SOCIAL AND EMOTIONAL IMPACT OF GROUP ENGAGEMENT IN OCCUPATIONS AMONG CANCER SURVIVORS

by

Heidi Kreis

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Thesis Director: Dr. Lynne Murphy, EdD, OTR/L

Department: Occupational Therapy

Rationale: Due to medical and technological advancements, the cancer death rate has declined significantly in recent years, leading to an increase in the number of cancer survivors. A cancer diagnosis impacts an individual's physical and mental health, and the consequences of cancer do not cease once treatment has ended. Traditional models of cancer survivorship care fail to emphasize the psychosocial impact of the disease, as cancer survivors continue to face occupational disruptions throughout their lives. Occupational therapists are skilled in addressing social and emotional distress through occupational engagement, yet occupational therapy services are underutilized in current survivorship care. Research is limited to support occupational therapy's effectiveness in supporting cancer survivors through psychosocial group intervention. **Purpose:** This study was conducted to explore the effect of group engagement in meaningful occupations on the psychosocial wellbeing of adult cancer survivors. Specifically, this study aimed to examine differences in pre- and posttest measures of distress, meaning and purpose of life, and the positive psychosocial impact of illness. **Design:** Quasi-experimental one-group pretest-posttest design. **Participants:** Participants were three female breast cancer survivors between the ages of 63 and 71 (M= 66, SD=3.56) with varying courses and timelines

of cancer treatment. **Methods:** Participants completed pretest data collection, eight weekly occupation-based group sessions, and posttest data collection. The research team facilitated eight 90-minute sessions, each with a different occupational focus centered around leisure. The general structure of the weekly sessions included an introduction to the activity and group goals, engagement in a meaningful leisure activity, and guided reflection. **Analysis:** Psychosocial wellbeing was analyzed using three quantitative measures to measure cancer-related distress, perceptions of meaning and purpose of life, and the positive psychosocial impact of illness. Pre- and posttest measures of the three quantitative measures were compared using three Wilcoxon signed-rank tests. **Results:** The current study did not yield statistically significant changes in the three measures of psychosocial wellbeing in response to the occupation- and group-based intervention. However, individual measures of distress, meaning and purpose of life, and the positive psychosocial impact of illness demonstrate a need for occupation-based intervention addressing psychosocial wellness. **Discussion:** Although measures of psychosocial wellbeing between pre- and posttest data collection did not identify significant change, findings from this study provide guidance for ongoing research in occupation-based cancer survivorship care.

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Master of Science in Occupational Therapy

By

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APPROVED BY:

DIRECTOR OF
THESIS: _____
Lynne Murphy, EdD, OTR/L

COMMITTEE MEMBER: _____
Anne Dickerson, PhD, OTR/L, SCDCM, FAOTA, FGSA

COMMITTEE MEMBER: _____
Heather Panczykowski, DHSc, OTR/L

COMMITTEE MEMBER: _____
Xiangming Fang, PhD

CHAIR OF THE DEPARTMENT
OF OCCUPATIONAL
THERAPY:_____
Denise Donica, DHSc, OTR/L, BCP, FAOTA

DEAN OF THE
GRADUATE SCHOOL:
_____
Kathleen Cox, PhD

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Chapter 1: Introduction

An estimated 2 million people were diagnosed with cancer in the United States in 2022 (Cavallo, 2023). Due to advancements in treatment and diagnosis, the cancer death rate has dropped 31% between 1991 and 2018 (American Cancer Society, 2021). As a result of this decline, the number of cancer survivors has increased, with an estimated 22.2 million people expected to survive cancer in the U.S. by 2030 (National Institutes of Health, 2020), indicating an uptick in cancer survivorship (National Cancer Institute, 2021). A cancer diagnosis typically subjects the individual to invasive and difficult treatments, including but not limited to chemotherapy, surgery, and/or radiation (Hwang et al., 2015). The effects of these treatments, although lifesaving, can produce both physical and psychosocial difficulties, such as cancer-related fatigue, pain, anxiety, and distress (Hwang et al., 2015; Vehling & Kissane, 2018).

Cancer treatments tend to align with the medical model of oncology management, which fails to emphasize the physical and psychosocial effects of cancer that typically persist long after the individual is deemed cancer-free (Buckland & Mackenzie, 2017; Polo & Smith, 2017). As a result of these effects, survivors may be subject to occupational performance deficits in areas of activities of daily living (ADL), instrumental activities of daily living (IADL), social participation, work, and leisure (Polo & Smith, 2017). Disturbances to occupations can create distress related to emotional health and social participation. Thus, occupational therapy has a unique role in facilitating engagement in meaningful activities and addressing psychosocial elements of life in both individual and group settings. While the American Occupational Therapy Association (AOTA) recognizes occupational therapy's role in cancer care, the scope has not been fully realized. Occupational therapists primarily work within the medical model of cancer care, as adequate research has not been conducted to determine occupational therapy's

effectiveness in cancer survivorship care, particularly related to social and emotional aspects of life and group interventions (Longpré & Newman, 2011; Udovicich et al., 2020). Thus, the purpose of this study was to investigate the effect of group engagement in meaningful occupations on components of psychosocial wellbeing in adult cancer survivors.

Chapter 2: Literature Review

While the experience of a cancer survivor should not be over-generalized, this population exhibits reduced quality of life compared to the general population (Curtin et al., 2021; Hwang et al., 2015). As a life-changing event, the consequences of a cancer diagnosis persist beyond physical limitations, and the social and emotional upheaval of the individual's life can be overlooked by a medically focused oncology team (Bennion & Molassiotis, 2013).

Social Distressors and Role Dysfunction

While extremely traumatic for the patient, the shock and trauma associated with a cancer diagnosis extends to the individual's loved ones (Greszta & Siemińska, 2011). As a result, changes occur within the complex dynamics of the individual's social relationships. Research suggests that positive social changes can occur, as a cancer diagnosis can reinforce loving relationships and support systems for the individual (Greszta & Siemińska, 2011). However, a cancer diagnosis can also produce feelings of social isolation, such that the cancer survivor feels like no one in their social and familial circles understands what they are going through (van Leeuwen et al., 2018). Additionally, the physical effects of cancer treatment—fatigue, pain, gastrointestinal problems—may inhibit the individual from participating in social situations. In a qualitative study, Lokietz et al. (2012) investigated the relationship between psychosocial hardships and physical difficulties experienced by cancer survivors. Their findings suggest that the physical experience of cancer cannot be separated from the social and emotional side effects.

In addition to changes in social relationships, many cancer survivors experience reduced role performance following treatment, commonly affecting the individual's role as an employee, spouse, and parent. On top of the vast financial burden of medical costs, the Medical Expenditure Panel Survey from 2008-2011 found that 42% (n=1,202) of cancer survivors experienced

changes to employment status, including reduced hours, paid/unpaid time off, and changes in duties because of their cancer (Ekwueme et al., 2014). While some adult cancer survivors return to work once cancer-free, survivors face significantly more work-related hardships than the rest of the working population, which can negatively impact one's feelings surrounding their role as a productive worker (Buckwalter et al., 2007).

Role performance as a spouse may change based on several factors. Change in a cancer survivor's employment status influences the family income. In addition, the spouse often becomes a caregiver of the cancer patient during and following medical treatments. The spouse must take on additional roles and activities within the household while their loved one undergoes treatment and endures cancer's lasting side effects, thereby influencing the spousal relationship (Baxter et al., 2017). Additionally, cancer survivors often experience sexual dysfunction, which can place further strain on the relationship between the survivor and spouse (Baxter et al., 2017; van Leeuwen et al., 2018).

Lastly, cancer survivorship can impact an adult's role as a parent. Because the survivor is experiencing the physical effects of cancer and treatment, they may become less present in their children's lives. In turn, this involuntary absence can contribute to feelings of guilt and worry (Shah et al., 2017). Additionally, changes in the survivor's parental role may create more demands on the spouse to care for their partner, children, and household. Once cancer-free, survivors continue to face difficulty adjusting to previous roles. While there are more factors involved, changes related to employment status, spousal role, and parental roles represent three frequently cited points of strain for cancer survivors and their families.

Despite the literature cited above, minimal research has been done to determine ways to mitigate the negative effects of role and social dysfunction involved in cancer survivorship,

despite its known prevalence among survivors (Hwang et al., 2015).

Emotional Distressors

The emotional experience of cancer survivorship cannot be generalized. There is vast variation in cancer type, severity, and treatment, as well as personal factors that affect the lived experience of the individual's cancer journey. However, research suggests greater rates of depression, distress, anxiety, and fear among cancer survivors when compared to their healthy peers (Chirico et al., 2017; Hwang et al., 2015).

Distress is often referred to as the "sixth vital sign" in cancer care (Ownby, 2019, p. 178). The American Cancer Society (2020) defines distress as "an unpleasant emotion, feeling, thought, condition, or behavior," that individuals may describe as helplessness, hopelessness, and demoralization (paragraph 1). Demoralization refers to a perceived loss of control, uncertainty, and reduced meaning in life (Vehling & Kissane, 2018). The frequency of clinically relevant levels of cancer-related distress is unclear in current literature; however, it is cited as a common response to diagnosis and survivorship. Vehling and Kissane (2018) suggest that once cancer-free, individuals continue to face disruption in their daily lives, which can further impact their routines, sense of security, and purpose.

