, & Galdòn, 2012). In order to effectively screen for distress, adequate assessment tools must be selected. The tools should be brief, easily scored and interpreted, with adequate psychometric properties (López, Ferrandis, Vaillo, & Galdòn, 2012).

The following review examines the specific articles that address art therapy and patients with cancer within a medical setting. These are presented in chronological order and by “type” as a way to preliminarily analyze any emergent themes related to gathering data and demographics.

### **Art Therapy with Caregivers of Cancer Patients**

Walsh, Martin, and Schmidt (2004) published a study that tested the efficacy of creative arts interventions (CAI) on family caregivers of patients with cancer. The intervention was designed to be given at the bedside of a patient while he or she was undergoing chemotherapy. The patient was not recruited for the study, but was encouraged to help the caregiver make decisions, and could participate if they felt like doing so. The participant was given a list of six items to choose from on an “Art-Kart” and the materials to go with it. Once they got started on the activity, a nurse-artist intervention team came back to check every 15 minutes until they were finished (Walsh, Martin, & Schmidt, 2004). Before the participant made the art, they were given three self-report pre-test instruments. The first was the Mini Profile of Mood States (Mini-POMS), which assesses for mood disturbance (Walsh, Martin, & Schmidt, 2004). This is a

shorter version of the original Profile of Mood States, which is used in a wide variety of research domains and was originally developed to assess mood states and changes in psychiatric populations (Bourgeois, LeUnes, & Meyers, 2010). The original format consisted of 65 questions while the shorter version consists of seven questions. The self-report includes questions about anxiety, sadness, depression, confusion, energy, fatigue, and anger to measure mood. The participant answers questions in the format “right now I feel...” on a 5-point Likert scale. (Kuesten, Bi, & Meiselman, 2017) (Walsh, Martin, & Schmidt, 2004).

The second assessment the researchers used was the Beck Anxiety Inventory to measure for anxiety. The BAI is a 21-item inventory to describe symptoms associated with anxiety. Questions are scored on a Likert Scale of 0 (not at all) to 3 (severely) (Beck Anxiety Inventory, 2018). Scores range from 0-63. Lower scores reflect lower anxiety. It takes about five minutes to complete (Walsh, Martin, & Schmidt, 2004).

The third assessment Walsh, Martin, and Schmidt (2004) used was the Derogatis Affects Balance Scale (DABS). This has been used to measure positive and negative affect in clinical and non-clinical settings. Participants rate 40 adjectives to describe common feelings on a 5-point Likert scale from 1 (not at all) to 5 (extremely). It takes approximately 5-8 minutes to complete. Walsh, Martin and Schmidt state that “the DABS has been shown to indicate changes in feelings over the course of various medical and psychotherapeutic treatments for cancer, sexual dysfunction, clinical anxiety, and depression” (p. 216).

### **Mindfulness-Based Art Therapy and Cancer Patients**

Monti et al. (2006) conducted research on the effects of Mindfulness-Based Art Therapy on cancer patients. This study was conducted within the Thomas Jefferson University cancer

center. The intervention group received supportive and expressive group therapy that included skills training in mindfulness meditation and group art therapy tasks. The group met once a week for eight consecutive weeks. Each session lasted two and a half hours (Monti, et al., 2006).

In this same study, the researchers used two quantitative assessments. The first was the Symptoms Checklist Revised (SCL-90-R) which they used to assess for psychological distress and stress-related somatic complaints. The participants were assessed immediately pre-and post-intervention at 0 (pre-test), 8 weeks, and 16 weeks (post-test). It is a 90-item checklist that rated in a 5-point Likert scale. This test takes approximately 12-15 minutes to complete (Monti, et al., 2006).

Monti et al. (2006) also assessed health-related quality of life through the Medical Outcomes Study Short Form Health Survey (SF-36). This is a 36-item measure used to assess eight health concepts: (1) limitations in physical activities; (2) limitations in social activities; (3) limitations in role activities because of health problems; (4) limitations in role activities because of emotional problems; (5) bodily pain; (6) general health perceptions; (7) vitality (energy and fatigue); and (8) mental health (psychological distress and well-being) (Monti, et al., 2006). The survey was designed for self-administration for participants over the age of 14 and it is to be administered by a trained interviewer. This study is designed to take 10 minutes or less to complete (Ware, 1992).

### **Art Therapy and Symptom Control of Cancer Patients**

In 2006, Nainis et al. (2006) published a study that explored art therapy and cancer symptom control. This study evaluated the results of a 1-hour art therapy session on pain and

other symptoms in adult cancer patients. Subjects were from an in-patient oncology unit and participated in one art directive. Art therapists met with the patients to help them establish a goal they would like to achieve in the art therapy session and then went over different art materials that may help them to work towards that goal (Nainis, et al., 2006).

Patients were given the Edmonton Symptoms Assessment Scale (ESAS) to measure physical and emotional symptoms (Nainis, et al., 2006). The ESAS is a self-related tool that includes nine common symptoms of pain. These include pain, tiredness, drowsiness, nausea, appetite, depression, anxiety, shortness of breath, and well-being. The patient also has the option of adding a 10th patient-specific symptom (Gretarsdottir, Fridriksdottir, & Gunnarsdottir, 2016). The severity of each symptom is rated on a 0-10 numeric scale. “Validation studies of ESAS have reported reliability estimates, content validity evidence, concurrent validity evidence, predictive validity evidence, and sensitivity and/or specificity” (Gretarsdottir, Fridriksdottir, & Gunnarsdottir, 2016, p. 134).

In this same study, patients were also given the Spielberger State-Trait Anxiety Index (STAI-S) to measure levels of anxiety. This assessment tool differentiates between temporary anxiety and the more long-standing, general anxiety known as trait anxiety. In this study, only the state component of the STAI-S was used was used to measure how a patient described their psychological state at the time of the intervention. Scores of the STAI increase in response to physical danger and psychological stress and decrease as a result of relaxation. The ESAS and the STAI-S were both administered before the art directive (pre-test) and after (post-test) (Nainis, et al., 2006).

### **Art Therapy to Enhance Psychological Well-Being in Stage I and II Breast Cancer Patients**

In 2006, Puig, Lee, Goodwin, and Sharrard (2006) published a study the efficacy of creative arts therapy on emotional expression, spirituality, and psychological well-being with newly diagnosed women with Stage I or II breast cancer. Each session was private and consisted of a semi-structured art intervention and a guided meditation to increase bodily awareness (Puig, 2006). The intervention lasted over a period of four weeks. The Profile of Mood States (POMS) was administered as a pretest and a posttest at the end of the four-week period (Puig, 2006). This test was described above in the description of Walsh's, Martin, and Schmidt's study (Walsh, Martin, & Schmidt, 2004).

### **Art Therapy and Patients Undergoing Chemotherapy**

Bar-Sela, Atid, Danos, Gabay, and Epstein (2007) published a study of cancer patients undergoing chemotherapy and the effects of art therapy on levels of depression, anxiety, and fatigue. The study consisted of patients given art directives that started as free-form, and then gradually became more specific. The interventions were conducted in a room within the oncology department of the patients that were receiving chemotherapy, radiotherapy, or follow-up care (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007).

Assessments were given to the patients in the beginning as a baseline, and before each session began. The Hospital Anxiety and Depression Scale (HADS) was used to assess both depression and anxiety. This is a 14-item questionnaire that detects anxiety and depression symptoms in a medical setting. The scale is divided into two subscales, one for anxiety and one for depression (HADS-A and HADS-D). Each subscale contains seven items (Bjelland, Dahl, Haug, & Neckelmann, 2002). The patient answers each item on a four-point score (0-3) and

possible scores could range from 0-21 for depression and 0-21 for anxiety. This test takes approximately five minutes to complete (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007).

The Brief Fatigue Index was used to determine levels of fatigue. The BFI questionnaire contains nine items, each measuring the severity of the fatigue on a 0–10 scale. A score of 1–3 is considered mild fatigue, 4–6 is moderate fatigue, and 7–10 is considered severe fatigue (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007).

### **An Evaluation of a Creative Arts Therapy Course on Cancer Patients**

Adriaan Visser (2008) evaluated the effects an art therapy course had on cancer patients in the Netherlands. The course, called Creative and Creative Art, consisted of 8 weekly sessions and lasted for 2.5 hours. It was held in the art therapy department of the Mesos Medical Center in Utrecht, the Netherlands. Throughout the course, art therapy directives focused on relaxation, visualization, concentration, imagery exercises, and coping mechanisms (Visser, 2008).

Two questionnaires were used in this study as pretest and posttest measurements and were administered in the beginning and conclusion of the eight-week period. The Profile of Mood States (POMS) was used to assess mood states (Visser, 2008). This test was described above in the description of the study done by Walsh et al., (2004) that examined family caregivers of patients with cancer (Walsh, Martin, & Schmidt, 2004).

The second questionnaire that was administered was the European Organization for Research and Treatment of Cancer (EORTC). It was used to evaluate the patient's general quality of life (Visser, 2008). This assessment tool has been developed specifically for cancer patients and is rated using a four-point Likert Scale (0-3) (Geue, Richter, Buttstädt, Brähler, & Singer, 2013). It includes several categories- function, global health status, quality of life, and



several single-item scales. This test has been used in the United States, Canada, and Europe and has been translated into many languages (European Organization for the Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30), 2007).

### **Art Therapy and Improved Quality of Life in Breast Cancer Patients**

Svensk et al. (2009) conducted a study that explored whether art therapy would have an impact on the quality of life in women with breast cancer. A control group of women who had traveled to the city of Umeå in Sweden for radiology treatment participated in a 5-week art therapy program. The goal of each session was to allow women to have time and space to reflect and express themselves, to give support in the process of restoring body image, and to promote agency (Svensk, et al., 2009).

The women who participated in the study were given two questionnaires that assessed quality of life one month before the start of their radiotherapy, two months later, and then six months later. The first assessment given was the Swedish version of the WHOQOL-BREF which was developed by the World Health Organization and measures the patient's quality of life. It is available in more than 20 languages and consists of 26 items. The test is self-administered and is divided into four areas: physical health, psychological health, social relationships, and environment. The higher the score, the higher the quality of life (Svensk, et al., 2009).

The second assessment given was the European Organization for Research and Treatment of Cancer (EORTC) BR-23 (Svensk, et al., 2009). This version of this assessment that is most widely used was described above in Visser's research in art therapy and creative art education (Visser, 2008). This version has a slight variation, though. Instead of 30 items, this version was

shortened to 23 items and the questions are aimed at patients specifically undergoing breast cancer (Svensk, et al., 2009).

### **Effects of an Art Education Program on Patients with Cancer**

In 2010, Singer (2010) et al. published a study whose aim was to develop an art education program for ambulatory patients with cancer and to assess its viability and possible effects. The study examined the effects of art therapy on cancer patients and some of their family members in an outpatient setting. Participants were given two questionnaires as a pre-test and post-test before and after the duration of the course, which lasted 22 weeks (Singer, et al., 2010).

The first assessment was the Hospital Anxiety and Depression Scale (HADS), which was described above in the research conducted by Bar-Sela et al., (2007) research. The second was the Trier Coping Scales, which was developed in 1993. This assessment measures coping skills that are used by the individual. The assessment comprises 37 items that are broken into five subscales. They are rumination, search for social contacts, denial, seeking for information and exchange, and search for support in religion (Singer, et al., 2010).

### **Art Therapy and Post-Traumatic Growth**

Singer (2012) et al., continued their research with patients with cancer. In this study their research explored art therapy and the effect on post-traumatic growth with this population. Art therapy was administered to small groups over a period of 22 weeks in the Leipzig University Hospital. The early directives focused on simple drawing techniques and the study concluded with the creation of a personal book (Singer, et al., 2012).

In this study, patients were given assessment tools as a pretest and a posttest in the conclusion of the study. Post-traumatic growth was measured with the Stress-Related Growth Scale (SRGS) translated into German. This is a self-administered 15-item measure based on personal and social resources and coping strategies (Singer, et al., 2012). In the pretest, patients were asked to assess their growth since their tumor diagnosis, and in the posttest, they were asked to assess the growth since the last measurement (Singer, et al., 2012).

### **Mindfulness-Based Art Therapy and Cerebral Blood Flow**

In 2012, Monti (2012) et al. published another study of Mindfulness-Based Art Therapy (MBAT). This time, he worked specifically with female patients that had been diagnosed with breast cancer between 6 months to three years before enrolling in the intervention. These patients were not in active treatment. This study evaluated changes in cerebral blood flow and its relationship with MBAT directives. This study was conducted within the Thomas Jefferson University's cancer center (Monti, et al., 2012).

Expressive art therapy directives were paired with mindfulness-based stress reduction techniques (MBAT). Patients were given an fMRI up to two weeks prior to the start of the intervention, and again within two weeks after the conclusion of the eight-week program. (Monti, et al., 2012). The study showed a decrease in cerebral blood flow in the group that combined the MBAT. This decrease is associated with a decrease in levels of anxiety (Monti, et al., 2012).

Monti used the Symptom Checklist-90-Revised (SCL-90-R) as an assessment in this study. It was administered pre-test and post-test, both within a week of the respective fMRI scans (Monti, et al., Changes in Cerebral Blood Flow and Anxiety Associated with an 8-week

Mindfulness Programme in Women with Breast Cancer, 2012). The SCL-90-R is a self-report inventory of 90 items that characterize various psychiatric conditions. The degree to which each symptom has been present in the past 7 days is rated on a Likert scale from 0 (not at all) to 4 (extremely). The items can be grouped into nine scales: anxiety, depression, hostility, interpersonal sensitivity, obsessive-compulsive, paranoid ideation, phobic anxiety, psychoticism, and somatization. It takes approximately 10-15 minutes to complete (Eich, et al., 2012).