A major concern of cancer survivors is fear of recurrence. In a systematic review, Simard et al. (2013) found that fear of recurrence is cited as survivors' most frequently unaddressed need. While the social and emotional responses to cancer survivorship vary, research suggests that younger age, worse physical symptoms, high psychological distress, and reduced quality of life are correlated with higher levels of fear of recurrence (Simard et al., 2013). In a cross-sectional cohort study, a single-item analysis suggested that the most common fears for cancer survivors include attending doctor's appointments, concerns about family, and reliance on

strangers for ADL performance (Vehling & Kissane, 2018).

The literature does not suggest that all cancer survivors will experience clinical levels of distress during and following cancer treatment. The experience of distress is not all-or-none, such that survivors may experience fluctuating levels of distress at different points in their cancer journey and the presence of distress can exist simultaneously with the presence of positive life changes (Greszta & Siemińska, 2011). Positive life changes that are sometimes reported include strengthened social connections, perceived improvement of priorities, and stronger spirituality (Greszta & Siemińska, 2011). However, positive changes are partially moderated by personality differences. For example, high self-efficacy is strongly inversely correlated with distress (Chirico et al., 2017). While some survivors find silver linings readily once cancer-free, many cancer survivors are confronted with social and emotional distress that could be addressed through occupational therapy, specifically in a group setting that facilitates social participation.

Cancer Survivorship Models

In response to the increase in the number of cancer survivors, the Institute of Medicine (IOM) and National Research Council produced guidelines for the necessary components of survivorship care (Hewitt et al., 2005). The report emphasizes prevention and surveillance of new or recurrent cancers, assessments of and interventions for medical and psychological effects, and management of care between primary care providers and oncologists. In 2008, the IOM released another report that highlighted the importance of psychosocial considerations for cancer survivorship care (Adler et al., 2008). The actualization of these guidelines in practice has been limited and current research exemplifies the need to restructure posttreatment care to address the needs of the growing population of cancer survivors (Denlinger et al., 2014; Powel & Seibert, 2017).

A major discrepancy in quality healthcare for cancer survivors emerges from the lack of communication between the survivor's oncology team and primary care provider. Adjusting to life after cancer treatment requires targeted attention to physical and psychological side effects. However, with an overwhelmed healthcare system and an increase in cancer survivors, many survivors do not have a designated liaison to aid their management of late effects of cancer (Powel & Seibert, 2017). In a comprehensive status update, Powel and Seibert (2017) discuss six primary survivorship models, all of which are based on the original IOM report (Hewitt et al., 2005). The models attempt to establish the roles in management of care, the use of specialized survivorship clinics, and cost concerns. Despite the IOM's guidance, implementation of the survivorship models remains difficult due to the barriers within the healthcare system, allowing some survivors to "fall through the cracks" (Powel & Seibert, 2017, p. 194).

While implementation of a survivorship model remains difficult, the goal of research persists to address an individual's health and life beyond diagnosis and treatment, with an emphasis on the multidisciplinary nature of cancer treatment (Aziz & Rowland, 2003). In a systematic review of qualitative research regarding the adult cancer patient experience, researchers found a common theme among respondents: a dismissal of ongoing cancer-related side effects following treatment by the survivor's healthcare team (Bennion & Molassiotis, 2013). The synthesis of studies suggests that survivors may feel abandoned by their doctors or feel like a burden when addressing post-treatment symptoms, because the physical cancer is technically gone. Additionally, Bennion and Molassiotis (2013) found that survivors often feel unprepared and misled following treatment, unaware that the symptoms of cancer and treatment would persist throughout life. While oncologists provide treatments to physically combat the cancer and primary care providers address other physical side effects following treatment, cancer

survivors deserve a rehabilitation team that will address the impact of cancer holistically and over time (Baxter et al., 2017; Bennion & Mollassiotis, 2013).

Occupational Therapy's Role in Cancer Survivorship

AOTA produced guidelines for occupational therapy's role within oncology, with the overarching goal of empowering individuals to reach maximal functional performance—physically and psychologically—in the skills of everyday life (Longpré & Newman, 2011). This scope applies to all cancer survivors, regardless of life expectancy or prognosis. AOTA provides examples of interventions to remediate, compensate, or adapt an individual's ability to engage in life. Examples address ADLs, IADLs, sleep and fatigue, and therapeutic exercise to promote range of motion, strength, and mobility. However, less guidance exists regarding interventions for social and emotional consequences of cancer (Longpré & Newman, 2011). Although perfectly situated to address the psychosocial effects of cancer through client-centered care, occupational therapy remains underutilized in practice (Baxter et al., 2017; Pergolotti et al., 2014).

In a systematic review of occupational therapy's effectiveness in cancer rehabilitation, Hunter et al. (2017) found strong evidence to support multidisciplinary rehabilitation strategies for cancer survivors. Further, results suggested that multidisciplinary programs improved function and engagement in occupation regardless of the type or stage of cancer and the age of the survivor. Secondly, Hunter et al. (2017) yielded strong evidence to support the use of psychosocial strategies in treatment, such as cognitive-behavioral therapy and educational interventions. While still a comprehensive review, Hunter et al. (2017) admitted that many of the included studies have small sample sizes and lack strong research designs; these authors call for more research to be conducted to further support occupational therapy in cancer rehabilitation.

In other diagnostic groups, occupational therapy enables individuals with chronic conditions to gain functional abilities. For example, occupational therapy can help individuals return to work, which often prompts a return to routine and valued roles (Baxter et al., 2017). While cancer survivors have unique needs compared to other patient groups, occupational therapy perspectives can address unmet functional needs of survivors that directly relate to social and emotional side effects of the disease.

Group Interventions

Utilization of group interventions are common in occupational therapy, and provide benefits such as social engagement, opportunity for new relationships, and development of communication skills (Higgins et al., 2014). In a group intervention study intended to address cognition in cancer survivors, Schuurs and Green (2012) found statistically significant improvements in psychosocial distress and social function of cancer survivors in a group-based intervention group compared to a control group. This study provides evidence for the feasibility of a group intervention study for cancer survivors. Further, in a study of the effectiveness of community-based intervention for cancer survivors, Petruseviciene et al. (2018) found that participants in the community-based intervention group reported significantly higher engagement in meaningful occupation and scores in global measures of quality of life after the six-week intervention period compared to the control group.

In a scoping review, Udovicich et al. (2020) found that following a cancer diagnosis and treatment, survivors wish to devote more energy toward valued leisure activities. Additionally, participation in group-based programs with other cancer survivors provided increases in occupational performance and satisfaction. As mentioned, cancer survivors report feelings of social isolation related to their diagnosis, claiming that the individuals in their social

environment do not fully understand their cancer experience (van Leeuwen et al., 2018). However, research suggests that sharing the experience of occupation-based group intervention is highly valued by cancer survivors (Udovicich et al., 2020).

Although commonly used in community-based settings, rigorous studies regarding group interventions specifically for cancer survivors are limited. However, preliminary evidence suggests that group interventions for cancer survivors provide a feasible opportunity for social and occupational engagement, which lends to increased satisfaction and quality of life (Higgins et al., 2014). Thus, research is needed to address the utility of group interventions for cancer survivors to promote meaningful occupational engagement and improve psychosocial wellbeing.

Opportunities

Although occupational therapy's scope in cancer survivorship has been defined, it has not been fully realized in practice. In a cross-sectional descriptive study of cancer survivors (n=68), 53% of survivors responded yes, that "transitional help through occupational therapy would have been useful" (Hwang et al., 2015). Another 10.6% of responded "not sure," which aligns with a proposed barrier of occupational therapy's use in cancer rehabilitation: lack of awareness of occupational therapy's function on behalf of patients and medical providers (Baxter et al., 2017; Hwang et al., 2015). Other barriers include lack of referrals from physicians, limitations in reimbursement, and lack of evidence-based research to support occupational therapy's effectiveness in cancer survivorship care (Sleight & Duker, 2016).

Despite its underutilization (Perglotti et al., 2014), occupational therapists have the potential to apply a unique, holistic perspective to cancer survivorship, emphasizing participation in meaningful occupations that ultimately aid cancer survivors in returning to valued routines, roles, and rituals that existed before the cancer diagnosis (Baxter et al., 2017). Additionally, as a

life-changing condition, a cancer diagnosis may bring changes to an individual's life that they do not want to diminish; for example, a cancer survivor may find new meaning to life that challenges previous priorities (Greszta, & Siemińska, 2011). Using a holistic, client-centered approach, occupational therapists are situated to aid cancer survivors in the realization of new occupations and the maintenance of existing, valued occupations.

Summary

The literature provides a basis for conducting research regarding cancer survivors and their experience of social and emotional distress, as many survivors face challenges during their cancer journeys. Although cancer survivorship falls within occupational therapy's scope of practice, research in this area is limited, and therefore the potential of occupational therapy within cancer survivorship models has not been fully realized. Much of the cancer-related occupational therapy research explores the role of physical activity, ADLs, and IADLs in cancer-related recovery. Similarly, much of this research focuses on individual approaches to cancer survivorship. With cited decrements in social engagement of cancer survivors, as well as preliminary research to suggest the feasibility and positive outcomes of group interventions, future research should address the effectiveness of group interventions for cancer survivors, specifically those that address meaningful occupations, psychosocial healing, and social engagement (Chirico et al., 2017; Hwang et al., 2015; Petruseviciene et al., 2018; Schuurs & Green, 2012). Current research regarding occupational therapy with non-cancer patient groups shows promise, such that the facilitation of meaningful engagement in occupation may affect the severity of negative social and emotional consequences of a cancer diagnosis.

Thus, the purpose of this study is to determine the effect of group engagement in meaningful occupations on levels of psychosocial wellbeing in cancer survivors. The study aims

to analyze the effectiveness of an occupational therapy group intervention in reducing psychosocial distress and increasing meaning of life and positive outcomes of illness in cancer survivors. These components of psychosocial wellbeing—psychosocial distress, meaning of life, and positive impacts of illness—were targeted using an eight-week occupation-based group intervention program for cancer survivors.

Chapter 3: Theoretical Framework

To maintain a client-centered and occupation-based approach, the Model of Human Occupation (MOHO) guided the development of the occupational therapy intervention utilized in this research study (Kielhofner & Burke, 1980). MOHO has been used in occupational therapy practice in a variety of client populations across diverse levels of functioning and is often applied in mental health settings (Kielhofner, 2009). The model is concerned not only with the physical and cognitive elements of occupational performance, but is inclusive of an individual's occupational identity, competence, and adaptive capacity that are developed through occupational engagement. MOHO asserts that people's engagement in occupations "shape[s] their abilities, routine ways of doing things, and thoughts and feelings about themselves" (Kielhofner, 2009, p. 154).

MOHO describes three internal constructs of a person, namely volition, habituation, and performance capacity. Values, interests, and personal causation are the subsystems that make up one's volition. According to the model, values are beliefs about what is meaningful and worthwhile, and interests bring satisfaction to our lives (Kielhofner, 2009). Personal causation, another subconstruct of volition, refers to personal feelings of effectiveness in performing occupations (Kielhofner, 2009). An individual's volition is a driving factor in occupational engagement. When faced with impairment, volition may be negatively impacted, causing the individual to withdraw from once-valued occupations. Volition is cyclical, such that a reduction in motivation may limit occupational engagement, or barriers to occupational engagement may reduce motivation. Cancer survivors experiencing physical and psychological impairments may encounter occupational performance decrements, leading to reduced motivation. Occupations that may be effective in restoring wellbeing for cancer survivors must be tailored to their values

and interests. Additionally, personal causation is an important construct for individuals who have experienced a loss of control due to the diagnosis and treatment process of cancer. Understanding the volition component of MOHO is key to implementing occupational therapy services and interventions to facilitate occupational re-engagement for cancer survivors (Kielhofner, 2009).

Habituation refers to the roles and routines in which individuals organize their lives (Kielhofner, 2009). This pattern of organization directly contributes to one's occupational skills and performance. Cancer survivors often face challenges in their roles as employees, spouses, and parents (Baxter et al., 2017; Buckwalter et al., 2007; van Leeuwen et al., 2018). Disruption to one's routines and roles may severely impact their sense of familiarity and stability in life. As mentioned, a cancer diagnosis can cause serious disturbances to one's life and the disturbance can impact family, friends, and colleagues (Greszta & Siemińska, 2011). MOHO emphasizes the importance of establishing positive roles and habits in order to navigate life following impairment (Kielhofner, 2009). Following the upheaval caused by a cancer diagnosis, occupational therapy practice, using MOHO, can target the development of adaptive performance and engagement patterns for cancer survivors and others impacted.

Lastly, performance capacity refers to the cognitive and physical abilities that underly occupational engagement (Kielhofner, 2009). Unlike other models of practice, MOHO recognizes the significance of recognizing how an occupation is experienced, with a particular emphasis on one's limitations. Cancer and cancer treatment are likely to cause changes to the body and mind, such as fatigue and impaired cognition, which contribute to a reduction in performance capacity (Hwang et al., 2015). However, according to MOHO, occupational therapy

practice can assist cancer survivors in regaining previous performance capacity and adapting current abilities to be successful in occupational engagement (Kielhofner, 2009).

The aim of the intervention is to use group engagement in valued occupations to improve psychosocial wellbeing in cancer survivors. Using MOHO as the framework, the group-based intervention aims to foster feelings of self-efficacy, develop positive routines, and build skills for participation for the cancer survivors.

Chapter 4: Methodology

Design

This pilot study used a quasi-experimental one-group pretest-posttest design to explore the impact of group engagement in desired occupations on the psychosocial wellbeing of cancer survivors. This design allowed measurement of differences in psychosocial wellbeing, the dependent variable, prior to and following group engagement in meaningful occupations, the independent variable. Psychosocial wellbeing constructs include perceived psychosocial distress, meaning and purpose of life, and the positive impact of illness. A pretest was completed to create a baseline measure of psychosocial distress, meaning and purpose of life, and positive impact of illness among participants. No control group allowed researchers to offer the intervention to all cancer survivors in the sample. Participants, using pretest and posttest measures, served as their own controls, and pretest and posttest data were compared. The East Carolina University & Medical Center Institutional Review Board granted approval for this study as Certified Exempt (UMCIRB 22-001140).

Participants

The target population for this study included adult cancer survivors residing in or around Greenville, North Carolina. For the study's purposes, the term "cancer survivor" included individuals who were not engaged in active cancer treatment at the time of the study, as adverse physical and cognitive symptoms may persist while receiving treatment. The inclusion criteria were (1) a previous cancer diagnosis, (2) residential status in or around Greenville, NC, and (3) a score of 3 or greater on the *Distress Thermometer*, discussed in detail below. Minors and individuals currently receiving cancer treatment were excluded from participation due to the anticipated differences in the perceptions of cancer survivorship, such as differences in

occupational engagement and logistical barriers to participation. Participants were not excluded on the basis of cancer type, severity, or treatment history.

Network and convenience sampling were used to identify participants within the target population. Recruitment efforts included the dissemination of a flyer with the study's purpose, time requirements, and researcher contact information. Flyers were distributed to ECU Health Medical Center, nearby physicians' offices, relevant community centers, and employees of East Carolina University. Participants were offered $5 for pretest data collection, $10 for posttest data collection and $10 for each of the eight occupation-based sessions, with opportunity for compensation totaling a maximum of $95 in gift cards. The research team aimed to identify ten cancer survivors to participate in the intervention. Despite recruitment efforts, only three cancer survivors committed to participating in the survivorship group.

Instrumentation

Descriptive Measures

The following descriptive measures were administered at pretest data collection to further inform the outcomes of the group intervention. Demographics of interest, selected based on cancer survivorship literature, included gender, age, type of cancer, time since end of treatment, course of treatment, available social support, relevant medical history, and past engagement in occupational therapy. Demographic information included in this research was adapted from Hwang et al.'s (2015) Post Cancer Outcome Survey for their study regarding QOL and functional deficits in adult cancer survivors. Social support was added because the literature suggests that there is a strong relationship between high social support and improved psychosocial adjustment to a cancer diagnosis (Meyerowtiz et al., 2008). A copy of the demographic questionnaire can be found in Appendix B.

Distress Thermometer

The *Distress Thermometer* is a widely used scale to evaluate psychological distress in cancer patients and survivors, developed by the National Comprehensive Cancer Network (2020) (See Appendix C). Although the *Distress Thermometer* cannot be used in diagnosis of psychological disorders, it provides a quick and easy screening of current perceptions of psychological distress (Al-Shaaobi et al., 2021). Additionally, clinically significant levels of distress can be used by physicians when considering referrals to other healthcare providers. All cancer survivors are considered at-risk for distress, and the *Distress Thermometer* is the most commonly used tool for its evaluation (Ownby, 2019).

The *Distress Thermometer* requires participants to select a level of distress, zero representing no distress and ten representing extreme distress. Translated into many languages, the *Distress Thermometer* is used globally to routinely assess distress in cancer patients (Ownby, 2019). Strong evidence of the validity of the *Distress Thermometer* is lacking, as cutoff points for clinical levels of distress differ by culture and cancer type and severity (Al-Shaaobi et al., 2021). However, for the purposes of the current study, measures on the *Distress Thermometer* were used for participant screening and pre- and posttesting. It was not used to make clinical decisions or referrals. This tool allows for assessment of self-reported distress quickly and easily and can aid in understanding of the client experience through statistical analysis.

PROMIS Measures

Created by the National Institute of Health, the *Patient-Reported Outcomes Measurement Information System* (PROMIS) provides helpful screening measures for disability, disparities, and communication (PROMIS, 2021). Research suggests that the PROMIS assessments are reliable and valid in tracking health-related changes over time (Hays et al., 2018). Development

of a PROMIS scale requires exhaustive literature searches surrounding existing measures, interviews to address language and relevance, psychometric testing to develop an item bank, and comprehensive validation studies (PROMIS, 2021).

The *PROMIS-Meaning and Purpose* is a 37-item scale that measures an individual's perception of meaning and purpose of life (See Appendix D) (PROMIS Health Organization, 2017). Using a literature review and expert consultation, the measure was created using item response theory (Salsman et al., 2020). The *Meaning and Purpose* scale shows promising convergent validity and internal consistency, meaning that this assessment is accurate in measuring perceptions of meaning and purpose of life. As a newly created measure, this tool has not undergone rigorous validation and reliability studies further than the initial validation studies conducted by the NIH (Salsman et al., 2020). However, preliminary findings provide strong support for use of the *PROMIS-Meaning and Purpose* measure for understanding positive psychological processes (Salsman et al., 2020; PROMIS, 2021).