### **Additional Mindfulness-Based Art Therapy**

In 2013, Monti (2013) et al. again conducted a research study of MBAT with breast cancer patients. In this study, he measured the patient's levels of stress in response to the MBAT. The directive combined expressive art interventions with mindfulness techniques such as gentle yoga and walking meditations. Levels of stress were measured in the beginning (pre-test), at week 9, and again at week 36 (post-test). This study was also conducted at the Thomas Jefferson University's cancer center. Psychological distress and stress-related somatic complaints were assessed using the Symptoms Checklist Revised (SCL-90-R) which was described above in Monti's previous research. Health-related quality of life was assessed using the Medical Outcomes Study Short-Form Health Survey (SF-36) which was also described above in Monti's previous study from 2006 (Monti, et al., 2012).

### **Effects of Art Therapy on Distress and Coping**

In 2013, Gueu, Buttstädt, Brähler, and Singer (2013) published a study that examined the effects of art therapy on cancer patients that are in out-patient aftercare. The aim of this study

was to understand the effects of an art therapy intervention on distress and coping. The intervention was conducted in the Psychosocial Counseling Center which was part of the Leipzig University Medical Center in Germany. It lasted 22 weeks and the participants were asked to complete two questionnaires at three points of the study. Once before they began, another time at the end of the 22 weeks, and then six months after the conclusion of the study (Geue, Richter, Buttstädt, Brähler, & Singer, 2013).

The first assessment was the Hospital Anxiety and Depression Scale (HADS). This tool was described the research of Bar Sela et al., (2007) described above. The Freiburg Questionnaire on Coping with Illness (FKV) and the Perceived Adjustment to Chronic Illness Scale (PACIS) were both used in this study to measure how well the patient was coping with their illness (Geue, Richter, Buttstädt, Brähler, & Singer, 2013). The FKV as a self-reporting tool that consists of five main areas: “depressive coping, problem-solving behavior, distraction and self-assembly, spirituality and search for meaning, cognitive avoidance and dissimulation” (Geue, Richter, Buttstädt, Brähler, & Singer, 2013, p. 3). All items use a 5-point Likert scale for responses with high scores indicating a strong tendency towards coping skills (Geue, Richter, Buttstädt, Brähler, & Singer, 2013).

Geue, Buttstädt, Brähler, and Singer (2013) used the PACIS is a measure that indicates the effort to cope with a disease over the course of the week prior to the interview. The patient responds by responding if an activity uses little effort (=0) and a lot of effort (= 100) (Geue, Richter, Buttstädt, Brähler, & Singer, 2013).

### **Art Therapy with Patients with Advanced Stages of Cancer**

Rhondali, Lasserre, and Fibert (2013) conducted a study with cancer patients in a palliative care unit in 2013. The purpose of this study was to find out if an art therapy session had an effect of on patients with advanced stages of cancer and quantitatively assess the impact of the session on their physical and psychological distress (Rhondali, Lasserre, & Fibert, 2013). The patients met with a professional art therapist to discuss the type of art they wanted to make. The next day they participated in a 1-hour art therapy directive. The researchers used the Edmonton Symptoms Assessment Scale (ESAS) to assess for the physical and psychological distress one hour before and after the directive (Rhondali, Lasserre, & Fibert, 2013). This assessment was described in Nainis' research above.

### **The Effects of Art Therapy on Quality of Life in Patients with Cancer**

In 2017, Gueu, Buttstädt, and Singer (2017), conducted another study of the effects of art therapy and cancer patients. This time they wanted to measure the effect that the art therapy directives would have on the quality of life of both highly distressed and less distressed patients. The program consisted of a 90-minute art therapy session for 22 weeks at the Medical Oncology ward of the Leipzig University Hospital. The study was comprised of three parts. The first part (sessions 1-7) comprised of patients getting comfortable with the art materials and experimental drawing. In the second part (sessions 8-13), patients expressed their thoughts and feelings. In the last part of the study (sessions 14-21), patients made a book that told their story. The last session was used as a closing (Gueu, 2017).

Psychological distress was measured using the German version of the Hospital Anxiety and Depression Scale (HADS), which was described above in the study by Bar-Sela et al., (2007). Quality of Life was measured with the European Organization for the Research and Treatment of Cancer Quality of Life Core Questionnaire (EORTC QLQ-C30). This study was described above in Visser's study of education and creative arts therapy (Visser, 2008).

### **The Effects of Art Therapy on Patients with Cancer Receiving Radiotherapy**

Lee et al., (2017) conducted a study that evaluated the effectiveness of art therapy on the distress of cancer patients receiving radiotherapy between October 2015 and February 2016. They specifically set out to measure anxiety, depression, and cancer-related symptoms in an outpatient setting right before receiving RT in the Department of Radiation Oncology. The study used a combination of famous art appreciation with creative art-making twice a week over four weeks. The researchers used the Hamilton Depression Ratings Scale (HDRS), Hospital Anxiety and Depression Scale (HADS), and the Edmonton Symptom Assessment Scale (ESAS), and the to measure cancer-related stress in the patients. The assessments were administered at three points- before the art therapy began (pre-test), after the fourth session, and after the eighth session (post-test) (Lee, et al., 2017).

The HDRS measures depression severity using 17 items. Lee et al., (2017) describe the test in the following way:

The HDRS has 9 items rated on a 0–4 scale including depressive mood, guilt, suicide, work and interests, agitation, retardation, psychic anxiety, somatic anxiety, and hypochondriasis, and 8 items rated on a 0–2 scale including initial insomnia, middle

insomnia, delayed insomnia, gastrointestinal symptoms, general symptoms, loss of weight, loss of libido, and loss of insight. The total score ranges from 0 to 52, with scores of 0–6 indicating the absence of depression, 7–17 indicating mild depression, 18–24 indicating moderate depression, and above 25 indicating severe depression. (p.709)

The HADS and ESAS were both described above.

### **Art Therapy and Children in Cancer Treatment**

Altay, Kilicarslan-Toruner, and Sari (2017) conducted a study that examined the effects of drawing and writing on anxiety levels of children undergoing cancer treatment in a hematology-oncology unit within a hospital. The intervention consisted of a combination of drawing, writing, and story-telling. The intervention took place over a five-day period in 2015 in a hospital in Turkey. The State Anxiety Inventory was used to measure how the levels of anxiety changed over the five-day period. The inventory was given on the first and fifth day of the intervention and takes about 10 minutes to administer (Altay, Kilicarslan-Toruner, & Sari, 2017).

The State Anxiety Inventory was developed by Charles Spielberger in 1973 and translated into Turkish in 1955. The inventory can be adapted for the 9–16 years age group. The Inventory consists of 20 items describing emotions and behaviors. The respondents indicate how often they experience each using a four-point scale where 1 = never and 4 = always. High scores correspond to high anxiety (Altay, Kilicarslan-Toruner, & Sari, 2017).

### **Additional Mindfulness-Based Art Therapy**

Salimah H. Meghani, Peterson, Kaiser, and Rao (2018) conducted a study that assessed the effects of Mindfulness-Based Art Therapy (MBAT) on patients with cancer. The researchers



implemented an intervention known as “Walkabout” that uses a mixed-media collage construction. This is an accessible art form for those that do not have experience with art-making. The study lasted for eight weeks and was conducted in a cancer center within the University of Pennsylvania’s Health System (Meghani, Peterson, Kaiser, & Rao, 2018).

The researchers used several different assessment tools to measure the effects of the art directive on outpatients with cancer. The study measured sleep quality, health-related quality of life, spirituality, and a sense of coherence. The data was gathered as a pre-test to establish a baseline, at four weeks, and again at eight weeks as a post-test. They used the Edmonton Symptoms Assessment Scale to assess for changes in symptoms. The Short-Form Health Survey (SF-36) was used to measure changes in health-related quality of life (Meghani, Peterson, Kaiser, & Rao, 2018). Both of these assessments were described above in previous studies.

The Pittsburgh Sleep Quality Index (PSQI) was used to measure “sleep quality, latency, duration, efficiency, disturbances, and daytime disturbance. The measure has been shown to be reliable and valid in persons with cancer” (Meghani, Peterson, Kaiser, & Rao, 2018, p. 1197). It consists of 19 self-related questions that are grouped into these seven areas. These seven areas are scored 0-3. The higher the score, the worse the quality of sleep. It takes between 5-10 minutes to complete (Buysse, Reynolds, Monk, Berman, & Kupfer, 1989).

The fourth assessment tools that the researchers used was Antonovsky’s Sense of Coherence Orientation to Life Questionnaire 29. This was used to measure patient’s coherence, their ability to manage stressful situations and stay well (Meghani, Peterson, Kaiser, & Rao, 2018). The assessment measures comprehensibility, manageability, and meaningfulness. It consists of 29 questions that are scored from 1 (never have this feeling) to 7 (always have this feeling) (Eriksson & Mittelmark, 2016).

The last assessment tool the researchers used was the Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being (FACIT-Sp). This was to measure the patient’s spiritual well-being. It is a 12-item scale that has been validated with cancer patients and others with chronic illnesses. The assessment uses three subscales to measure meaning, peace, and faith (Meghani, Peterson, Kaiser, & Rao, 2018).

### **The Effects of Self-Book Art Therapy on Cancer-Related Distress in Female Patients**

Radl, Vita, Gerber, Gracely, and Bradt (2018) conducted a study that sought to explore evidence-based art therapy interventions in oncology care (Radl, Vita, Gerber, Gracely, & Bradt, 2018). Participants in this study constructed a 10-page Self-Book reflecting their experience of their cancer diagnosis and treatment over the course of six sessions. An art therapist worked with the patient and validated their experience. The aim of this directive was to evaluate if the directive would have any effect on the patient’s emotional distress and psychological well-being (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

Data was collected using four different assessments at baseline (pretest), week 3, week 6, and 1 to 2 months after the conclusion of the directive (posttest). Emotional distress was measured through the Distress Thermometer (DT). This is a zero to 10 numeric rating scale in the shape of a thermometer. The DT was used in this study to screen all participants and to measure ongoing emotional distress before and after Self-Book® art therapy sessions. “The National Cancer Institute states that cutoff scores of 4 and 5 are most commonly used in clinical trials and approximately 40% of cancer patients report scores above this cutoff score” (Radl, Vita, Gerber, Gracely, & Bradt, 2018, p. 289).

The Perceived Emotional Distress Inventory (PEDI) was also used as a tool to measure emotional distress. This is a 15-item self-report questionnaire used to designed to measure emotional distress in cancer patients. The score for the inventory ranges from 0 to 45 points, with lower scores corresponding to lower levels of perceived emotional distress. “The PEDI was specifically developed for cancer patients in active treatment designed to reflect the presence and severity of emotional distress and general mood disturbance. The measure assesses anxiety, anger, depression, and hopelessness making distinctions regarding the expression and suppression of angry feelings” (Radl, Vita, Gerber, Gracely, & Bradt, 2018, p. 290).

The psychological well-being was measured by using the Patient-Reported Outcomes Measurement Information System Brief Psychological Well-being test, also known as the PROMIS Brief Psychological Well-Being test. This is a 7-item questionnaire that assesses general well-being. Participants rate questions on a 4-point scale and scores can range from 7-35 and the higher the score the healthier the psychological well-being (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

The Functional Assessment of Chronic Illness Therapy Spiritual Well-being (FACIT-Sp) was also used to measure participants' psychological well-being. However, this assessment focused spiritual well-being. This scale includes five quality of life areas: “physical well-being, social/family well-being, emotional well-being, functional well-being, and spiritual well-being” (Radl, Vita, Gerber, Gracely, & Bradt, 2018, p. 290). Spiritual well-being was aimed at assessing a sense of meaning and peace during the illness and treatment (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

**Conclusion and Future Study**

This was a qualitative analysis of different studies that focused on quantitative assessments used in art therapy research. This investigation of literature focused on the research that was conducted with cancer patients in a medical setting. There are a broad range of assessments used. Some focus specifically on the psychological and emotional symptoms associated with having cancer and oncological treatment, others focus on the physical symptoms as well. Some assessments look at sleep quality, while others look at overall quality of life. I will continue to look at these studies for common themes.

### **Research Approach**

An archival research approach was used to comprehensively review the available literature on quantitative assessments used in a medical setting with cancer patients. Using this qualitative approach, the intention was to explore already published research from a variety of different fields in order to establish new meaning and emergent themes that describe quantitative assessment tools being used to measure effectiveness of art therapy with patients who have cancer. In the context of this research, a systematic exploration was conducted of published journals in art therapy, psychology, and oncology. I then looked for relationships in the data analysis. I explored trends in the format of the assessment tools, how they were used in the research studies, how art therapy was incorporated in the study, and what were the populations that were participating in the interventions.

“Archival research is a method of collecting data from sources that already exist” (Archival Research, 1998). It is seeking out and collecting evidence from archival records, in this case peer reviewed articles from a variety of disciplines, and systematically analyzing in order to uncover new meaning. A key feature that distinguishes archival research from traditional research is the use of pre-existing data in archival research and the use of prospective data in traditional research (Heng, Wagner, Barnes, & Guarana, 2018).

Archival research entails analyzing data that was stored for other academic research purposes. This approach has been used frequently in other fields, but less so in the social psychology (Heng, Wagner, Barnes, & Guarana, 2018). Because archival data can typically be obtained by other researchers seeking to replicate analyses, this data allows transparency in a manner that is not as readily accessible in laboratory or field research. Many archival data are publicly available and often free to access (Barnes, Dang, Leavitt, Guarana, & Uhlmann, 2018).

The digital universe is rapidly expanding, and archival research can be an advantageous way for social scientists to investigate social phenomena.

The qualitative analysis of studies that focus on quantitative assessments of cancer patients in a medical setting seeks to understand any trends in the format of the assessment tools, how the assessments are used, and the population they are being administered to in the art therapy research. Archival research has been used to study changes over time. Barnes, Dang, Leavitt, and Uhlmann (2018) state “archival research may thus prove an especially useful tool upon which to examine issues of time” (p.1460).