The *PROMIS-Psychosocial Illness Impact-Positive* (PROMIS Health Organization, 2016) addresses the positive psychosocial processes of illness (See Appendix E). More specifically, the measure assesses the outcomes of illness that result from the realization of one's mortality. Items in this scale are worded to facilitate a positive emotional response to illness. The *Psychosocial Impact Positive* scale provides a measure of how illness has affected the respondent using 39 items created using item response theory.

The PROMIS network follows a detailed procedure to create PROMIS outcome measures (Riley et al., 2011). The items in each assessment are created using empirically based perspectives and conceptual models. Large calibration samples and item response theory analyses are conducted before the measure undergoes validation studies (Riley et al., 2011;

PROMIS, 2021). The two listed PROMIS measures—*Meaning and Purpose*, and *Psychosocial Illness Impact-Positive*– represent validated measures of participants' current perceptions of meaning of life and positive psychosocial impacts of their illness.

Adapted Modified Interest Checklist

The *Modified Interest Checklist* is a self-report assessment of past, current, and desired participation in leisure occupations (Kielhofner & Neville, 1983). The full checklist contains 68 items and is useful in identifying leisure activities. This checklist was created using MOHO, the theoretical framework for the development of group interventions.

In the current study, an adapted version of the *Modified Interest Checklist* was used to identify occupations of interest within our cancer survivorship group. The checklist was adapted to account for practical limitations of the intervention. The findings from this assessment were intended to identify general areas of interest, avoid undesired or unfeasible occupations, and plan sessions of the intervention program. A full version of the adapted *Modified Interest Checklist* can be found in Appendix F.

Intervention

This cancer survivorship research included pretest data collection, eight weeks of occupation-based group engagement intervention, and posttest data collection. Group sessions were facilitated by the research team, made up of three master's students and one faculty member from the Department of Occupational Therapy. Sessions were held on Monday afternoons in an occupational therapy department classroom on the Health Sciences Campus at East Carolina University. Appendix G outlines the occupational focus and group goals for each of the eight sessions, including gardening, artistic expression, and social game participation. Occupational focuses were selected using the information gathered from the adapted *Modified*

Interest Checklist. All sessions were focused on identifying and implementing leisure activities into one's daily life.

Materials and spaces were prepared prior to the 90-minute group session by members of the research team. Sessions followed the general structure of (1) introduction to the activity, (2) opening discussion question, (3) statement of goals, (4) engagement in activity, and (5) guided reflection. The introduction and opening discussion (10-15 minutes) included discussion of the session's agenda, group goals, and open-ended questions regarding the previous or current group session. The majority of the 90-minute session (45-60 minutes) was spent engaging in the selected leisure activity. The guided reflection (15 minutes) included open-ended questions regarding the participants' experience with the session's leisure activity and potential for future leisure participation. After participants left the session, the research team discussed successes and challenges in the group implementation, improvements for future sessions, and focused topics of subsequent sessions. See Appendix H for a detailed outline of each session plan.

Procedure

Upon approval from the Institutional Review Board, the descriptive data, *Distress Thermometer*, and the two PROMIS measures were configured with the REDCap database for survey distribution. The research team began recruitment efforts to identify participants. Cancer survivors interested in study participation contacted the research team via email or telephone to receive more information and further steps for participation. During the initial communication between the potential participant and research team, the time commitment for and purpose of the study was described. Participants provided written informed consent to participate in the intervention program prior to data collection.

Upon receiving consent, participants were provided with a link to the REDCap survey via email. Participants completed the demographic measures, *Distress Thermometer,* and two PROMIS measures using the online survey. Participants' names were de-identified and replaced with a number in the order in which they completed the pretest survey. Following completion of pretest data collection, a phone call was scheduled between each participant and one member of the research team to complete the adapted *Modified Interest Checklist*. During this phone call, the researcher and participant discussed occupations of interest and those that should be avoided during the upcoming interventions, due to physical and/or other personal limitations.

Prior to holding group sessions, the research team met to review the findings from the adapted *Modified Interest Checklist* and develop occupation-based sessions that might interest the identified participants. A leadership role was assigned to one of the research team members for each of the eight sessions. The research team determined that the leader for each group session would be primarily responsible for writing the session's goals and developing a plan for the occupation-based activity and guided reflection. All research team members were responsible for assisting with session set-up, engaging with participants, implementing the activity, and contributing to guided reflection. The session leader provided the session plan to the research team prior to the session, and the faculty member coordinated the purchase of materials required for the session. Session focuses were adjusted as needed by the research team to account for unexpected group interests, requests, or concerns. Sessions were held for eight weeks during Fall 2022.

At the end of the eight-week program, participants completed the same online REDCap survey from pretest data collection, excluding the demographic form. Participants were compensated for their participation in the study based on their attendance record of group

sessions. Other members of the research team conducted semi-structured interviews for qualitative analysis; however, these results will be reported elsewhere.

Data Analysis

Demographic data collected during the pretest were analyzed using descriptive statistics. Variables of interest include age, gender, social support, cancer type, course of treatment, and months since active treatment. To test the effect of the group occupation-based intervention on psychosocial wellbeing in cancer survivors, three Wilcoxon signed-rank tests were used to identify any differences between the pretest and posttest medians of the self-reported *Distress Thermometer* measure, *PROMIS-Meaning and Purpose* measure, and *PROMIS-Psychosocial Illness Impact-Positive* measure.

Specifically, the research questions are:

1. Is there a clinically significant difference in pre- and posttest measures of distress following engagement in an eight-week, occupation-based group intervention program?
2. Is there a clinically significant difference in pre- and posttest measures of meaning and purpose of life following engagement in an eight-week, occupation-based group intervention program?
3. Is there a clinically significant difference in pre- and posttest measures of the perceived positive impact of illness following engagement in an eight-week, occupation-based group intervention program?

Chapter 5: Results

Participants

Three female breast cancer survivors (n=3) participated in the study. Two participants attended 8/8 occupation-based sessions, and one participant attended 7/8 occupation-based sessions. The average age of participants was 66 years (SD=3.56), and time since diagnosis and time since final treatment varied among participants. See Table 1 for the sample's descriptive statistics regarding age, time since diagnosis, and time since last treatment.

Table 1

Descriptive Characteristics of Participants

Characteristic	Mean	Standard Deviation	Range
Age (years)	66	3.56	63-71
Time since diagnosis (months)	39.67	7.59	32-50
Time since last treatment (months)	26.33	12.50	17-44

None of the participants reported current involvement or future interest in full- or part-time employment, but one participant engaged in unpaid volunteer work approximately 20 hours per week. All participants reported at least two sources of social support, and no participants reported current involvement in a community cancer survivor support group. Surgery and radiation were the common medical treatments among participants, and two participants received chemotherapy treatment as well. Specific diets and exercise were the most common forms of alternative medicine used in the participants' cancer treatments. None of the participants reported prior engagement in occupational therapy services for their cancer diagnosis. See Table 2 for the sample's demographic information.

Table 2

Participant Demographic Information

Characteristic	*n*	*%*
Race / Ethnicity		
White or Caucasian	1	33
Black or African American	2	66
Employment Status		
Volunteer	1	33
Retired or Disability	2	66
Current Social Supports		
Spouse / Partner	2	66
Other family member(s)	2	66
Friends	2	66
Church or other spiritual support	2	66
Treatment: Medical		
Surgery	3	100
Radiation	3	100
Chemotherapy	2	66
Other medical	1	33
Treatment: Complementary & Alternative		
Specific diets	2	66
Exercise	2	66
Tai Chi/Yoga	1	33
Social/Emotional/Counseling	1	33

Participants reported cancer-related "problem" areas using the *Distress Thermometer* during pretest data collection. Two participants identified worry and depression as distressors in their cancer journeys. The third participant did not identify emotional problems on the *Distress Thermometer* but described pain and stress behaviors. Participants, on average, identified seven physical problems causing cancer-related distress using the *Distress Thermometer*. All participants identified cancer-related fatigue as a physical distressor.

Cancer-Related Distress

A Wilcoxon signed-rank test was used to determine if there was a statistically significant difference in pre- and posttest medians of distress as measured by the *Distress Thermometer*.

Comparison of median levels of distress indicated a downward trend after participation in the occupation-based group. The pretest median of distress was 6.00 (M=6.00, SD=1.00), and the posttest mean was 5.00 (M=4.00, SD=2.65) (See Table 3). Of the three participants, one indicated a decrease in distress, while the other two participants reported no change in distress at the conclusion of the program. The Wilcoxon signed-rank test showed that participation in the intervention program did not elicit a statistically significant change in distress (z=-1.00, p=0.32).

Meaning and Purpose

Participants' mean scores for pre- and posttest measures of meaning and purpose fall within one standard deviation of the average score (mean=50, SD = 10) for the United States general population. Using a Wilcoxon signed-rank test, comparison of pre- and posttest medians of meaning and purpose indicated a downward trend after participation in the occupation-based group (See Table 3). However, the Wilcoxon signed-rank test indicated that this change was not statistically significant regarding meaning and purpose of life (z=-1.64, p=0.11).