## Methods

### Definition of Terms

- **Art Therapy.** “The therapeutic use of art making, within a professional relationship, by people who experience illness, trauma, or challenges in living, and by people who seek personal development. Through creating art and reflecting on the art products and processes, people can increase awareness of self and others cope with symptoms, stress, and traumatic experiences; enhance cognitive abilities; and enjoy the life-affirming pleasures of making art (American Art Therapy Association, 2012).”
- **Baseline.** A minimum or starting point used for comparisons (<https://www.merriam-webster.com/dictionary/baseline>).
- **Personal Inventory.** A self-report questionnaire (a survey filled out by the client) that asks a series of questions about thoughts, interests, feelings, and behaviors that is aimed at developing a general profile about a person’s personality and lifestyle. This type of inventory can be used to give a counselor or therapist a sort of snapshot of who the client is inside; how they live, what's important to them, how they cope with life, etc. (Personal Inventory, 2018).
- **Likert Scale.** A type of rating scale used in psychological research to measure attitudes towards a statement or subject. This is a fixed choice scale-respondents are only given a certain number of options to respond and cannot respond in any manner they choose (Likert Scale, 2018).
- **Mindfulness.** A mental state achieved by focusing one's awareness on the present moment, while calmly acknowledging and accepting one's feelings, thoughts, and bodily sensations, used as a therapeutic technique (Mindfulness, 2018).

- **Pre-Test.** Initial measurement before an experimental treatment is administered and subsequent measurements are taken (Pre-Test, 2018).
- **Post-Test.** A test given to students after completion of an instructional program or segment and often used in conjunction with a pretest to measure their achievement and the effectiveness of the program (Post-test, 2018).
- **Quantitative Assessment.** A traditionally favored type of research design that has influenced outcomes-based assessment methodology (Reis, Quantitative and Qualitative and Assessment Methods, 2009).

### **Design of Study**

This research project was a systematic qualitative analysis of published literature regarding quantitative assessment tools used in cancer research with art therapy taken from published journals in art therapy, psychology, and oncology between the years 2004-2018.

Data analysis began by extensively reviewing the literature around themes of quantitative assessments and art therapy effectiveness with cancer patients. Included in the studies were patients in active treatment, family members or caregivers of the patients, or patients that are no longer in treatment. Seventy articles were gathered and reviewed for relevance. Of these approximately 70 articles, 23 were found to be relevant to themes of this study. These articles were then organized using a table that categorized articles by chronological order. During this investigation, my research questions were as follows:



1. According to the published literature, what are the types of structures of quantitative assessment tools are being used in art therapy research?
2. According to the published literature, how are the quantitative assessment tools being used in art therapy research that focuses on patients with cancer?
3. According to the published literature, what art directives were employed in the research studies?
4. According to the published literature, how have these assessments been used with different populations?

**Sampling.** The author sampled articles from a variety of medical journals, such as *Psycho-Oncology* and *American Journal of Hospice and Palliative Medicine*, and *Journal of Pain and Symptom Management*. I also used art therapy journals, such as *The Arts in Psychotherapy* and *The American Art Therapy Journal*. I referenced psychological publications as well, such as *Psychiatry Research*, *Journal of Clinical Psychology*, and *Psychiatric Research Journal*. I used these publications to understand the ways quantitative research assessments were being used to measure art therapy in a medical setting. The goal was to gain an understanding of the ways empirical data is being gathered in this research and recognize emergent themes in how the assessments were being used. I found 43 articles that used quantitative assessment tools and matched my research criteria which is described below.

**Gathering of Data.** The researcher gathered the literature from professional and scholarly publications about patients with cancer in a medical setting. This was primarily made through internet searches through the LMU/LA William H. Hannon Library web site in order to connect with current research on art therapy and cancer research through searches in PsychINFO and

MEDLINE. Keywords in the searches included *art therapy*, *pre-test*, *post-test*, *standardized tests*, and *cancer*. Most of the data that showed the use of the quantitative assessments in art therapy research were recent, after 2003.

The research began by reviewing approximately 70 research journals that reported on studies of quantitative assessment tools being used in art therapy research. The criteria included a study of art therapy and the implementation of a pre-test and post-test of quantitative assessment tools that were specifically not art therapy assessments. There were 43 articles that matched the criteria, which are listed in Table 1 (p. 9). Then I narrowed the search to the research that focused specifically on cancer research. There were 23 articles that matched these criteria, which became the subjects of the literature review and the following research. These are found in Table A2 (p.92). I then narrowed this down further and explored the five quantitative assessment tools that were used the most frequently.

**Analysis of Data.** Data was analyzed in two phases. First, preliminary analysis was conducted in the creation of the literature review where I collected and tabled articles in chronological order that met specific criteria which was the implementation of a pre-test and post-test of the quantitative analysis tools to assess the effectiveness of the art therapy directive within the context of a medical setting. These articles that documented quantitative studies were then evaluated to observe if any themes emerged over the passage of time.

During the second phase of analysis, I more closely inspected each of the articles that are included in Table 1 using the research questions to guide my inquiry. I focused specifically on the articles that researched the effectiveness of art therapy directives with patients with cancer (Table A2, p. 92). Within these studies, I documented the quantitative assessments that were

used in each study. I determined that there were five quantitative tests that were being used with the most frequency. I then determined that they would be the focus of the analysis. Through systematic analysis, I examined how the assessments are structured, how they are used in the study, how the art directive is incorporated into the treatment, and how they are used with different populations.

## Results

### Presentation of Data

Below is a presentation of the data I collected on quantitative assessment tools used in art therapy research with cancer patients. During the literature review, which was a preliminary analysis of the research, I found a total of 23 total assessment tools that were used in this area of art therapy research with cancer patients in a medical setting. I found seven assessments that were used more than once in the research and I chose to focus on the top five.

The assessments are listed in the order of the frequency of use in the art therapy research and I then divided it into several sections. The first section was a general overview of the assessment to familiarize the reader with the assessment. The second section is the format of the assessment in order to compare the difference and similarities of the structure of the assessment tools. The third section looks at the assessment's strengths and weakness to highlight that there are aspects of each of these tests that are better or worse than other assessment tools. I examined the art directives that affected the behaviors measured by the assessments. Lastly, I included a section that lists the languages the assessment has been translated into. The reason for this is that I was interested how the quantitative assessment measures were being used in other cultures.

### **Hospital Anxiety and Depression Scale (HADS).**

*Overview.* The Hospital Anxiety and Depression Scale (HADS) was the most frequently used assessment tool of the art therapy studies I reviewed. I found it was used in six of the 23 cancer studies I examined. The HADS is one of the most widely used instruments for screening psychological distress in cancer patients (López, Ferrandis, Vaillo, & Galdòn, 2012). It was

developed by Zigmond and Snaith in 1983 to identify anxiety disorders and depression in patients in a hospital setting (Saboonchi, Wennman-Larsen, Alexanderson, & Peterson, 2013). The HADS extensive use is based on two characteristics. The first is that it has been validated against structured clinical interviews for mental disorders (López, Ferrandis, Vaillo, & Galdòn, 2012). The second characteristic is its features. It is a brief test that is easy and quick to administer, score and interpret (López, Ferrandis, Vaillo, & Galdòn, 2012). Also, it excludes somatic symptoms of anxiety and depression, which may be confused with physical symptoms due to the cancer itself (López, Ferrandis, Vaillo, & Galdòn, 2012) (Saboonchi, Wennman-Larsen, Alexanderson, & Peterson, 2013).

Studies that look at screening tools for psychological distress found a large number of validation studies in which HADS had been used across disease types and stages of cancer as well as across languages and cultures (López, Ferrandis, Vaillo, & Galdòn, 2012).

***Format.*** The HADS is a 14-item questionnaire that detects anxiety and depression symptoms in a medical setting. The scale was divided into two subscales, one for anxiety and one for depression (HADS-A and HADS-D), which each contained seven items (Bjelland, Dahl, Haug, & Neckelmann, 2002). The patient answers each item on a four-point score (0=not at all, 3=extremely) and possible scores could range from 0-21 for depression and 0-21 for anxiety. A score of 0–7 for either subscale could be regarded as being in the normal range, a score of 11 or higher indicating a mood disorder problem, and a score of 8–10 indicating a mild to moderate problem (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007).

***HADS in art therapy research.*** The HADS has been used in a variety of psychological testing, including art therapy research. It has been used to assess the effectiveness of the art therapy directives on this population. The HADS was used in one study from Haifa in 2007. The

researchers wanted to determine if there was an improvement in anxiety, depression, or fatigue during chemotherapy after being administered art therapy directives (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007). The researchers administered the HADS to a group of 60 cancer patients. These patients consisted of both in- and out-patients that were receiving oncology care (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007). The patients were asked to complete the HADS before each session.

During the sessions, the patients worked on a variety of water-based paintings with either open directives or directives asking the patient to think about light and darkness (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007). Changes in the HADS score was used to determine whether the art therapy interventions were successful in reducing feelings of anxiety and depression in patients in the group that participated in the interventions compared to a control group (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007).

The HADS was also used in Germany to measure psychological distress in cancer patients using art therapy in addition to their medical treatments. A study conducted by Kristina Geue et al., (2017) used the HADS to evaluate the effectiveness of art therapy interventions (Gueu, Riekof, Buttstaedt, & Singer, 2017). Data was collected from 53 patients who had finished their initial cancer treatment. These patients participated in a variety of art therapy interventions over a 20-month period. The HADS was administered at three different points over this time period (pre-test, mid-test, post-test) to assess which patients were highly distressed at the beginning of the study and also if there were improvements in the feelings of distress in the middle and end of the study (Gueu, Riekof, Buttstaedt, & Singer, 2017).

In another study, the HADS was used with patients receiving Radiation Treatment in an outpatient setting. Lee et al., (2017) conducted a study where patients had eight art therapy

sessions that consisted of famous art work appreciation in addition to art therapy directives. The patients were given the HADS, as well as several other assessments, at three points during the study (Lee, et al., 2017). The purpose for the HADS was again to assess if there was a reduction in depression and anxiety in patients throughout the course of the study. The assessments were given as a pretest, and mid-test (at four weeks), and a posttest at (eight weeks).

**Strengths.** Studies that look at screening tools for psychological distress found a large number of validation studies in which HADS had been used across disease types and stages of cancer as well as across languages and cultures (López, Ferrandis, Vaillo, & Galdòn, 2012). It is a brief test, quick to administer and easy to score and interpret. One of the reasons the HADS is preferred over some other assessment scales is that it specifically avoids assessing for somatic symptoms of anxiety and depression, because these can be confused with the physical symptoms of the cancer itself (López, Ferrandis, Vaillo, & Galdòn, 2012) (Sabounchi, Wennman-Larsen, Alexanderson, & Peterson, 2013).

**Weaknesses.** In a large review of 417 papers that reported using the HADS in their research in non-English speaking countries, only 45% indicated whether a translation was used and studies validating the translations were cited in 54%. Seventeen reviews were examined that incorporated data from diverse translated versions. Only seven mentioned problems with language and culture, and none of them mentioned the challenging problems in integrating results from different translations (Maters, Sanderman, Kim, & Coyne, 2013).

The HADS does not include all of the diagnostic criteria for depression as stated in the DSM-V. Therefore, additional questions need to be asked about appetite, sleep, self-harm, and suicidal thoughts. A risk assessment for self-harm or suicide should be conducted in appropriate cases (Stern, 2014).

**Translations.** The HADS has been translated into 78 languages for use in both western and non-western countries. In 2011 it was translated for the first time into Amharic, which is the language of Ethiopia (Reda, 2011). Before this, the HADS had been translated into many European and some Asian languages, but very few of the African languages (Reda, 2011). In 2016 it was used for the first time in mainland China (Li, et al., 2016). However, many of the studies into other languages do not address issues of diversity and culture within the assessments.

### **Profile of Mood States (POMS).**

**Overview.** The Profile of Mood States is the quantitative assessment that also come up more frequently. This assessment came up four times in my data analysis. The POMS is a valid and reliable instrument that has been widely used in clinical and psychological research. This is an extensively used assessment that was originally developed to assess mood states and changes in psychiatric populations (Bourgeois, LeUnes, & Meyers, 2010). There are full length and shortened versions of the POMS suitable for different research environments and it is generally recommended for adults over the age of 18, although there are alternate versions suited for an adolescent population. The test takes approximately 5-15 minutes depending on the form.

**Format.** The assessment consists of 65 items and was designed to evaluate individuals within seven different subscales: Anger, Confusion, Depression, Fatigue, Tension, and Vigor, and Friendliness. The scale has been recommended for evaluating affective changes over the course of brief assessment periods. The assessment is a 5-point Likert scale (0= Not at all to 4=Extremely) (Bourgeois, LeUnes, & Meyers, 2010).

The POMS has been condensed and there are now several shorter versions of the scale. One is the POMS-SF (Short Form). This version consists of 37 items that have been divided into



six sub-scales instead of seven. Friendliness was removed from this version. The depression scale of the POMS-SF has yielded a good internal consistency reliability (Kim & Smith, 2017). The POMS-SF Depression subscale consists of eight single word items—Unhappy, Sad, Blue, Hopeless, Discouraged, Miserable, Helpless, and Worthless. Respondents indicate how much they have felt like the word in the last 2 weeks (0=not at all; 1=a little; 2 = moderately; 3 = quite a bit; 4 = extremely). Higher scores suggest more depressive symptoms (Kim & Smith, 2017).

There is another version of the Profile of Mood States that is even shorter, which is used in a wide variety of research domains. This version consists of seven questions and is referred to as the Mini-POMS. The seven questions correspond to the seven original domains of Anger, Confusion, Depression, Fatigue, Tension, and Vigor, and Friendliness to measure mood. There are “right now I feel...” instructions and is also the 5-point Likert scale. This version takes about three minutes to complete (Kim & Smith, 2017).

***Profile of Mood States in art therapy research.*** I found several art therapy studies that used the POMS or mini-POMS to assess for differences in mood. One study was conducted in Japan, where the Profile of Mood States was translated into Japanese. The study investigated the feasibility of art therapy with Japanese patients with cancer of the blood and bones. The researchers wanted to know if there was a difference in mood after the art therapy interventions as measured by the Profile of Mood Scale. The study consisted of seven patients and took place over two sessions. The clients discussed feelings and created art in response to their emotions or understanding of their illness (Ando, Imamura, Kira, & Nagasaka, 2013).

Walsh, Martin, and Schmidt (2004) researched the efficacy of an art therapy intervention with family caregivers of patients with cancer. The intervention took place over a 6-month period within a regional cancer treatment center in South Florida and the participants were

mostly made up of Hispanic and white non-Hispanic caregivers. Seventy-five percent of the caregivers were female. The directive took place while the caregiver was at the center for the patient's chemotherapy or at the patient's bedside. The researcher's wanted to know if the art therapy had any effect on the caregiver's levels of stress, feelings of anxiety, and positive emotions. The mini-POMS was used to give a total score for mood disturbance (Walsh, Martin, & Schmidt, 2004).

Puig et al. (2006) conducted a study that would explore the efficacy of an art therapy intervention to enhance emotional expression, spirituality, and psychological well-being in newly diagnosed breast cancer patients. Thirty-nine women in Stage I or II breast cancer participate in creative arts therapy over a period of four weeks and were administered a pre- and posttest. The directive implemented pencils, pastels, and acrylic painting to explore meaning-making of the breast cancer experience. In this study the POMS was used to assess for psychological well-being (Puig, 2006).

**Strengths.** It is helpful that there are different versions of the scale in different lengths, which may be suitable for different research environments. The depression component of the POMS has yielded a good internal consistent reliability. It is considered simple to administer and easy for the participant to understand. It can also be administered through online, which further contributes to its ease of use.

**Weaknesses.** In depression studies, it is evident that the rates of depression in women are almost double the rates of depression in men. The researchers of this article suggest that there is a possibility that some of this may have to do with the measurement errors. In a study that looked at invariance by gender in the Profile of Mood States- Short Form, Kim and Smith (2017) found that there was a "configural invariance, and partial metric and scalar invariance" (Kim & Smith,

2017, p. 171). These results were found specifically in the depression subscale. There were also specific issues with the word “blue,” which was viewed differently by women and men. They found that results of POMS-Sf should be interpreted with caution, especially when gender is considered important in the study (Kim & Smith, 2017).

**Translation.** Researchers Andrade et al., (2010) tested the POMS research validity when it was translated into Spanish. The test was administered to 364 Spanish-speaking adult athletes. After evaluating the results, the researchers concluded that in order for the POMS to be effective with this population, some of the items should be eliminated from the scale, reducing it from a 65-item scale to a 44-item scale. They also propose getting rid of the mood domain of “confusion” completely because the consistency values between the English and Spanish versions of the POMS was always the lowest. It has been noted that some of the adjectives that appear on the POMS have a cultural character to them and are specific to the English language (Andrade, et al., 2010).

### **Edmonton Symptom Assessment Scale (ESAS).**

**Overview.** Another effective assessment tool in understanding cancer patient’s symptomatology is the Edmonton Symptom Assessment Scale (ESAS). A major difference between the HADS and the ESAS is the assessment of physical pain, which the HADS specifically avoids. This study came up four times in my data review.

Over the past 25 years, the ESAS has become one of the most commonly used patient-reported scales and has been used in palliative care, oncology, and more. It has been psychometrically validated, translated into many languages, and is easily available. It enables fast and practical assessment of many symptoms simultaneously and has been used in medical

settings worldwide. Hui & Bruera (2017) state that the ESAS has changed the research paradigm and has contributed to major insights into symptom prevalence, trajectory, clusters, and interventions (Hui & Bruera, 2017).

**Format.** ESAS was initially developed by Bruera and colleagues as a clinical tool to document the symptoms in patients with advanced cancer admitted to a palliative care unit (Hui & Bruera, 2017). It was published in 1991 and has been widely used to assist in the assessment of common symptoms of cancer patients. “The ESAS was originally developed for inpatient palliative care settings, but since then it has been used and validated in various other cancer care settings and in non-cancer populations” (Boonyathee, Nagaviroj, & Anthaisintawee, 2018, p. 737).

The ESAS is a self-related tool that includes nine common symptoms of pain. These include pain, tiredness, drowsiness, nausea, appetite, depression, anxiety, shortness of breath, and well-being. The patient also has the option of adding a 10th patient-specific symptom (Gretarsdottir, Fridriksdottir, & Gunnarsdottir, 2016). The severity of each symptom is rated on a 0-10 numeric scale, where 0 means the symptom is absent, and 10 is the worst severity. “Validation studies of ESAS have reported reliability estimates, content validity evidence, concurrent validity evidence, predictive validity evidence, and sensitivity and/or specificity” (Gretarsdottir, Fridriksdottir, & Gunnarsdottir, 2016, p. 137).

**Revisions.** In 2011, a revised version of the ESAS was published. The ESAS-r consists of the same nine symptoms, but the order of the symptoms had been changed and some clarifications of the symptoms were added. Related symptoms would now follow each other, and explanations have been added to clarify some of the symptoms, i.e. tiredness is a lack of energy (Gretarsdottir, Fridriksdottir, & Gunnarsdottir, 2016). According to research that compared both

the original ESAS and the revised version, the ESAS-r was significantly easier for the patients to understand (Watanabe, Nekolaichuk, & Beaumont, 2012).

*ESAS in art therapy research.* The ESAS has been used as an assessment in a variety of art therapy studies. The reason this test was selected was due to its reliability in assessing pain and depression in many types of studies, including cancer research (Boonyathee, Nagaviroj, & Anthaisintawee, 2018). It was used in conjunction with the HADS in the previously mentioned study by Jeongshim Lee et al. (2017). In this study, cancer patients were undergoing radiation treatment and at the same time participated in art therapy directives that were focused on famous art appreciation combined with art making. The ESAS was used in this study to assess the severity and intensity of distress related to the cancer symptoms (Lee, et al., 2017).

The ESAS was also used in a study to assess physical and psychological distress in an inpatient palliative care unit in which the patients were suffering from advanced stages of cancer. The patients used paint to express how they were feeling. These assessment results were based on a single session and the patients were given the test one hour before and one hour after the directive (Rhondali, Lasserre, & Fibert, 2013).

In another study, patients were recruited from an inpatient oncology unit. The ESAS was used to assess the physical and emotional symptoms associated with the cancer over the four-month period that the research was conducted. The patients were administered the ESAS by a research assistant at the beginning and end of each session (Nainis, et al., 2006). A trained art therapist met with the client before the session to discuss goals for the therapy. Then the art therapist provided a variety of materials and encouraged the patient to explore how they wanted to accomplish that goal through the art (Nainis, et al., 2006).

**Strengths.** The ESAS has been translated into many languages, is easy to use, and is easily available. It has been regarded as able to provide context in which the patient's symptoms can begin to be understood. It can easily be understood by the patient due to its straightforward nature, and the revised edition explains some concepts that were previously ambiguous, such as fatigue. It is easy to administer because it is self-reported, and it also touches on key patient symptoms (Peraira, et al., 2016).

Peraira et al., (2016) conducted the largest study of the ESAS in a medical setting up until the time he published. He found it to be an effective way for physicians and nurses to assess patients' symptoms. He found that 67% of physicians in the study looked at their patient's ESAS scores "always" or "often," and that 85% of nurses found the scores helpful. More than half of all professionals "strongly agreed" or "agreed" that the ESAS improves the efficiency of meeting with the patient (54%) (Peraira, et al., 2016).

**Weaknesses.** One of the issues with the ESAS is that it still needs work on standardizing the administration of the test (Hui & Bruera, 2017). Another concern is that it is not specific enough for all types of cancer. For example, some respondents have reported that the ESAS does not include some symptoms specific to certain types of cancer or may include irrelevant symptoms (Peraira, et al., 2016). There have also been concerns that the administration of the ESAS would take away time in a busy clinic. Also, there has been some criticism in the lack of standardization of the ESAS. Researchers believe that it would be more effective if there was a way to standardize the test (Hui & Bruera, 2017). Some medical centers do not consider the ESAS a complete assessment tool and should be used as one part of a complete clinical assessment.

**Translation.** ESAS has been translated professionally by Mapi Research Trust into over 20 languages and is freely available (Questionnaires Distributed By The Mapi Research Trust, 2019). Multiple research groups have further validated ESAS both linguistically and psychometrically in Chinese, Flemish, French, German, Icelandic, Italian, Japanese, Korean, Portuguese, Spanish, Thai, and Turkish. An Arabic variation of ESAS is also available (Hui & Bruera, 2017).

### **Symptoms Checklist SCL-90.**

**Overview.** The checklist is best suited to those over the age of 13 and have at least a 6-grade reading level. It should take about 12-15 minutes to complete (Eich, et al., 2012). The SCL-90-R is considered sufficiently sensitive to discern changes in stress-related symptoms and has been used specifically with cancer patients (Monti, et al., 2012).

**Format.** The SCL-90 is a self-report symptom checklist that was developed by Leonard R. Derogatis. It asks respondents to rate how bothered they were by an item during the past seven days on a list of 90 symptoms. The SCL-90 comprises nine scales (Depression, Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism) (Merport & Recklitis, 2012).

The SCL-90-R is a self-report inventory of 90 items that characterize various psychiatric conditions. The degree to which each symptom has been present in the past 7 days is rated on a Likert scale from 0 to 4, (0 = not at all, 4 = extremely). The scales are formed by summing up the ratings given to each item belonging to the respective scale. The higher the score, the more severe the symptoms (Merport & Recklitis, 2012).

*The SCL-90 in art therapy research.* In another study, Monti et al., (2006) conducted a randomized and controlled trial of mindfulness-based art therapy (MBAT) with women with cancer. 111 Adult women with a cancer diagnosis participated in a study that gathered data on the efficacy of MBAT on symptoms of distress and health related quality of life. The participants were split into intervention groups and control groups. Both received medical care, but only the intervention group received mindfulness training as well as group art therapy activities. The interventions took place over eight consecutive weekly meetings and each meeting was for 2.5 hours (Monti, et al., 2006).

One of the assessment tools used in this study was the SCL-90-R. The researchers examined the results of the anxiety and depression subscales of the intervention group in order to see if there were greater reductions of symptoms of distress as compared with the control group. The SCL-90-R assessed psychological distress and stress-related somatic complaints as pre- and posttests at weeks 0, 8, and 16 (Monti, et al., 2006).

Monti et al., (2012) continued their research with MBAT. They studied if there was a change in patient's cerebral blood flow, and if that change correlates with changes in levels of stress and anxiety in women with breast cancer. The researchers used an fMRI technique to evaluate the changes in cerebral blood flow of participants of the study who participated in mindfulness-based art directives. Eighteen women with breast cancer participated in the study and engaged in art directives and mindfulness practices. The SCL-90-R was used as a pre- and post-test to evaluate the response to the program. The researchers looked primarily at the anxiety subscale (Monti, et al., 2012).

*Strengths.* The SCL-90 has several strengths. The first is that it takes a short time to complete. It is also easy to understand, and the participants only need a reading level of 8<sup>th</sup> grade



and above. It is a self-report instrument and is therefore easy to administer. A self-report gives a person a direct perspective of their experience. It has a high internal consistency and has a high test-retest reliability within a week. The SCL-90 also has a history of validated use with cancer patients.

**Weaknesses.** The test has been seen to have potential validity problems and the norms for the test leave out diversity for males and females. Although studies by Derogatis have found support for the 9 dimensions that correspond to the subscales of the SCL-90, there is growing evidence that there are problems replicated the subscales (Bonicatto, Dew, Soria, & Seghezzo, 1997).

**Translation.** The test is available in English, French, Spanish (Bonicatto, Dew, Soria, & Seghezzo, 1997), German (Prinz), Russian, Dutch (Hafkensgheid, Maasen, & Veeniga, 2007) and 20 other languages (Bonicatto, Dew, Soria, & Seghezzo, 1997).

### **The Functional Assessment of Chronic Illness Therapy Spiritual Well-being.**

**Overview.** Research has shown that spiritual well-being as an essential component of health-related quality of life (HRQOL). The Functional Assessment of Chronic Illness Therapy Spiritual Well-being (FACIT-Sp) was developed for this purpose (Radl, Vita, Gerber, Gracely, & Bradt, 2018). It is related to but distinct from more traditional health-related quality of life (HRQOL) areas: physical, mental, and social well-being. This model may be particularly useful when applied to medical settings or for patients suffering from serious illnesses. It has been validated to test for a patients' spiritual well-being, or the extent to which a patient's spirituality can help them make sense of their lives. It can be used to measure how a patient feels whole, hopeful, and peaceful even in the midst of a serious illness. It can help both clinicians and

researchers with clinical conceptualization and subsequent treatment planning (Bredle, Salsman, Debb, Arnold, & Cella, 2011). This assessment tool came up three times in my research.

The FACIT-Sp was developed in the 1990s in order to address the need for a brief, broad measure of spiritual well-being, but with the content not limited to any one religious or spiritual tradition. It was concluded that the FACIT-Sp is a brief, reliable and valid measurement of spiritual well-being that may be particularly useful in assessing the role of both religious and non-religious spiritual well-being in HRQOL (Bredle, Salsman, Debb, Arnold, & Cella, 2011).

*Format.* Five quality of life domains are included in this scale. They include physical well-being, social/family well-being, emotional well-being, functional well-being, and spiritual well-being. Spiritual well-being was aimed at assessing a sense of meaning and peace in illness (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

The test consists of 12 items and three subscales of spiritual well-being, which help facilitate an in-depth exploration of the components that make up spiritual well-being, such as peace, meaning, and faith. It has also been adapted for use with the general population with a non-illness version, and an expanded version also exists (FACIT-Sp-Ex), which includes an additional 11 items added to the original 12. These include forgiveness, connectedness, and appreciation (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

The FACIT-Sp questionnaire was designed for self-administration and uses a 5-point Likert-type scale to measure patient-reported HRQOL (0 = Not at all; 4 = Very much). The recall period for each question is seven days. Questions were written at the fourth grade-reading level. It was designed to be self-administered and simple. There is an option to complete the questionnaire by an interview, which enables those to take it that would not be able to complete

the questionnaire on their own for reasons such as fatigue, depression, or poor eyesight. A review of the items is recommended when the patient has completed the questionnaire to ensure that all questions have been answered to the best of the respondent's capability (Bredle, Salsman, Debb, Arnold, & Cella, 2011).