Positive Psychosocial Impact of Illness

Participants' mean scores for pre- and posttest measures of the perceived positive impact of illness fall within one standard deviation of the average score (mean=50, SD = 10) for a calibrated population sample, which featured proportionately more chronically ill individuals. A Wilcoxon signed-rank test was used to determine if there was a statistically significant difference in pre- and posttest measures of the perceived positive impact of illness, using the *PROMIS-Psychosocial Illness Impact-Positive*. Comparison of pre- and posttest medians of the perceived positive impact of illness indicated a downward trend after participation in the occupation-based group (See Table 3). However, the Wilcoxon signed-rank test indicated that this was not a statistically significant change in meaning and purpose of life (z=-1.60, p=0.11).

Table 3

Summary of Pre- and Posttest Measures of Psychosocial Wellbeing

	Pretest			Posttest			Wilcoxon	Sig.
	M	SD	Median	M	SD	Median	*z*	*p*
Distress Thermometer	6.00	1.00	6.00	4.00	2.65	5.00	-1.00	.32
PROMIS-Meaning and Purpose	53.50	1.83	53.90	47.17	6.09	49.80	-1.64	.11
PROMS-Psychosocial Illness Impact-Positive	47.97	3.04	48.8	43.57	5.82	44.6	-1.60	.11

The lack of statistical significance between pre- and posttest measures of psychosocial wellbeing using the Wilcoxon signed-rank tests is not surprising with a small sample size. However, quantitative scores, information taken from the guided reflections, and existing literature assisted in interpretation of trends in the results. See Table 4 for the participants' de-identified pre- and posttest quantitative measures.

Table 4

Individual Participants' Pre- and Posttest Quantitative Measures

	Distress Thermometer		*PROMIS-Meaning and Purpose*			*PROMIS-Psychosocial Illness Impact-Positive*		
	Pre	Post	Pre	Post	Difference	Pre	Post	Difference
Participant 1	7	1	53.9	51.5	2.4	50.5	48.8	1.7
Participant 2	5	5	51.5	40.2	11.3	44.6	37.3	7.3
Participant 3	6	6	55.1	49.8	5.3	48.8	44.6	4.2

Chapter 6: Discussion

This study was conducted to explore the impact of group occupational engagement on cancer survivors' psychosocial wellbeing. While the literature describes the social and emotional consequences of cancer, research is limited in supporting the use of psychosocial group interventions with cancer survivors specifically. Although the quantitative data did not indicate statistically significant changes in psychosocial wellbeing between pre- and posttest data collection, results from this study provide important takeaways for occupation- and group-based cancer survivorship care and on-going research about the role of occupational therapy in cancer survivorship.

Despite a small sample size and variation in the participants' cancer survivorship journeys (i.e., time since diagnosis, course of treatment), individual and median levels of cancer-related distress, meaning and purpose, and the psychosocial impact of illness indicate a need for cancer survivorship care. Aside from Participant 1's posttest distress score, all of the reported pre- and posttest measures of distress were greater than five, which is two points greater than the cutoff score for study eligibility. This result is consistent with the literature, as distress tends to persist throughout one's cancer journey as occupational disruptions occur (Vehling & Kissane, 2018). While the *Distress Thermometer* does not have formally accepted cutoff scores for clinical diagnosis, a score of four is recognized in the literature to optimize specificity and sensitivity in indicating clinical levels of psychosocial distress in cancer survivors (Donovan et al., 2014). While the current study used three as a cutoff score for participation, all participants entered the study with a clinically significant level of distress, as described in the literature (Donovan et al., 2014). Although the study intended to reduce distress scores through intervention, the relatively high distress pre- and posttest scores suggest that participants could

benefit from psychosocial intervention, as the *Distress Thermometer's* intended use includes "empower[ing] clinicians to facilitate appropriate psychosocial support" (Ownby, 2019).

Additionally, participants' pre- and posttest scores from the two PROMIS measures are within one standard deviation of the population mean (M=50, SD=10), except for Participant 2's posttest score on the *PROMIS-Psychosocial Illness Impact-Positive*. This finding suggests that, although the sample size is small, the participants' perceived meaning and purpose of life and positive psychosocial response to illness are typical for the cancer survivor population. The quantitative findings, combined with information from the guided reflections, suggest that this study's participants have experienced both negative and positive impacts of cancer, which is consistent with previous literature (Greszta & Siemińska, 2011). For example, the participants reported positive impacts of illness such as strengthened spiritual support, strong social connections, and improved focus regarding priorities in life. Simultaneously, participants reported negative consequences of cancer, such as fatigue, pain, and reduced leisure engagement prior to group participation.

As shown in Table 4, two participants reported no change in distress between pre- and posttesting; however, Participant 1 reported a 6-point decrease in distress between pre- and posttest data collection. During the guided reflection portion of the group sessions, Participant 1 consistently described distressing situations, whereas Participant 2 and Participant 3, whose distress scores did not change between pre- and posttest data collection, rarely described distressing situations and were more positive throughout sessions.

Interestingly, Participant 2 and Participant 1 finished their last cancer treatments within one month of each other and had similar courses of treatment. Despite similar timelines of their cancer journeys, Participant 2 and Participant 1 reported different scores using the *Distress*

Thermometer, suggesting varying responses to the group program. Additionally, Participant 3 reported the highest score on the posttest *Distress Thermometer*, despite finishing treatment almost two years earlier than the other two participants. Without a clear pattern, no definitive conclusions can be made regarding the correlation between time since the last treatment and cancer-related distress. This finding is consistent with the literature, which describes cancer-related distress as fluctuating in nature and only somewhat dependent on severity of cancer and/or amount of time since last cancer treatment (Al-Shaaobi et al., 2021; Greszta & Siemińska, 2011). This finding supports the study's inclusion of cancer survivors despite the time since diagnosis and/or treatment. Future studies should not exclude cancer survivors from participating in psychosocial intervention if the individual demonstrates a basic level of cancer-related distress or another indication for services.

Scores from the two PROMIS measures demonstrated a decrease in perceived meaning and purpose and positive impact of illness, although these changes were not significant. Because of the positive wording on the two PROMIS measures, an increase in scores was desired to show improved psychosocial wellbeing. Despite the unwanted decrease in scores, individual measures of meaning and purpose and the positive psychosocial impact of illness reveal that Participant 2 had a marked reduction in both measures between pre- and posttest data collection, although she reported no change in distress. Interestingly, Participant 1, whose distress decreased the most between pre- and posttest data collection, reported the smallest change in meaning and purpose and the positive psychosocial impact of illness. Although statistical conclusions cannot be drawn from this finding, it is interesting that the two participants who showed no change in distress (Participant 2, Participant 3) showed the greatest decreases in perceived meaning of life and positive impact of illness, while the participant who showed the greatest reduction in distress

(Participant 1) demonstrated minimal changes in perceived meaning of life and positive impact of illness. A possible reason for this finding is the intended use of the *Distress Thermometer*, namely a quick screening tool for cancer-related distress experienced in the past 7 days. While the two PROMIS measures evaluate more complex components of psychosocial wellbeing, the *Distress Thermometer* is inefficient in fully describing one's consistent level of cancer-related distress. It is recommended that the *Distress Thermometer* be used only to assess participants' need for psychosocial intervention, rather than as a quantitative measure to determine changes in psychosocial wellbeing in future research.

The variation in participants' individual and mean scores are consistent with the literature, such that cancer-related distress and positive adjustment to illness can occur simultaneously, and both shift significantly throughout one's cancer journey (Greszta & Siemińska, 2011). Additionally, how a cancer survivor responds to their illness is highly variable, and partially dependent on personality traits, such as self-efficacy (Greszta & Siemińska, 2011). Guided reflections during group sessions revealed that Participant 1 responded maladaptively in non-cancer related, negative situations; she frequently perseverated on negative events and shared complaints with the group. In contrast, Participant 2 and Participant 3 often provided encouragement to the other group members and remained positive throughout sessions. Yet, Participant 2 and Participant 3 reported lower scores of psychosocial wellbeing compared to Participant 1. This finding is partially attributed to the differences in participants' level of comfort in sharing honestly while completing the virtual pre- and posttest measures versus sharing aloud with the group. Perhaps Participant 2 and Participant 3 felt more comfortable reflecting on distressing situations using the online data form because it is more anonymous in nature, while sharing during group discussion requires more vulnerability.

In addition to key personality differences, the participants described significant life events that may have had an effect on their perceived psychosocial wellbeing during pre- and posttest data collection. Thus, it is difficult to attribute any changes in psychosocial wellbeing to the group process alone, considering the fluctuating nature of distress levels, complex nature of one's perceived quality of life, and the lack of specificity for small changes in the quantitative measures.

The current study utilized MOHO as the theoretical framework to develop the intervention. The research team aimed to use group engagement to promote gains in self-efficacy, positive routines, and skills for leisure participation. While there was no formal measure of carry-over between sessions, during the guided reflection, participants often reported attempting the previous week's occupation outside of group meetings. Although the primary focus of each group session was participation in the selected occupation, the research team also incorporated broader occupational therapy concepts into each session. For example, during Week 4's session (Routines to Rituals: Making the Mundane Meaningful), the team leader described the difference between a routine versus a ritual and discussed ways to elevate daily routines to be more meaningful (See Appendix H). Providing broader guidance for successful occupational participation allowed participants to generalize skills from the session's selected occupation to other daily activities. While MOHO was utilized in the intervention process, it is recommended that future studies incorporate formal measures of habits, roles, and routines into data collection to draw more informed conclusions of the intervention program's impact on occupational engagement as means to improve psychosocial wellbeing.