*FACIT-Sp in art therapy research.* I found the FACIT-Sp to be used as an assessment to measure spiritual well-being in several art therapy studies. One study looked at the effects of a Self-Book art therapy directive that took place over 6 sessions with 60 women with cancer in 2018. The researchers evaluate the efficacy of the art therapy for emotional distress and psychological well-being. The FACIT-Sp was specifically used to assess the patient's well-being, with an emphasis on spiritual well-being, which the researchers referred to as a sense of meaning and peace within the illness. One of the measures they used was the FACIT-Sp. The measurements were gathered at baseline, week 3, week 6, and one to two months after the conclusion of the study. The women were divided into those who took part in the directive, and those that were given regular treatment without the art therapy directive. The study was conducted in Philadelphia, Pennsylvania (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

Another study was conducted in 2013 in Japan, where the FACIT-Sp was translated into Japanese. The study investigated the feasibility of art therapy with Japanese patients with cancer of the blood and bones. The researchers wanted to know if after the completion of the art interventions, there was a difference in mood (measured by the Profile of Mood Scale) and spiritual well-being, which included the meaning of life and religious aspects, as measured by the FACIT-Sp. The study consisted of seven patients and took place over two sessions. The measurements were gathered before the first session, and after the second session (Ando, Imamura, Kira, & Nagasaka, 2013).

Meghani, Peterson, Kaiser, and Rao (2018) conducted a study on the effects of an eight-week long mindfulness-based art therapy intervention (MBAT). The participants used a combination of art media and photography to facilitate intrapersonal relationships and non-verbal creative expression. This was also combined with meditation. The researchers used the FACIT-Sp to assess for changes in spiritual well-being. Measurements were taken in the beginning to establish a baseline, at week 4, and week 8. The research took place in Philadelphia (Meghani, Peterson, Kaiser, & Rao, 2018).

**Strengths.** The FACIT-Sp is easy to use and easy to administer. It helps assess factors such as hope and overall well-being, which can be influential in a patient's' recovery from an illness. There is an option to complete the questionnaire by an interview, which enables those to take it that would not be able to complete the questionnaire on their own for reasons such as fatigue, depression, or poor eyesight (Meghani, Peterson, Kaiser, & Rao, 2018).

**Weaknesses.** In the study conducted by Bredle et al., (2011) to validate the FACIT-Sp, found that it was difficult to measure the results of the FACIT-Sp over time (Bredle, Salsman, Debb, Arnold, & Cella, 2011). Also, many of the cancer patients included patients with different forms of cancer and who were in different stages of their treatment or recovery. Therefore, the results were not consistent. In addition, some participants found the FACIT-Sp was limited due to the lengthy questions that seemed to cause noticeable fatigue to many participants (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

Another issue was that only four studies looked at racially or ethnically diverse samples and only one study included a healthy comparison group. Research has demonstrated racial and ethnic differences on various religious and spiritual factors and these differences may be

associated with important differences in health outcomes (Bredle, Salsman, Debb, Arnold, & Cella, 2011).

**Translations.** To date, the English version of the FACIT-Sp has also been translated and linguistically validated in Arabic, Chinese (Simplified and Traditional), Danish, Dutch, Farsi, French, German, Italian, Japanese, Korean, Norwegian, Portuguese, Spanish, and Swedish. The FACIT-Sp has a website that one can access for an up to date list of language availability and scoring protocols (Facit Questionnaires, 2010).

In one study, a cross-sectional design was used with a sample of 309 patients in Uruguay. Psychological well-being was measured using the POMS-SF, and HRQOL and spirituality-related outcomes were evaluated using the FACIT-Sp. Results suggested that spiritual well-being was an important determinant of participants' assessments of their overall HRQOL. Interestingly, of the patients surveyed, about 42% reported no current religious affiliation, which is typical to Uruguay but unlike the majority of South American nations. The authors found it noteworthy that spiritual well-being remained relevant despite this fact. They concluded that spiritual characteristics may be considered permanently embedded in a person's coping mechanisms and inferred that this could lead to better HRQOL (Bredle, Salsman, Debb, Arnold, & Cella, 2011).

The Arabic translation of the FACIT-Sp was found to have good psychometric properties among cancer patients in treatment in Amman, Jordan. However, the researchers felt that the validation study needed to be replicated among other populations in different Arabic-speaking regions of the world (Lazenby, Khatib, Al-Khair, & Neamat, 2013).

### **Analysis of Data**

The first step of this qualitative data analysis was an examination of my original table of quantitative assessment tools in art therapy research (Table 1, p. 9) which was done during my review of the literature. This was in order to determine which assessments were being used primarily in the cancer research. I then created a second table (Table 2, p. 93) in order to determine which quantitative assessment tools were the most frequently utilized with regards to art therapy and cancer research, finding five quantitative assessment tools that I would examine more closely. These five assessment tools came up in 13 of the research articles on cancer research. I created a separate document for each of these five quantitative assessment tools and carefully described in more detail what each assessment tool entailed. Based on these descriptions I then coded the data through the lens of my original research questions in order to uncover emergent themes within each question. The following analysis of data is organized by research question.

#### **Question #1: What is the format of quantitative assessment tools that are being used in art therapy research?**

The first research question examined the structure of each of the quantitative assessment tools. All of the assessments were in the form of a questionnaire that the patient filled out themselves. The longest questionnaire was the SCL-90, which is comprised of 90 items, and is broken down into 9 subscales. The POMS in its original form had 65 items and 7 subscales. The HADS is a 14-item questionnaire with 2 subscales of anxiety and depression. The FACIT-Sp had 12 items and 5 subscales. The shortest questionnaire was the ESAS, which only had 10 questions on it.

Four of the assessments were in the format of a Likert scale. Three of the questionnaires (POMS, SCL-90, FACIT-Sp) were a five-point Likert scale, which patients rated their symptoms from not at all=0; to extremely/severe=4. The HADS is a four-point Likert scale (0-3). The one assessment that was the most different was the ESAS. This is an 11-point scale (0-10) with 0= not at all, and 10 the most severe.

For four of the assessments, the higher the score, the more severe the issues. This is different for the FACIT-Sp. Three of the subscales follow the format of the higher the score, the more severe the symptoms, but in two of the subscales, a higher score indicates a higher quality of life.

### **Question #2: How are quantitative assessment tools being used in art therapy research focused on patients with cancer?**

The second research question examined how each assessment was used in the art therapy research. Each art therapy study that I examined used the assessment tool to establish a baseline measurement with the patients, and again as a posttest to evaluate any changes the participant may have experienced during the art therapy intervention. Some of the research studies also implemented mid-test assessments, and some gave the test as a follow-up assessment approximately 2 weeks- 6 months following the conclusion of the directive.

Most of the assessments and directives were either given on an individual basis, or as a small group of between 5-8 people. Six of the studies were administered in a group format, while seven of the studies were given 1:1, and the rest of the studies did not reveal that information. This format of administration was not test specific. Each assessment was given both individually and as a group.

Based on my analysis, I divided the research articles into the different symptoms that the quantitative assessments were measuring in the cancer research to further understand how the quantitative tools were being used in the cancer research:

**Psychological well-being/ distress.** Many of the research studies used different assessments to measure psychological well-being or distress with the participants. Gueu et al., (2017) used the HADS with other questionnaires to evaluate the effectiveness of art therapy on psychological distress. They used the HADS to establish which patients were distressed at the beginning of the intervention and also if there were improvements in feelings of distress in the middle and end of the study (Gueu, 2017). Puig et al., (2006) used the POMS to explore the efficacy of a creative arts therapy intervention on psychological well-being with women who had been newly diagnosed with Stage I or II breast cancer (Puig, 2006).

Lee et al., (2017) used the ESAS to assess distress related to cancer symptoms with patients in radiotherapy. Rhondali used the ESAS as well to assess for psychological distress with in-patient palliative care patients with advanced stages of cancer (Lee, et al., 2017). Monti et al. (2006) used the SCL-90 to assess for psychological distress in women with breast cancer diagnosis (Monti, et al., 2006). Radl et al., (2018) used the FACIT-Sp assessment tool to evaluate the effects psychological well-being in female oncology patients, with an emphasis on spiritual well-being. This was aimed at assessing a sense of meaning and peace in the illness (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

**Reduction in Anxiety/ Distress.** Several of the quantitative assessment tools were used to measure possible reduction in symptoms of anxiety and/ or depression to the patients with cancer. The HADS was used for this purpose in two of the studies (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007) (Lee, et al., 2017). Monti et al (2006). used the anxiety subscale of the



SCL-90 to measure the levels of anxiety in women with breast cancer (Monti, et al., 2006). Walsh et al., (2004) used the mini-POMS to measure anxiety levels in caregivers of family members with cancer (Walsh, Martin, & Schmidt, 2004).

**Physical symptoms.** Several studies used the quantitative assessments to assess for changes in the physical symptoms of the patients with cancer. The ESAS was used to measure physical symptoms in each study it was used for. This is one of the main functions of the ESAS. Lee et al., (2017) used it to measure the physical symptoms in cancer patients undergoing radiotherapy treatment (Lee, et al., 2017). Rhondali et al., (2013) measured the physical symptoms of cancer patients with advanced stages of cancer in a palliative care unit (Rhondali, Lasserre, & Fibert, 2013). Nainis et al., (2006) used the ESAS to assess physical symptoms with cancer patients in an inpatient oncology unit (Nainis, et al., 2006). Monti et al. (2006) used the SCL-90 to assess for changes in stress-related somatic symptoms with women with cancer (Monti, et al., 2006).

**Mood states.** The POMS was used to assess for changes in mood states with cancer patients. Ando used it to measure mood states in Japanese cancer patients with cancer of the blood or bone marrow. Walsh et al., (2004) used the mini-POMS to assess changes in mood in caregivers of patients with cancer (Walsh, Martin, & Schmidt, 2004).

### **Question #3: What art directives were measured by the quantitative assessment tools?**

According to the published literature, these are the art directives that were measured by the assessment tools in the research studies. Some of the art interventions were given by a trained art therapist, sometimes a by psychologist, or occasionally a nurse. In some of the studies, the directives were developed by an art therapist, but administered by someone other than the art

therapist (Ando, Imamura, Kira, & Nagasaka, 2013) (Walsh, Martin, & Schmidt, 2004). In most of the research studies, there were several general goals that the researchers were attempting to reach through the art. Most were hoping to help the patients make meaning through the art. This was accomplished through the art process, the psychological or emotional exploration throughout the study, or through a focus on coping skills (Grulke, Bailer, Stähle, & Kächele, 2006).

**Open directives.** Many of the researchers used open directives in their exploratory studies. Bar-Sela et al., (2007) had open directives for some of the sessions they ran for cancer patients in chemotherapy treatment. They used the HADS to assess whether the art therapy interventions were successful in reducing anxiety and depression for the cancer patients during chemotherapy treatment (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007). Gueu et al., (2017) also used an open directive for a segment of the session. Their study was broken into three phases and Phase I and II were both in the format of open directives. They also used the HADS to examine differences in distress levels after the art intervention (Gueu, 2017).

Some of the directives encouraged the participant to think about topics they would like to explore through the art sometime before the session. In the study by Ando et al., (2013) with Japanese cancer patients, the researchers spoke with the patients about their emotions and understanding of the disease before they made an art response. The researchers administered the FACIT-Sp to assess the patient's spiritual well-being before and after the art response (Ando, Imamura, Kira, & Nagasaka, 2013). Rhondali et al., (2013) met with patients the day before the art directive to ask the patients what directive they wanted to explore and used the ESAS to assess physical and psychological distress (Rhondali, Lasserre, & Fibert, 2013). Likewise, Nainis et al., (2006) met with the patients before the start of the session for the patient to discuss their goals for therapy and therefore the art response may conform to these goals. They also used the

ESAS to assess for changes in emotional and physical symptoms before and after each session (Nainis, et al., 2006).

Puig (2006) offered what was described as a “semi-structured” intervention, but the specifics of the intervention were not stated (Puig, 2006). The researchers then administered the POMS to see if the art therapy directive had an effect on the psychological well-being of the patients (Puig, 2006). Monti et al., (2006) also offered the participants open directives, however these were non-verbal activities in order to encourage “directed and spontaneous art creation.” The researchers then gave the SCL-90 to assess for stress-related somatic symptoms and distress (Monti, et al., 2006, p. 370).

**Specific art therapy topics and directives.** Some of the research invited the research participants to respond to specific topics. Bar-Sela et al., (2007) asked the patients with cancer to focus on the ideas of light and dark (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007). Monti et al., (2012) asked patients to focus on specific imagery in each session. This may include a mindful exploration of the materials, stressful or pleasant pictures, and healing. The researchers used the ESAS to assess for the patient’s response to anxiety (Monti, et al., 2012). Radl et al., (2018) also asked the patients with cancer to think about different topics in their artmaking. The participants created a book that had certain topics corresponding to specific sections, such as safety, trust, support, etc. The participants were given the FACIT-Sp to assess their psychological well-being, with an emphasis on the patient’s sense of meaning and peace in the illness (Radl, Vita, Gerber, Gracely, & Bradt, 2018). Gueu et al., (2017) also guided the patients to construct a book. This one was made in three phases that concluded with the patients telling their own stories about themselves and the disease. The HADS was used to measure the patient’s distress levels (Gueu, 2017).

**Media.** Many of the research studies used a variety of media that was available to the participants. This may include paint, colored pencil, clay, and pastels (Ando, Imamura, Kira, & Nagasaka, 2013) (Gueu, 2017) (Lee, et al., 2017) (Meghani, Peterson, Kaiser, & Rao, 2018) (Nainis, et al., 2006) (Puig, 2006). Several of the studies specifically mentioned incorporating collage. Ando's (2013) study incorporated collage as one of many media offered. The participants from the study with Meghani et al., (2018) also used collage as one of many media offered, but in a specific way. The patients used cameras and took photographs of the landscape around the facility. They then incorporated those photographs into collage form in later interventions (Meghani, Peterson, Kaiser, & Rao, 2018). The patients in the study of Radl et al., (2018) used collage in the creation of a self-reflective visual book that could document and express the patient's feelings and experiences of their disease (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

Bar-Sela et al., (2007) were specific in the media choices in their research. They offered only water-based paint. They reasoned that this medium was geared to patients without art experience and could express themselves through color and movement (Bar-Sela, Atid, Danos, Gabay, & Epstein, 2007). Rhondali et al., (2013) also specifically offered paint to express feelings through color and drawing (Rhondali, Lasserre, & Fibert, 2013). Walsh et al., (2004) used an "Art Kart," in which the participants picked a specific directive from a bulletin board and then were given certain media to complete that directive (Walsh, Martin, & Schmidt, 2004).

**Mindfulness-based art therapy.** Several of the art therapy studies I examined looked at incorporated mindfulness-based activities with the art therapy. Monti et al. (2006) and Monti (2012) both offered mindfulness skills training to the participants of the study, such as body scans, yoga, and meditation (Monti, et al., 2006) (Monti, et al., 2012). They also offered mindful

exploration of the art materials, as did Meghani et al. (2018), which also utilized mindful walking as part of the directives (Meghani, Peterson, Kaiser, & Rao, 2018). Puig (2006) began the sessions with a guided meditation (Puig, 2006).

**Question #4: How have quantitative assessment tools that are used in art therapy research with patients with cancer used with different populations?**

The fourth question examines how the testing tools are used with different populations. One way I explored this was to examine the different languages that each assessment had been translated into.

**Translations.** The HADS has been used across many languages and cultures (López, Ferrandis, Vaillo, & Galdòn, 2012). It has been translated into at least 78 languages. Many of these were in European and far eastern languages, and more recently into African languages. According to Mapi Research Trust, who are publishers of the HADS, there is a list of translations, but they state, “that the listed translations may not have undergone a full linguistic validation process and may require further work for suitable study” (Bjelland, Dahl, Haug, & Neckelmann, 2002, p. 75) (Questionnaires Distributed By The Mapi Research Trust, 2019).

There was less information on the POMS translations. It has been translated into Chinese and is suitable for those that speak Mandarin and Taiwanese. It has also been translated into Japanese and Spanish (Andrade, et al., 2010) (Bourgeois, LeUnes, & Meyers, 2010).

According to Mapi Research Trust, there are 55 translations of the ESAS. According to HUI, multiple research groups have further validated ESAS both linguistically and psychometrically in Chinese, Flemish, French, German, Icelandic, Italian, Japanese, Korean,

Portuguese, Spanish, Thai, and Turkish (Boonyathee, Nagaviroj, & Anthaisintawee, 2018). An Arabic variation of ESAS is also available (Hui & Bruera, 2017).

The SCL-90 is available in English, French, Spanish (Bonicatto, Dew, Soria, & Seghezze, 1997), German, Russian, Dutch and 20 other languages (Hafkensgheid, Maasen, & Veeninga, 2007).

The English version of the FACIT-Sp has also been translated and linguistically validated in Arabic, Chinese (Simplified and Traditional), Danish, Dutch, Farsi, French, German, Italian, Japanese, Korean, Norwegian, Portuguese, Spanish, and Swedish. The FACIT-Sp has a website that one can access for an up to date list of language availability and scoring protocols (Facit Questionnaires, 2010). However, to gain access to the full list of translated versions of the different versions of this assessment, one must register and pay a fee.

Some of the translations have been validated with one segment of the population, but further research needs to be conducted if it would have validity with other segments of the vast Arabic population. This was the recommendation of the researcher who validated the Arabic version of the FACIT-Sp. Lazenby et al., (2013) felt that the validation study needed to be replicated among other populations in different Arabic-speaking regions of the world (Lazenby, Khatib, Al-Khair, & Neamat, 2013).

**Demographics.** The next way I explored this was to see if the different art therapy studies with cancer patients mentioned the demographics of the research participants. In the majority of the studies, the participants were women who were white and older. Some of the studies did, while others omitted this from their data. Of the 13 research articles that used the qualitative assessment tools that appeared the most frequently in my research, all them assessed exclusively women or the majority of women. The ratios of with the studies involving both sexes

ranged from 58% female (Nainis, et al., 2006) to 95% female (Lee, et al., 2017) (Meghani, Peterson, Kaiser, & Rao, 2018). Five of the research studies' participants were exclusively female. Two of the studies were working with breast cancer patients (Puig, 2006) (Monti, et al., 2012), but the other three were exploring a wider range of cancers, such as neurological and pancreatic cancer. (Rhondali, Lasserre, & Fibert, 2013) (Monti, et al., 2006) (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

Seven of the 13 studies listed the race of the participants of the study as opposed to all 13 that list gender. Of the seven studies, four of them had a majority of white participants (Puig, 2006) (Nainis, et al., 2006) (Monti, et al., 2012) (Meghani, Peterson, Kaiser, & Rao, 2018). Ando et al. (2013) worked with exclusively Japanese patients, while Walsh et al., (2004) had a marginally smaller number of Latino participants over white participants (Ando, Imamura, Kira, & Nagasaka, 2013) (Walsh, Martin, & Schmidt, 2004). In the study conducted by Radl et al., (2018), the participants were 80% Black, 10% White, and 10% other (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

## **Findings**

After analyzing the data, several overarching themes emerged; format of the quantitative assessment tools, frequency of self-report measures, accessibility, and mindfulness. The first theme, format of qualitative assessments, explores how the tests are constructed and how this provides benefit to both the administrator of the test and the participant. The second theme, frequency of self-report measures, uncovers information about how the quantitative format is chosen due to the ease of administration, cost effectiveness, and quantifiable results. The theme of accessibility includes the accessibility of the assessment tools to the participants of the studies,

as well as the ability to access complementary therapy, such as art therapy, in cancer treatment. The theme of mindfulness was evident in several of the research articles as a way to help participants be more fully present with their feelings and experiences within the context of the art directives.

**Format of qualitative assessments.** The following section explores the format of the assessment tools and how their design can be beneficial for administration and scoring.

However, there can be some issues associated with the format, as well.

*Self-Report questionnaire.* All of the quantitative assessment tools in the research were self-report questionnaires, or personal inventory. This is a survey filled out by the client that asks a series of questions about thoughts, interests, feelings, and behaviors that is aimed at developing a general profile about a person's personality and lifestyle. This type of inventory can be used to give a counselor or therapist a sort of snapshot of who the client is inside; how they live, what's important to them, how they cope with life, etc. (Personal Inventory, 2018).

There are many benefits to using this format and they have been recognized as helpful in a busy medical setting. According to the literature, they are cost effective and easier to administer than other tests that may need the involvement of a psychiatrist or instruments that must be administered by a clinician (Wang & Gorenstein, 2013). They also do not require additional training to score it, as well (Debois, 2016).

Another benefit is that there are a wide variety of self-reporting qualitative assessments. Therefore, the researchers can research and decide to utilize whichever assessment they feel will explore the area of interest most efficiently (Debois, 2016). In addition, these qualitative assessments can also be administered quickly, which can be important in how health care



systems are currently functioning (Pietrowski, 2018). Often medical offices are trying to see as many patients as possible in a short period of time, and assessments that can be administered easily and completed quickly fit with this environment.

It is important to note that there are some disadvantages to the self-reporting method, as well. It can be considered impersonal as a questionnaire cannot fully capture emotional responses or the feelings of the respondents and does not incorporate these aspects of the person into the findings. There is no way to include facial expressions or body language in the results and this may cause the participants to feel distant about the experiences they are being questioned about (Garcia & Gustavson, 1997). However, this quality can be seen as a benefit, as well. The lack of personalization can be seen as an advantage in creating a homogenous language in understanding the patient's distress.

Another problem with self-reporting is that participants can be dishonest in their answers. This can happen for a variety of reasons, including a social desirability bias and attempting to protect their privacy. It is also possible that a person may not give accurate information but think that they are. In addition, people have different perceptions of pain, which can be influenced by personal, social, and cultural experiences and can affect the answers the participants can give. There may be cultural or personal stigmas (i.e. depression) or participants may want to present themselves in a positive light, sometimes to "please" the researcher (Garcia & Gustavson, 1997).

A statement made by Anna Puig (2006) reinforces the idea that participants may alter the truth of their results. "Since all instruments used in this specific study were self-report, the women may have made unconscious or conscious efforts to appear doing and feeling better than

they actually were at pre- and post-session testing for all who received the treatment and/or at posttest after 4 weeks of treatment or wait (delayed treatment) time” (Puig, 2006, p. 226).

*Likert Scale.* An advantage of using quantitative assessment tools is they can dictate a standardized language in the findings. One way that they do this is through the use of a Likert Scale. A Likert Scale is defined as a fixed choice rating scale and respondents are only given a certain number of options to respond and cannot respond in any manner they choose (Likert Scale, 2018).

The advantages of the Likert Scale are that they are the most universal method for data collection, are easily understood, and easily quantifiable. It allows them to respond in a degree of agreement or disagreement, which makes question answering easier on the participant. In the Likert Scales with an odd number of choices, the responses presented accommodate neutral or undecided feelings of participants. These responses are also very easy to code when accumulating the data since the participant’s response is represented by a number. “Likert surveys are also quick, efficient and inexpensive methods for data collection. They have high versatility and can be sent out through mail, over the internet, or given in person.”

(psych450.wordpress)

However, the disadvantage of the Likert Scale is that it only gives 4-7 options of choice. Therefore, it has been said that it fails to measure the true feelings of the respondents. Also, it is probable that people's' answers will be influenced by previous questions. Frequently, people avoid choosing the “extremes” options on either side of the scale, because of the negative implications involved with “extremists,” even if an extreme choice would be the most accurate (Likert Scale, 2018).

**Frequency of quantitative assessments.** The frequency of administration was determined by when the assessments were administered and how often throughout the course of the study.

*Pre-test/ Post-test.* All of the research articles I explored followed the format of administering the quantitative assessment as a pre-test to establish a baseline, and as a post-test to measure any symptomatic changes that the patient may have experienced. In my initial examination of the research, I came across some articles in which the researchers only administer a post-test. This seems limited because it is difficult to quantify change if only one point is measured. If change is to be measured, one needs to establish the place that the client starts from. Several studies also administered mid-tests, in order to measure the gradual process of the potential change (Lee, et al., 2017) (Meghani, Peterson, Kaiser, & Rao, 2018) (Radl, Vita, Gerber, Gracely, & Bradt, 2018). In addition, some of the studies provided even more information by administering the tests several weeks or months after the tests (Monti, et al., 2006) (Geue, Richter, Buttstädt, Brähler, & Singer, 2013). This was to understand if any of the changes could last beyond the duration of the art therapy directives.

One issue with this design was brought up in the research done by Puig (2006) with the POMS. The researchers felt that the initial exposure to the pre-test may have influenced the results. Puig (2006) stated that “a possible interaction between the pretest and the treatment which may make the results generalizable only to other pretested groups” (Puig, 2006, p. 226). Despite these concerns, the establishment of a baseline and a post-test seem to be the most effective way to measure the effects of the art therapy directives on the patients with cancer.

**Mindfulness and art therapy.** Mindfulness was a theme that came up in several journal articles that I examined. Some of the researchers had the goal to specifically focus on the combination of mindfulness practices and art therapy (Monti, et al., 2006) (Monti, et al., 2012) (Meghani, Peterson, Kaiser, & Rao, 2018), while another study incorporated aspects of mindfulness, such as meditation into the art therapy research (Puig, 2006).

As stated above, mindfulness is “a mental state achieved by focusing one's awareness on the present moment, while calmly acknowledging and accepting one's feelings, thoughts, and bodily sensations, used as a therapeutic technique” (Mindfulness, 2018). Mindfulness has been shown to be effective in reducing stress and anxiety for those that suffer with cancer and therefore seems to be useful in symptomatic reduction, especially with this population for research with this population.

According to Meghani et al., (2018), mindfulness-based art therapy (MBAT) intervention is an approach that combines the core elements of mindfulness-based stress reduction (MBSR) with art therapy approaches. This combined intervention is “designed to reduce over-identification or predominantly negative association with illness by providing experiential learning based on teaching attention (mindfulness skills) and hands-on playfulness (art therapy)” (Meghani, Peterson, Kaiser, & Rao, 2018, p. 1197). Although it was in only several of the art therapy and cancer research articles I examined, it seems like more research in this area would be helpful for patients with cancer.

**Accessibility.** All of the quantitative assessments that I examined have been translated into multiple languages, which makes them more accessible to non-English speakers and other cultures globally. Some of the research articles take into account cultural considerations and variability and address this in the research. However, in many of the articles that implemented

translated assessments, the adaptability of culture is not mentioned. Different cultural backgrounds may respond differently to different tests, and therefore it is important to explore this in the research of the qualitative assessment tools.

Many of the assessments are available on a global level, but the actual access to the art therapy treatments and directives seem less available to diverse populations. The majority of participants are older white women. Some of the studies were geared specifically for women, such as Monti et al., (2006) who specifically conducted gender-segregated research (Monti, et al., 2006); or those that were specifically studying patients with or recovering from breast cancer which effects a significantly larger number of women than men (Puig, 2006) (Monti, et al., 2012). However, it seems that when researchers were not specifically assessing women, there were still a significantly higher number of women volunteers over men. Meghani et al., (2018) considered this as a limitation in the study (Meghani, Peterson, Kaiser, & Rao, 2018).