Although there were no statistically significant outcomes from the group intervention, all participants reported positive experiences throughout the survivorship program. The guided

reflection portion of each group session facilitated discussions regarding the experience of engaging in an occupation surrounded by other cancer survivors, which were documented in weekly field notes. Participants described the enjoyment of (1) having a reason to get out of the house, (2) being guided through a new occupation, and (3) engaging with others outside of their typical social circles. Participants often reported engaging in the previous session's occupation during the following week, demonstrating progress toward occupational carryover and engagement in leisure occupations. Participants expressed the desire to stay later during sessions. The women did not want the group to end at the conclusion of the eight-week program, and they voiced interest in attending in future semesters to continue to engage in new occupations and meet other cancer survivors.

Limitations

A primary limitation of this study is the small sample size, which prevented generalization of results to the cancer survivor population. The small sample size limited the research team's ability to analyze data using non-parametric methods. A larger sample size is needed to identify if a statistically significant change occurred in psychosocial wellbeing using the current intervention due to a potentially small to medium effect size. Increasing the sample size, inclusion of more robust statistical methods, and considering other instruments to measure change may elicit more meaningful statistical results for future iterations of the study.

Beyond data analysis, it is suspected that the small sample size influenced components of the group process. There were more members of the research team leading each occupational session than there were cancer survivors participating in each session. The research team's participation in each group session may have limited objectivity and influenced the relationships between participants. Despite recruitment efforts in the community, the extensive time

commitment and the scheduled meeting time posed barriers to participation for more participants.

The length of the intervention program also limited the participants' ability to achieve group goals and find lasting improvements in their psychosocial wellbeing. The first 3-4 sessions of the program consisted of more introductory and surface-level reflections and occupational exploration as the participants were acclimated to each other and the group process. Because of the introductory period, only 4-5 sessions consisted of more meaningful reflection and occupational exploration. Additionally, since a new activity was introduced each week, there was limited opportunity to explore possible integration of novel occupations in the participants' daily lives. Other studies of cancer survivorship groups that target leisure and/or general occupational engagement utilize a range of lengths of intervention (1-12 weeks) (Udovicich et al., 2020). Despite differences in program durations, other cancer survivorship groups target more refined areas of engagement in leisure occupations, which promotes carryover and generalization of reflection and engagement (Udovicich et al., 2020).

Future Directions

Findings from this pilot study provide guidance for future occupation-based group interventions with cancer survivors. First, future studies should enhance recruitment efforts to increase group size, thereby providing greater statistical inference and to gain a deeper understanding of the therapeutic benefits of this survivorship model. Because there were more members of the research team than participants, there may have been less group cohesion among cancer survivors. Ideally, based on the literature regarding the occupational therapy group process, a group with five to ten participants is optimal to improve the therapeutic utility of group intervention (Weis, 2003). Additionally, researchers should consider a longer duration of

the group program to provide long-term support for participants. Although other studies of cancer survivorship groups have a range of durations, at the conclusion of the program, all participants expressed the desire to continue with the survivorship after the eight weeks (Udovicich et al., 2020). By increasing the group size and program duration, there is greater opportunity to create strong therapeutic bonds and promote carryover of occupational engagement into daily life.

Secondly, in observing the engagement patterns of participants between sessions, it is recommended that the goals of each session continue to be explicitly discussed with the participants prior to the group activities. The research team observed more meaningful participation in the selected occupation when the goals and benefits of engagement were explained in simple terms to participants. The guided reflections revealed that the participants preferred to be guided through each session by the research team rather than participate in a self-directed session.

In addition to emphasizing the group goals, it is recommended that future studies narrow the occupational focuses of group sessions. Other studies of cancer survivorship groups have revealed statistically significant improvements in variables related to psychosocial wellbeing, despite a shorter program duration, when the occupational engagement is concentrated to a refined area of leisure (Udovicich et al., 2020). While the current study utilized an adapted version of the *Modified Interest Checklist* to gauge interest in different occupations, it is suspected that participants would be more successful in meeting specific group goals if the occupations were focused to a specific leisure area (i.e., table-top occupations, artistic expression). For further analysis of the survivors' patterns of occupational engagement, it is recommended that development of habituation be addressed. For example, researchers could

require an activity log to record occupational engagement outside of group sessions and/or provide guidance to engage in the targeted activity in the community. Addressing carryover of occupational engagement is consistent with MOHO, the theory in which this study is grounded. This client-centered model emphasizes the importance of motivation and habituation to occupational engagement, which should be utilized more distinctly in future studies of occupation-based survivorship groups to promote positive patterns of leisure engagement.

Lastly, future research studies are recommended to use different and/or additional assessments to determine changes in psychosocial wellbeing, with a greater focus on changes in participants' engagement in occupation rather than broader concepts of QOL. Anecdotally, the participants described improvements in psychosocial wellbeing during group participation, and they reported overall satisfaction with the social aspect of the program. The NIH has developed nine PROMIS measures of Social Health, which may be beneficial in explaining group benefits related to survivors' social participation. The current study's instruments may not have been sensitive enough to changes resulting from the intervention. Additionally, because the literature suggests that personality differences impact one's cancer survivorship journey, assessments of self-efficacy and resiliency may further explain results (Greszta & Siemińska, 2011). For example, the NIH has developed and validated multiple PROMIS-Self-Efficacy tools for evaluating one's confidence in dealing with adverse situations. Including an assessment of self-efficacy may be beneficial in describing the psychosocial trends from other measures.

Key outcomes of other occupation-based cancer survivorship groups include engagement, performance, and satisfaction in occupation (Udovicich et al., 2020). Additionally, other studies rely on more subjective measures of occupational engagement, such as the Canadian Occupational Performance Measure, to obtain data regarding occupational engagement. Because

this study is grounded in MOHO, it is logical to explore participants' motivations and habits surrounding engagement in leisure occupations using MOHO assessments. As lack of research evidence continues to pose a barrier to occupational therapy's defined role in cancer survivorship care, it is recommended that future studies continue to incorporate strong quantitative measures into data collection in order to draw statistically-informed conclusions about the intervention's effectiveness.

Chapter 7: Conclusion

The literature indicates a need for psychosocial intervention for cancer survivors, due to the observed increase in social and emotional distress that begins with a cancer diagnosis and persists throughout the survivorship journey. And while there is support for some group-based interventions to facilitate adjustment to survivorship, there is limited research related to occupational therapy to support occupation- and group-based interventions to impact psychosocial variables and wellbeing. Thus, this study explored the impact of group occupational engagement on cancer survivors' perceived psychosocial wellbeing.

The current intervention included eight weeks of occupational engagement in leisure occupations, in addition to pre- and posttest data collection of quantitative measures of cancer-related distress, meaning of and purpose in life, and the perceived positive impact of illness. Although data analysis did not indicate statistically significant improvements in variables of psychosocial wellbeing, this pilot study demonstrates a continued need for cancer survivorship research and provides guidance for future occupation-based cancer survivorship groups.

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Appendix A
IRB Approval Letter

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board
4N-64 Brody Medical Sciences Building • Mail Stop 682
600 Moye Boulevard • Greenville, NC 27834
Office **252-744-2914** • Fax **252-744-2284** •
rede.ecu.edu/umcirb/

Notification of Exempt Certification

From: Social/Behavioral IRB
To: Heidi Kreis
CC: Lynne Murphy
Date: 8/15/2022
Re: UMCIRB 22-001140
Cancer Survivorship Group Engagement

I am pleased to inform you that your research submission has been certified as exempt on 8/14/2022. This study is eligible for Exempt Certification under category # 2a.

It is your responsibility to ensure that this research is conducted in the manner reported in your application and/or protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

Document	Description
Benign Behavioral Interventions Consent_Cancer Survivorship Study.docx(0.01)	Consent Forms
Consent Form Revised(0.01)	Consent Forms
Consent_Cancer Survivorship Study Revision 2.docx(0.01)	Consent Forms
Demographic Form 2022 (1).docx(0.01)	Data Collection Sheet
Demographic Questionnaire (0.01)	Surveys and Questionnaires
Distress Thermometer(0.01)	Surveys and Questionnaires
Email Template for Recruitment.docx(0.01)	Recruitment Documents/Scripts
HKreis_MastersThesisProposal .docx(0.01)	Study Protocol or Grant Application
Interview Questions Post-Test(0.01)	Interview/Focus Group Scripts/Questions
PROMIS Bank v1.0 - Meaning and Purpose 6-26-2017.pdf(0.01)	Surveys and Questionnaires
PROMIS Bank v1.0 - Psychosocial Illness Impact Pos 6-26-2016.pdf(0.01)	Surveys and Questionnaires
Surviving To Thriving Flyer front and back REVISED.pdf(0.02)	Recruitment Documents/Scripts

For research studies where a waiver or alteration of HIPAA Authorization has been approved, the IRB states that each of the waiver criteria in 45 CFR 164.512(i)(1)(i)(A) and (2)(i) through (v) have been met. Additionally, the elements of PHI to be collected as described in items 1 and 2 of the Application for Waiver of Authorization have been determined to be the minimal necessary for the specified research.