In one study of Japanese men, 86% of the volunteers were women. The researchers felt that this may be due to the discomfort that many Japanese men have with direct displays of emotion, which they may equate with the art therapy (Ando, Imamura, Kira, & Nagasaka, 2013). This idea may be true in the art therapy and cancer research in America and internationally. The culture of masculinity does not support displays of emotion, and art-making associated with the patient's feelings and experiences may be associated with this.

Gueu et al., (2013) stated in their findings that male cancer patients often try to cope with their disease in an internal way or with their life partner (Geue, Richter, Buttstädt, Brähler, & Singer, 2013). They are often only seeking medical treatment, and not any alternative therapies. Therefore, this may influence the number of volunteers for the art therapy research.

The racial differences in the volunteers in these research studies are also notable. Most of the studies of art therapy had a higher number of white volunteers than of other races. Of the nine studies that took place in Europe and the United States, six stated the racial breakdown of their volunteers. Four of those studies had a significant majority of white volunteers (Puig, 2006) (Nainis, et al., 2006) (Monti, et al., 2012) (Meghani, Peterson, Kaiser, & Rao, 2018). One exception was the study by Radl et al., (2018), in which the volunteers were 80% African American (Radl, Vita, Gerber, Gracely, & Bradt, 2018). The other exception was the study of Walsh et al., (2004), which had 17 Latino volunteers and 15 white volunteers. (Walsh, Martin, & Schmidt, 2004).

The lack of diversification in these studies affects the applicability of the findings. Many of these studies do not reflect the population breakdown of the areas that the studies took place. In the study done by Radl et al., (2018), in which most of the volunteers were African American, the researchers said that the population was not diversified. They concluded that the results of their study could not be generalized to all oncology patients (Radl, Vita, Gerber, Gracely, & Bradt, 2018).

In Monti et al., (2006), three quarters of the participants were white. The researchers felt that this was acceptable because “demographic distribution is consistent with national trends of those seeking and participating in cancer support groups” (Monti, et al., 2006, p. 371) They were conducting their research in a location which they considered reflected the racial demographic of the area.

There needs to be additional research to understand why the majority of volunteers in these studies were white. The participants were receiving supportive care, in addition to medical treatment, that these studies provided. This included art therapy directives, mindfulness training,

and encouragement of personal expression. Is it possible that these additional therapies were being offered in medical settings that were not easily accessed by minority populations? Did the recruitment of volunteers exclude minority groups?

### **Conclusions**

A diagnosis of cancer can be a devastating diagnosis for the patients and their families. Complementary treatments, alongside traditional medical interventions, have been shown to be effective in reducing symptoms of distress and enhancing coping skills. Art therapy, one such form of complementary treatment, has helped patients adapt to the stressful and possibly traumatic experiences in dealing with cancer. However, the art therapy field is in its infancy and more research is required to demonstrate its efficacy with other modalities.

Art therapy research can achieve a more homogenous language of its efficacy by utilizing quantitative assessment tools. Homogenous language helps broadcast the results to the greater medical community; thereby increasing the use of art therapy alongside other disciplines, improving the potential for further research, and enhancing funding opportunities. As evidenced in multiple studies, art therapy tools already have a demonstrative efficacy. Quantitative assessment tools could provide the additional validity required from many non-art therapy researchers.

Through an archival approach, I evaluated the quantitative assessment tools frequently used in art therapy research with cancer patients. Through a systematic analysis, it became apparent that assessment tools were selected due to their ease of use, such as self-report questionnaires and Likert scales.

They were also chosen based on accessibility to divergent populations. All of the assessments were translated into different languages, increasing their accessibility. However, many of these translations lacked sufficient cultural competencies necessary to ensure validity and reliability of these measures.



In addition, many of the tests that were administered to homogenous populations. Specifically, many of the research subjects were older white women. This segment of the population may have greater access to medical care and ease expressing themselves through art. Further research should include a more diverse population.

Quantitative assessment tools play an essential role in art therapy research with cancer patients. With greater use, these tools can make art therapy more accessible to patients. Quantitative assessment increases the acceptance of results, contributes to more studies, and facilitates more programs that include art therapy as a complementary treatment for patients alongside their medical treatment.

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## Appendix A

Table A2

*Table of Qualitative Assessments in Art Therapy Research with Patients with Cancer*

Title	Author	Test Type	Journal	Year
Testing the Efficacy of a Creative-Arts Intervention with Family Caregivers of Patients of Cancer	Walsh, Sandra M.; Martin, Susan Culpepper; Schmidt, Lee A.	Mini-POMS; BAI, The Derogatis Affects Balance Scale (DABS)	Journal of Nursing Scholarship	2004
The efficacy of creative arts therapies to enhance emotional expression, spirituality, and psychological well-being of newly diagnosed Stage I and Stage II breast cancer patients: A preliminary study	Puig, Ana; Lee, Sang Min; Goodwin, Linda; Sharrard, Peter	Profile of Mood States (POMS)	The Arts in Psychotherapy	2006
A randomized, controlled trial of mindfulness-based art therapy (MBAT) for women with cancer.	Monti, Daniel A.; Peterson, Caroline; Kunkel, Elisabeth J. Shakin; Hauck, Walter W.; Pequignot, Edward; Rhodes, Lora; Brainard, George C.	Symptomatic Checklists, SCL-90; Medical Outcomes Study Short-Form Health Survey;	Psycho-Oncology	2006
Relieving Symptoms in Cancer: Innovative Use of Art Therapy	Nainis, N., Paice, J. A., Ratner, J., Wirth, J. H., Lai, J., & Shott, S.	Edmonton Symptom Assessment Scale (ESAS); Spielberger State-Trait Anxiety Index (STAI-S);	Journal of Pain and Symptom Management	2006

Title	Author	Test Type	Journal	Year
Evaluation of an art therapy offer for oncological patients in an acute hospital: A pilot study	Grulke, Norbert; Bailer, Harald; Stähle, Stephanie; Kächele, Horst	EORTC QLQ-30, POMS, HADS	The Arts in Psychotherapy	2006
Art therapy improved depression and influenced fatigue levels in cancer patients on chemotherapy	Bar-Sela, G., Atid, L., Danos, S., Gabay, N., & Epstein, R.	Hospital Anxiety and Depression Scale (HADS) and the Brief Fatigue Inventory (BFI)	Psycho-Oncology	2007
The effects of an art education program on competencies, coping, and well-being in outpatients with cancer— Results of a prospective feasibility study	Singer, Susanne; Götze, Heide; Buttstädt, Marianne; Geue, Kristina; Momenghalibaf, Azahdeh; Böhler, Ursula	Family-System-Test (FAST); “Hospital Anxiety and Depression Scale” (HADS); “Trier Coping Scales”	The Arts in Psychotherapy	2010
What research evidence is there for the use of art therapy in the management of symptoms in adults with cancer? A systematic review	Wood, Michele J. M.; Molassiotis, Alexander; Payne, Sheila	hand search found 12 studies	Psycho-Oncology	2012
A non-randomized trial of an art therapy intervention for patients with hematological malignancies to support post-traumatic growth	Singer, Susanne; Götze, Heide; Buttstädt, Marianne; Ziegler, Corinne; Richter, Robert; Brown, Anna;	Stress-Related Growth Scale (SRGS)	Journal of Health Psychology	2012

Title	Author	Test Type	Journal	Year
Changes in Cerebral Blood Flow and Anxiety Associated with an 8-week Mindfulness Program in Women with Breast Cancer	Monti, Daniel A.; Kash, Kathryn M.; Kunkel, Elisabeth J. S.; Brainard, George; Wintering, Nancy; Moss, Aleezé S.; Rao, Hengyi; Zhu, Senhua; Newberg, Andrew B.	Symptom Checklist-90-Revised (SCL-90-R)	Stress and Health: Journal of the International Society for the Investigation of Stress	2012
Art therapy among palliative care in patients with advanced cancer	Rhondali, W., Lasserre, & Fibert, M.	Edmonton Symptom Assessment Scale (ESAS)	Palliative Medicine	2013
Psychosocial benefits of a novel mindfulness intervention versus standard support in distressed women with breast cancer	Monti, Daniel A.; Kash, Kathryn M.; Kunkel, Elisabeth J.; Moss, Aleeze; Mathews, Michael; Brainard, George; Anne, Ranni; Leiby, Benjamin E.; Pequinot, Edward; Newberg, Andrew B	Symptoms Checklist-90-Revised; Medical Outcomes Study Short-Form Health Survey	Psycho-Oncology	2013
An art therapy intervention for cancer patients in the ambulant aftercare – results from a non-randomized controlled study	Geue, K.; Richter, R.; Buttstädt, M.; Brähler, E.; Singer, S.	Hospital Anxiety and Depression Scale (HADS); Freiburg Questionnaire on Coping with Illness; Perceived Adjustment to Chronic Illness Scale (PACIS);	European Journal of Cancer Care	2013

Title	Author	Test Type	Journal	Year
Do cancer patients with high levels of distress benefit more than less distressed patients from outpatient art therapy?	Gueu, K., Riekof, S., Buttstaedt, & Singer, S.	Hospital Anxiety and Depression Scale (HADS); European Organization for the Research and Treatment of Cancer Quality of Life Core Questionnaire EORTC QLQ-C30	European Journal of Oncology	2017
The effect of drawing and writing technique on the anxiety level of children undergoing cancer treatment	Altay, Naime; Kilicarslan-Toruner, Ebru; Sari, Çigdem	State Anxiety Inventory	European Journal of Oncology Nursing	2017
Art therapy based on appreciation of famous paintings and its effect on distress among cancer patients	Lee, J., Choi, M. Y., Kim, Y. B., Sun, J., Park, E. J., & Kim, J. H.	Hospital Anxiety and Depression Scale (HADS), Hamilton Depression Rating Scale (HDRS), and Edmonton Symptom Assessment Scale (ESAS)	Quality of Life Research	2017
A Pilot Study of a Mindfulness-Based Art Therapy Intervention in Outpatients with Cancer	Meghani, Salimah H.; Peterson, Caroline; Kaiser, Donna H.; Rao, Hengyi	Short-Form Health Survey; The Pittsburgh Sleep Quality Index; Edmonton Symptom Assessment Scale; Antonovsky’s Sense of Coherence Orientation to Life Questionnaire; Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being	American Journal of Hospice & Palliative Medicine	2018

Title	Author	Test Type	Journal	Year
The effects of Self-Book© art therapy on cancer-related distress in female cancer patients during active treatment: A randomized controlled trial	Radl, Donna; Vita, Maureen; Gerber, Nancy; Gracely, Edward; Bradt, Joke	Perceived Emotional Distress Inventory (PEDI); Distress Thermometer (DT); Patient-Reported Outcomes Measurement Information System Brief Psychological Well-being test; Functional Assessment of Chronic Illness Therapy Spiritual Well-Being (FACIT-Sp)	Psycho-Oncology	2018
Feasibility and efficacy of art therapy for Japanese cancer patients: A pilot study	Ando, Michiyo; Imamura, Yutaka; Kira, Haruko; Nagasaka, Takeo	POMS, FACIT-Sp	The Arts in Psychotherapy	2013



**Appendix B**

**Hospital Anxiety and Depression Scale**

**Hospital Anxiety and Depression Scale (HADS)**

Tick the box beside the reply that is closest to how you have been feeling in the past week.  
 Don't take too long over you replies: your immediate is best.

D	A		D	A	
		<b>I feel tense or 'wound up':</b>			<b>I feel as if I am slowed down:</b>
3		Most of the time	3		Nearly all the time
2		A lot of the time	2		Very often
1		From time to time, occasionally	1		Sometimes
0		Not at all	0		Not at all
		<b>I still enjoy the things I used to enjoy:</b>			<b>I get a sort of frightened feeling like 'butterflies' in the stomach:</b>
0		Definitely as much	0		Not at all
1		Not quite so much	1		Occasionally
2		Only a little	2		Quite Often
3		Hardly at all	3		Very Often
		<b>I get a sort of frightened feeling as if something awful is about to happen:</b>			<b>I have lost interest in my appearance:</b>
3		Very definitely and quite badly	3		Definitely
2		Yes, but not too badly	2		I don't take as much care as I should
1		A little, but it doesn't worry me	1		I may not take quite as much care
0		Not at all	0		I take just as much care as ever
		<b>I can laugh and see the funny side of things:</b>			<b>I feel restless as I have to be on the move:</b>
0		As much as I always could	3		Very much indeed
1		Not quite so much now	2		Quite a lot
2		Definitely not so much now	1		Not very much
3		Not at all	0		Not at all
		<b>Worrying thoughts go through my mind:</b>			<b>I look forward with enjoyment to things:</b>
3		A great deal of the time	0		As much as I ever did
2		A lot of the time	1		Rather less than I used to
1		From time to time, but not too often	2		Definitely less than I used to
0		Only occasionally	3		Hardly at all
		<b>I feel cheerful:</b>			<b>I get sudden feelings of panic:</b>
3		Not at all	3		Very often indeed
2		Not often	2		Quite often
1		Sometimes	1		Not very often
0		Most of the time	0		Not at all
		<b>I can sit at ease and feel relaxed:</b>			<b>I can enjoy a good book or radio or TV program:</b>
0		Definitely	0		Often
1		Usually	1		Sometimes
2		Not Often	2		Not often
3		Not at all	3		Very seldom

Please check you have answered all the questions

Scoring:

Total score: Depression (D) \_\_\_\_\_ Anxiety (A) \_\_\_\_\_

0-7 = Normal

8-10 = Borderline abnormal (borderline case)

11-21 = Abnormal (case)

**Profile of Mood State**

**Abbreviated POMS (Revised Version)**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Below is a list of words that describe feelings people have. Please **CIRCLE THE NUMBER THAT BEST DESCRIBES HOW YOU FEEL RIGHT NOW**.