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

IRB00000705 East Carolina U IRB #1 (Biomedical) IORG0000418
IRB00003781 East Carolina U IRB #2 (Behavioral/SS) IORG0000418

Appendix B
Demographic Form

From Surviving to Thriving: An Activity-Based Cancer Survivor Group
Demographic Form

Coded (De-identified) Name: _____

Thank you for agreeing to participate in our study, to determine more about how engaging in various group activities can promote social and emotional wellbeing after cancer. The following information helps us to understand who is participating in the group, and what might influence the outcomes of the program.

If there is anything that you do not feel comfortable answering, you may simply leave it blank.

Today's Date:

Your current age:

Gender Identity
- ☐ Male
- ☐ Female
- ☐ Other or choose not to answer

Race / Ethnicity
- ☐ White or Caucasian
- ☐ Black or African American
- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Pacific Islander
- ☐ More than one race / ethnicity
- ☐ Other or no response

Current Employment Status:
- ☐ Employed full-time
- ☐ Employed part-time
- ☐ Volunteer
- ☐ Retired or Disability
- ☐ Currently seeking employment
- ☐ Currently not employed

Current Social Supports:
- ☐ Spouse / Partner
- ☐ Other family member(s)
- ☐ Friends
- ☐ Community support group
- ☐ Church or other spiritual support

Type / location of cancer:

Month / Year of initial diagnosis:

Date of last treatment or procedure related to this diagnosis:

Other medical conditions / co-morbidities:

What type of treatments have you undergone? (Choose all that apply)

Medical

- ☐ Surgery
- ☐ Radiation
- ☐ Chemotherapy
- ☐ Immunotherapy
- ☐ Targeted therapy
- ☐ Hormone therapy
- ☐ Stem Cell Transplant
- ☐ Other medical

Complementary and Alternative

- ☐ Specific diets
- ☐ Exercise
- ☐ Acupuncture
- ☐ Reiki
- ☐ Tai Chi / Yoga
- ☐ Animal-assisted therapy
- ☐ Social / Emotional / Counseling
- ☐ Mindfulness / Meditation / Spiritual
- ☐ Other integrative approaches

Have you ever participated in occupational therapy related to your cancer diagnosis?

- ☐ Yes, acute care
- ☐ Yes, out-patient
- ☐ Yes, home care
- ☐ Yes, other
- ☐ Not sure
- ☐ No

Appendix C
Distress Thermometer

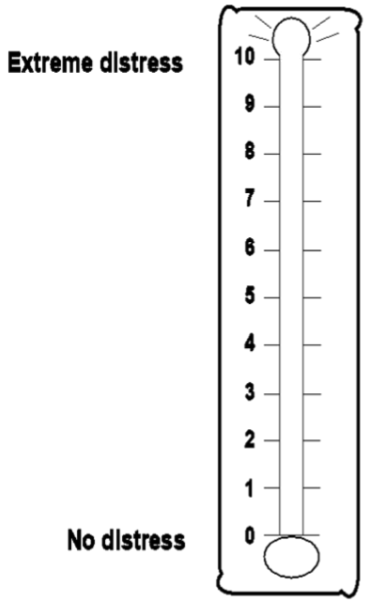
National Comprehensive Cancer Network®

NCCN Distress Thermometer and Problem List for Patients

NCCN DISTRESS THERMOMETER

Distress is an unpleasant experience of a mental, physical, social, or spiritual nature. It can affect the way you think, feel, or act. Distress may make it harder to cope with having cancer, its symptoms, or its treatment.

Instructions: Please circle the number (0–10) that best describes how much distress you have been experiencing in the past week including today.



PROBLEM LIST

Please indicate if any of the following has been a problem for you in the past week including today.
Be sure to check YES or NO for each.

YES	NO	Practical Problems
☐	☐	Child care
☐	☐	Food
☐	☐	Housing
☐	☐	Insurance/financial
☐	☐	Transportation
☐	☐	Work/school
☐	☐	Treatment decisions
		Family Problems
☐	☐	Dealing with children
☐	☐	Dealing with partner
☐	☐	Ability to have children
☐	☐	Family health issues
		Emotional Problems
☐	☐	Depression
☐	☐	Fears
☐	☐	Nervousness
☐	☐	Sadness
☐	☐	Worry
☐	☐	Loss of interest in usual activities
☐	☐	**Spiritual/religious concerns**

YES	NO	Physical Problems
☐	☐	Appearance
☐	☐	Bathing/dressing
☐	☐	Breathing
☐	☐	Changes in urination
☐	☐	Constipation
☐	☐	Diarrhea
☐	☐	Eating
☐	☐	Fatigue
☐	☐	Feeling swollen
☐	☐	Fevers
☐	☐	Getting around
☐	☐	Indigestion
☐	☐	Memory/concentration
☐	☐	Mouth sores
☐	☐	Nausea
☐	☐	Nose dry/congested
☐	☐	Pain
☐	☐	Sexual
☐	☐	Skin dry/itchy
☐	☐	Sleep
☐	☐	Substance use
☐	☐	Tingling in hands/feet

Other Problems: _____

Appendix D
PROMIS-Meaning and Purpose

PROMIS® Item Bank v.1.0 – Meaning and Purpose

Meaning and Purpose

Please respond to each item by marking one box per row.

		Not at all	A little bit	Somewhat	Quite a bit	Very much
PA215_C	I have a reason for living.....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA216_C	My life has been productive.....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA217_C	I feel a sense of purpose in my life.....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA218_C	I can make sense of my existence	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA219_C	My life has value.....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA220_C	I understand that there is a reason for my life.....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA221_C	My life has meaning.....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA222_C	The things I do in my life are of significance.....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA223_C	I can make sense of my life.....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA224_C	My life has significance	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA225_C	The things I do in my life are of value	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA226_C	I have a clear understanding of what life is about.....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA227_C	I have a clear sense of direction in life.....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

		Not at all	A little bit	Somewhat	Quite a bit	Very much
PA228_C	I feel that my life has meaning	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA229_C	My life is fulfilling	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA230_C	My life matters	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA231_C	I can understand my life	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA232_C	I experience deep fulfillment in my life	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA233_C	I am positive about my future	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA234_C	I know where I am going in life	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA235_C	I can reach my goals in life	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA236_C	My life is filled with meaning	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA237_C	My life has purpose	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
		Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**
PA201_C	I understand my life's meaning	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA202_C	My life has a clear sense of purpose.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA203_C	I have a good sense of what makes my life meaningful.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
PA204_C	I have discovered a satisfying life purpose.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA205_C	I generally feel that what I do in my life is valuable and worthwhile.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA206_C	My daily life is full of things that are interesting to me.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA207_C	To me, the things I do are all worthwhile. .	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA208_C	I value my activities a lot	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA209_C	I have lots of reasons for living	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA210_C	I have very clear goals and aims for my life	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA211_C	I understand the world around me.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA212_C	I realize my life has a great deal of personal meaning to me.	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA213_C	My life as a whole has meaning	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
PA214_C	My life makes sense to me	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Appendix E
PROMIS-Psychosocial Illness Impact-Positive

PROMIS Item Bank v1.0-Psychosocial Illness Impact-Positive

Psychosocial Illness Impact-Positive

Please respond to each question or statement by marking one box per row.

Thinking about how your illness has affected you, please rate how true these statements were of you before your illness, and again now, since your illness.

		Not at all	A little bit	Somewhat	Quite a bit	Very much
II2	I am comfortable with who I am					
II2-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II2-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II3	I believe I can handle problems					
II3-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II3-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II4	I believe I am a confident person					
II4-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II4-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II5	I believe I am a good person					
II5-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II5-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II6	I appreciate the health of my body					
II6-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II6-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5

Thinking about how your illness has affected you, please rate how true these statements were of you before your illness, and again now, since your illness.

		Not at all	A little bit	Somewhat	Quite a bit	Very much
II7	I am an optimistic person					
II7-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II7-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II8	I can keep going when problems arise					
II8-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II8-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II9	I can handle most anything					
II9-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II9-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II10	I believe I am a patient person					
II10-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II10-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II11	I believe I am an honest person					
II11-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II11-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II12	I know who I can count on in times of trouble					
II12-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II12-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5

Thinking about how your illness has affected you, please rate how true these statements were of you before your illness, and again now, since your illness.

		Not at all	A little bit	Somewhat	Quite a bit	Very much
II13	I have compassion for others					
II13-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II13-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II15	My relationships are meaningful					
II15-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II15-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II16	I am aware of the love and support available from other people					
II16-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II16-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II17	I realize who my real friends are					
II17-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II17-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II18	I am comfortable receiving help from others					
II18-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II18-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5

Thinking about how your illness has affected you, please rate how true these statements were of you before your illness, and again now, since your illness.

		Not at all	A little bit	Somewhat	Quite a bit	Very much
II19	I can appreciate people in my life					
II19-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II19-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II20	I am willing to help others					
II20-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II20-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II21	I make time for family and friends					
II21-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II21-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II22	I feel connected to people in my community					
II22-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II22-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II23	I feel close to people I care about					
II23-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II23-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II24	I am willing to express my emotions					
II24-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II24-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5

Thinking about how your illness has affected you, please rate how true these statements were of you before your illness, and again now, since your illness.

		Not at all	A little bit	Somewhat	Quite a bit	Very much
II25	I am able to accept the way things work out					
II25-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II25-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II26	I can deal with uncertainty					
II26-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II26-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II27	I can adjust to things I cannot change					
II27-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II27-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II28	I am able to take things as they come					
II28-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II28-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II29	I am able to deal with stress and problems					
II29-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II29-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II30	I tend to be accepting of things					
II30-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II30-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5

Thinking about how your illness has affected you, please rate how true these statements were of you before your illness, and again now, since your illness.