	Not At All	A Little	Moderately	Quite a lot	Extremely
Tense	0	1	2	3	4
Angry	0	1	2	3	4
Worn Out	0	1	2	3	4
Unhappy	0	1	2	3	4
Proud	0	1	2	3	4
Lively	0	1	2	3	4
Confused	0	1	2	3	4
Sad	0	1	2	3	4
Active	0	1	2	3	4
On-edge	0	1	2	3	4
Grouchy	0	1	2	3	4
Ashamed	0	1	2	3	4
Energetic	0	1	2	3	4
Hopeless	0	1	2	3	4
Uneasy	0	1	2	3	4
Restless	0	1	2	3	4
Unable to concentrate	0	1	2	3	4
Fatigued	0	1	2	3	4
Competent	0	1	2	3	4
Annoyed	0	1	2	3	4
Discouraged	0	1	2	3	4
Resentful	0	1	2	3	4
Nervous	0	1	2	3	4
Miserable	0	1	2	3	4

PLEASE CONTINUE WITH THE ITEMS ON THE NEXT PAGE

	Not At All	A Little	Moderately	Quite a lot	Extremely
Confident	0	1	2	3	4
Bitter	0	1	2	3	4
Exhausted	0	1	2	3	4
Anxious	0	1	2	3	4
Helpless	0	1	2	3	4
Weary	0	1	2	3	4
Satisfied	0	1	2	3	4
Bewildered	0	1	2	3	4
Furious	0	1	2	3	4
Full of Pep	0	1	2	3	4
Worthless	0	1	2	3	4
Forgetful	0	1	2	3	4
Vigorous	0	1	2	3	4
Uncertain about things	0	1	2	3	4
Bushed	0	1	2	3	4
Embarrassed	0	1	2	3	4

**THANK YOU FOR YOUR COOPERATION**

**PLEASE BE SURE YOU HAVE ANSWERED EVERY ITEM**

**Edmonton Symptom Assessment System**



**Edmonton Symptom Assessment System:  
Numerical Scale**  
Regional Palliative Care Program

**Please circle the number that best describes:**

No pain	0	1	2	3	4	5	6	7	8	9	10	Worst possible pain
Not tired	0	1	2	3	4	5	6	7	8	9	10	Worst possible tiredness
Not nauseated	0	1	2	3	4	5	6	7	8	9	10	Worst possible nausea
Not depressed	0	1	2	3	4	5	6	7	8	9	10	Worst possible depression
Not anxious	0	1	2	3	4	5	6	7	8	9	10	Worst possible anxiety
Not drowsy	0	1	2	3	4	5	6	7	8	9	10	Worst possible drowsiness
Best appetite	0	1	2	3	4	5	6	7	8	9	10	Worst possible appetite
Best feeling of wellbeing	0	1	2	3	4	5	6	7	8	9	10	Worst possible feeling of wellbeing
No shortness of breath	0	1	2	3	4	5	6	7	8	9	10	Worst possible shortness of breath
Other problem	0	1	2	3	4	5	6	7	8	9	10	

Patient's Name \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

Complete by (*check one*)

- Patient
- Caregiver
- Caregiver assisted

**BODY DIAGRAM ON REVERSE SIDE**

**Symptom Checklist-90-R**

Study \_\_\_\_\_

ID \_\_\_\_\_  
Date \_\_\_/\_\_\_/\_\_\_\_\_

**Symptom Checklist 90-R**

Below is a list of problems and complaints that people sometimes have. Please read each one carefully and **enter the number** that best describes how much you were bothered by that problem during the past week.

**Please enter only ONE.**

**FOR THE PAST WEEK, HOW MUCH WERE YOU BOTHERED BY:**

	Not At All	A Little Bit	Moderately	Quite A Bit	Extremely
1. Headaches	0	1	2	3	4
2. Nervousness or shakiness inside	0	1	2	3	4
3. Unwanted thoughts, words, or ideas that won't leave your mind	0	1	2	3	4
4. Faintness or dizziness	0	1	2	3	4
5. Loss of sexual interest or pleasure	0	1	2	3	4
6. Feeling critical of others	0	1	2	3	4
7. The idea that someone else can control your thoughts	0	1	2	3	4
8. Feeling others are to blame for most of your troubles	0	1	2	3	4
9. Trouble remembering things	0	1	2	3	4
10. Worried about sloppiness or carelessness	0	1	2	3	4
11. Feeling easily annoyed or irritated	0	1	2	3	4
12. Pains in heart or chest	0	1	2	3	4
13. Feeling afraid in open spaces or on the streets	0	1	2	3	4
14. Feeling low in energy or slowed down	0	1	2	3	4
15. Thoughts of ending your life	0	1	2	3	4
16. Hearing words that others do not hear	0	1	2	3	4
17. Trembling	0	1	2	3	4
18. Feeling that most people cannot be trusted	0	1	2	3	4
19. Poor appetite	0	1	2	3	4
20. Crying easily	0	1	2	3	4

Study \_\_\_\_\_

ID \_\_\_\_\_  
Date \_\_\_/\_\_\_/\_\_\_\_\_

**FOR THE PAST WEEK, HOW MUCH WERE YOU BOTHERED BY:**

	Not At All	A Little Bit	Moderately	Quite A Bit	Extremely
21. Feeling shy or uneasy with the opposite sex	0	1	2	3	4
22. Feeling of being trapped or caught	0	1	2	3	4
23. Suddenly scared for no reason	0	1	2	3	4
24. Temper outbursts that you could not control	0	1	2	3	4
25. Feeling afraid to go out of your house alone	0	1	2	3	4
26. Blaming yourself for things	0	1	2	3	4
27. Pains in lower back	0	1	2	3	4
28. Feeling blocked in getting things done	0	1	2	3	4
29. Feeling lonely	0	1	2	3	4
30. Feeling blue	0	1	2	3	4
31. Worrying too much about things	0	1	2	3	4
32. Feeling no interest in things	0	1	2	3	4
33. Feeling fearful	0	1	2	3	4
34. Your feelings being easily hurt	0	1	2	3	4
35. Other people being aware of your private thoughts	0	1	2	3	4
36. Feeling others do not understand you or are unsympathetic	0	1	2	3	4
37. Feeling that people are unfriendly or dislike you	0	1	2	3	4
38. Having to do things very slowly to insure correctness	0	1	2	3	4
39. Heart pounding or racing	0	1	2	3	4
40. Nausea or upset stomach	0	1	2	3	4
41. Feeling inferior to others	0	1	2	3	4
42. Soreness of your muscles	0	1	2	3	4
43. Feeling that you are watched or talked about by others	0	1	2	3	4
44. Trouble falling asleep	0	1	2	3	4

Study \_\_\_\_\_

ID \_\_\_\_\_  
Date \_\_\_/\_\_\_/\_\_\_\_\_

**FOR THE PAST WEEK, HOW MUCH WERE YOU BOTHERED BY:**

	Not At All	A Little Bit	Moderately	Quite A Bit	Extremely
45. Having to check and double-check what you do	0	1	2	3	4
46. Difficulty making decisions	0	1	2	3	4
47. Feeling afraid to travel on buses, subways, or trains	0	1	2	3	4
48. Trouble getting your breath	0	1	2	3	4
49. Hot or cold spells	0	1	2	3	4
50. Having to avoid certain things, places, or activities because they frighten you	0	1	2	3	4
51. Your mind going blank	0	1	2	3	4
52. Numbness or tingling in parts of your body	0	1	2	3	4
53. A lump in your throat	0	1	2	3	4
54. Feeling hopeless about the future	0	1	2	3	4
55. Trouble concentrating	0	1	2	3	4
56. Feeling weak in parts of your body	0	1	2	3	4
57. Feeling tense or keyed up	0	1	2	3	4
58. Heavy feelings in your arms or legs	0	1	2	3	4
59. Thoughts of death or dying	0	1	2	3	4
60. Overeating	0	1	2	3	4
61. Feeling uneasy when people are watching or talking about you	0	1	2	3	4
62. Having thoughts that are not your own	0	1	2	3	4
63. Having urges to beat, injure, or harm someone	0	1	2	3	4
64. Awakening in the early morning	0	1	2	3	4
65. Having to repeat the same actions such as touching, counting, washing	0	1	2	3	4
66. Sleep that is restless or disturbed	0	1	2	3	4
67. Having urges to break or smash things	0	1	2	3	4
68. Having ideas or beliefs that others do not share	0	1	2	3	4

Study \_\_\_\_\_

ID \_\_\_\_\_  
Date \_\_\_/\_\_\_/\_\_\_\_\_

**FOR THE PAST WEEK, HOW MUCH WERE YOU BOTHERED BY:**

	Not At All	A Little Bit	Moderately	Quite A Bit	Extremely
69. Feeling very self-conscious with others	0	1	2	3	4
70. Feeling uneasy in crowds, such as shopping or at a movie	0	1	2	3	4
71. Feeling everything is an effort	0	1	2	3	4
72. Spells of terror or panic	0	1	2	3	4
73. Feeling uncomfortable about eating or drinking in public	0	1	2	3	4
74. Getting into frequent arguments	0	1	2	3	4
75. Feeling nervous when you are left alone	0	1	2	3	4
76. Others not giving you proper credit for your achievements	0	1	2	3	4
77. Feeling lonely even when you are with people	0	1	2	3	4
78. Feeling so restless you couldn't sit still	0	1	2	3	4
79. Feelings of worthlessness	0	1	2	3	4
80. Feeling that familiar things are strange or unreal	0	1	2	3	4
81. Shouting or throwing things	0	1	2	3	4
82. Feeling afraid you will faint in public	0	1	2	3	4
83. Feeling that people will take advantage of you if you let them	0	1	2	3	4
84. Having thoughts about sex that bother you a lot	0	1	2	3	4
85. The idea that you should be punished for your sins	0	1	2	3	4
86. Feeling pushed to get things done	0	1	2	3	4
87. The idea that something serious is wrong with your body	0	1	2	3	4
88. Never feeling close to another person	0	1	2	3	4
89. Feelings of guilt	0	1	2	3	4
90. The idea that something is wrong with your mind	0	1	2	3	4



**The Functional Assessment of Chronic Illness Therapy Spiritual Well-being- Spiritual**

**FACIT-Sp (Version 4)**

Below is a list of statements that other people with your illness have said are important. **Please circle or mark one number per line to indicate your response as it applies to the past 7 days.**

<b><u>PHYSICAL WELL-BEING</u></b>		<b>Not at all</b>	<b>A little bit</b>	<b>Some-what</b>	<b>Quite a bit</b>	<b>Very much</b>
GP1	I have a lack of energy .....	0	1	2	3	4
GP2	I have nausea .....	0	1	2	3	4
GP3	Because of my physical condition, I have trouble meeting the needs of my family .....	0	1	2	3	4
GP4	I have pain .....	0	1	2	3	4
GP5	I am bothered by side effects of treatment .....	0	1	2	3	4
GP6	I feel ill .....	0	1	2	3	4
GP7	I am forced to spend time in bed .....	0	1	2	3	4

<b><u>SOCIAL/FAMILY WELL-BEING</u></b>		<b>Not at all</b>	<b>A little bit</b>	<b>Some-what</b>	<b>Quite a bit</b>	<b>Very much</b>
GS1	I feel close to my friends .....	0	1	2	3	4
GS2	I get emotional support from my family .....	0	1	2	3	4
GS3	I get support from my friends.....	0	1	2	3	4
GS4	My family has accepted my illness .....	0	1	2	3	4
GS5	I am satisfied with family communication about my illness.....	0	1	2	3	4
GS6	I feel close to my partner (or the person who is my main support) .....	0	1	2	3	4
Q1	<i>Regardless of your current level of sexual activity, please answer the following question. If you prefer not to answer it, please mark this box <input type="checkbox"/> and go to the next section.</i>					
GS7	I am satisfied with my sex life .....	0	1	2	3	4

**FACIT-Sp (Version 4)**

**Please circle or mark one number per line to indicate your response as it applies to the past 7 days.**

**EMOTIONAL WELL-BEING**

		<b>Not at all</b>	<b>A little bit</b>	<b>Some- what</b>	<b>Quite a bit</b>	<b>Very much</b>
GE1	I feel sad .....	0	1	2	3	4
GE2	I am satisfied with how I am coping with my illness.....	0	1	2	3	4
GE3	I am losing hope in the fight against my illness.....	0	1	2	3	4
GE4	I feel nervous.....	0	1	2	3	4
GE5	I worry about dying .....	0	1	2	3	4
GE6	I worry that my condition will get worse .....	0	1	2	3	4

**FUNCTIONAL WELL-BEING**

		<b>Not at all</b>	<b>A little bit</b>	<b>Some- what</b>	<b>Quite a bit</b>	<b>Very much</b>
GF1	I am able to work (include work at home) .....	0	1	2	3	4
GF2	My work (include work at home) is fulfilling.....	0	1	2	3	4
GF3	I am able to enjoy life.....	0	1	2	3	4
GF4	I have accepted my illness.....	0	1	2	3	4
GF5	I am sleeping well .....	0	1	2	3	4
GF6	I am enjoying the things I usually do for fun .....	0	1	2	3	4
GF7	I am content with the quality of my life right now.....	0	1	2	3	4

**FACIT-Sp (Version 4)**

Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

<b><u>ADDITIONAL CONCERNS</u></b>		<b>Not at all</b>	<b>A little bit</b>	<b>Some-what</b>	<b>Quite a bit</b>	<b>Very much</b>
Sp1	I feel peaceful.....	0	1	2	3	4
Sp2	I have a reason for living.....	0	1	2	3	4
Sp3	My life has been productive.....	0	1	2	3	4
Sp4	I have trouble feeling peace of mind.....	0	1	2	3	4
Sp5	I feel a sense of purpose in my life.....	0	1	2	3	4
Sp6	I am able to reach down deep into myself for comfort.....	0	1	2	3	4
Sp7	I feel a sense of harmony within myself.....	0	1	2	3	4
Sp8	My life lacks meaning and purpose.....	0	1	2	3	4
Sp9	I find comfort in my faith or spiritual beliefs.....	0	1	2	3	4
Sp10	I find strength in my faith or spiritual beliefs.....	0	1	2	3	4
Sp11	My illness has strengthened my faith or spiritual beliefs....	0	1	2	3	4
Sp12	I know that whatever happens with my illness, things will be okay.....	0	1	2	3	4