		Not at all	A little bit	Somewhat	Quite a bit	Very much
II31	I take good care of myself					
II31-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II31-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II32	I look at things in a positive way					
II32-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II32-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II33	I am able to feel joy					
II33-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II33-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II34	I am able to enjoy life					
II34-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II34-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II35	I can appreciate each day fully					
II35-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II35-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5

Thinking about how your illness has affected you, please rate how true these statements were of you before your illness, and again now, since your illness.

		Not at all	A little bit	Somewhat	Quite a bit	Very much
II36	My life is meaningful					
II36-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II36-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II37	I appreciate life					
II37-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II37-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II39	I have a sense of purpose in life					
II39-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II39-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II40	I feel peaceful					
II40-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II40-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II43	I have a sense of peace					
II43-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II43-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II46	I see what is really important in my life					
II46-B	How true was this before your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5
II46-A	How true is this now, since your illness?	☐ 2	☐ 2	☐ 3	☐ 4	☐ 5

Appendix F
Adapted from Modified Interest Checklist

Activity	Do you currently participate in this activity?		Would you like to pursue this activity in the future?		
	Yes	No	Yes	Maybe	No
Gardening					
Sewing, crocheting, knitting					
Playing cards					
Walking					
Dancing					
Writing					
Golf					
Listening to music					
Puzzles					
Movies					
Speeches/lectures					
Bowling					
Checkers/chess					
Reading					
Pottery					
Table games					
Handicrafts					
Playing an instrument					
Exercise					
Tennis					
Cooking					
Baking					
Fishing					
Science					
Photography					
Painting					
Drawing					
Craft for healthcare worker					
Craft for children in the hospital					

Other: [Type response]

Adapted from the Modified Interest Checklist (Kielhofner & Neville, 1983)

Appendix G
Surviving to Thriving Group Session Breakdown

	Session Plan
Week 1 *9/26/2022*	***Bloom Where You're Planted*** – Gardening Goals: 1. Invest in team membership. 2. Plant flowers and vegetables in raised gardening beds and propagate herbs. 3. Complete group debrief.
Week 2 *10/10/2022*	***Charcuterie Board Décor*** – Décor to use for food preparation and sharing Goals: 1. Invest in team membership and provide mutual support. 2. Design and decorate 12" board to be used for meal prep. 3. Discuss nutrition, self-care, and social participation during debrief.
Week 3 *10/17/2022*	***Styling Fruits & Veggies*** – Creative meal preparation and design Goals: 1. Style a charcuterie board using fruits, vegetables, and dips. 2. Share opinions about styling boards and support group members during steps of activity. 3. Discuss how this activity may influence other home occupations.
Week 4 *10/24/2022*	***Routines to Rituals: Making the Mundane Meaningful*** – New forms of coffee preparation, self-care Goals: 1. Explore ways to elevate one's morning routine. 2. Explore mindfulness practices to make daily activities more meaningful. 3. Discuss how routine activities can become rituals for self-care.
Week 5 *10/31/2022*	***Songwriters Anonymous*** – Creative leisure and emotional expression Goals: 1. Reflect on positive support systems in one's life. 2. Explore the positive benefits of music in one's life. 3. Collaborate with group members to develop uplifting lyrics to a well-known tune.
Week 6 *11/7/2022*	***Creating Comfort with Crochet*** – Needle and yarn art, creative leisure Goals: 1. Discuss occupational flow and how it relates to everyday activities. 2. Learn to hand-crochet a yarn blanket. 3. Explore other opportunities to achieve flow in enjoyable occupations.
Week 7 *11/14/2022*	***Living a Life of Leisure*** – Art leisure Goals: 1. Explore arts as a means to engage in leisure. 2. Create an art piece as a reminder to engage in leisure. 3. Identify strategies to engage in leisure activities regularly.
Week 8 *11/21/2022*	***Never Too Old to Play Games*** – Social participation, leisure Goals: 1. Describe the role that social participation plays in one's life. 2. Explore social participation through various group games. 3. Discuss opportunities for social participation outside of group membership.

Appendix H
Surviving to Thriving Weekly Session Outlines

Session 1

1. Name / Title of Group: Bloom Where You're Planted (Gardening)
2. Purpose and Rationale of Group
   - Cooperative group activity for team building
   - Gardening in raised beds allows for repeated attention to activity (can check progress over several weeks)
   - Propagating herbs to take home can link group activities to home
   - General goals of group: plant vegetables, flowers, herbs in raised beds and propagate herbs to take home
   - Relevance to OT: product-oriented activity that can be used to address personal growth and change, linked to discussion of growth and resilience of plants
3. Group Goals (with associated outcomes)
   - Clients will invest in team membership
     - Icebreaker: fun facts, why you joined the group, any goals you'd like to share?
     - Icebreaker: repeat fun fact of others in group
   - Clients will learn how to garden in raised beds
     - Plant broccoli, cauliflower, lettuce, and kale in one raised bed
     - Plant mums, snapdragons, and seasonal flowers in one raised bed
     - Plant herbs in either raised bed, depending on space
   - Clients will learn how to propagate herbs
     - Propagate cilantro, parsley, oregano, rosemary in water
     - Propagate lavender, mint in soil
   - Clients will complete group debrief
     - Discuss opportunities for growth and resilience
     - Discuss how today's activities may influence home occupations
     - Discuss what parts of today's activities (if any) might be continued beyond the group
4. DETAILED Group Activities
   - 3:15-3:30 Meet clients outside, issue parking pass (tell them to use each week), direct to clinic parking lot. Once in building, direct them to Room 1305 and orient to restrooms, water fountains
   - 3:30-3:35 Sign consent forms, give them a blank copy to keep. Give them one of our recruitment cards for easy access to contact information (Add Murphy cell phone)
   - 3:35-3:45 Icebreaker and Introduction
     - Icebreaker "Name Game"
     - Using the letters of your name, write something about you that begins with or includes that letter
     - Share with group
     - Murphy to introduce group purpose and research. Determine gardening experience within a group.
     - Explain what we're doing today, gardening zones, resources.
   - 3:45-4:15 Move to patio outside room 1330. Make plan for spacing of items, plant vegetables, herbs, flowers in the 2 beds. Decide which herbs to plant, which to propagate (plant chives, they don't propagate well).
   - 4:15-4:45 Depending on weather, we can use table on patio, or move back to 1305. Follow guide for propagating in water or soil.
   - 4:45-5:00 Debrief

    - Gardening was chosen because it is a bit of a metaphor for human life: nature intends us to grow and flourish but there are always barriers and pitfalls along the way. Plant needs to be nourished, it needs a positive and encouraging environment, and although it can be strong alone it sometimes needs care (from the gardener, bees, rain, or sun, etc.).
    - Can you relate any part of your current situation to a plant lifecycle? Do you currently need to be nourished and supported? Are you in a position to do that for others? Have people done that for you in your journey following a cancer diagnosis?
    - Was this new or something you've done before? What has made that successful or challenging for you in the past?
    - Is it something you would like to continue? (Alone or with others?) How can you address the past barriers?
    - Are you excited about watching the herbs grow? How might you use the herbs?
    - Develop a plan to care for the plants. Who is going to water them or check on them? How often? (Let's ask group members if they want to share this with us – they can access the patio from outside.)
    - Plan for "harvest" of items. How can we enjoy these?
    - Some future ideas based on interests…….
- 5:00-5:30 Team to clean and re-set area.
    - Go to ONEDRIVE to write in field notes and mark attendance (write in anything you noticed about participants that may be relevant or interesting to answer our research questions).
    - Discuss plan for Heidi's leadership next week.
    - Set up recurring meeting for group planning. I'll need time to get supplies and equipment each week, and we'll need to plan ahead of fieldwork week.

5. Time, Environment, Supply Considerations
    - Set up all planting materials on patio. RED TAPE ON CONCRETE EDGE TO PREVENT FALLS.
    - Fill watering can before group.
    - Team needs to be ready early today for parking passes
    - Will start / end in Room 1305 but will need to be outside for raised garden beds
    - RAIN / HEAT PLAN: team will need to move raised beds under covered outside areas near 1330, and we'll need to move them back as weather permits
    - Bring chairs from lab outside so people can sit if needed. MAKE SURE THEY ARE STABLE BEFORE YOU HAVE CLIENT SIT DOWN.
    - Always prep for extra time – we can plan future groups and brainstorm ideas if this goes more quickly than planned. Consider what participants have told you to date!
6. Supplies and Cost
    - Plants, potting soil, rooting powder, mason jars, flower pots, gardening gloves, raised beds have been purchased. ($67 spent for this group)
    - Bring watering can(s), towels to clean hands, cardboard for bottom of pots, sharp scissors for propagating.
    - Table coverings for propagation.
    - Because I have done this late, I am providing a poor example. Please list items we already have, then items we need to purchase. Provide purchase link and cost.
    - Update budget list in ONE DRIVE.
7. Group Roles, Limitations and Adaptations
    - Leader: Murphy
    - Team should participate in all activities – assist group members as needed and participate if they are independent. We are in this WITH them. (I don't want any group member to feel we are separate or somehow superior in this type of group. We are learning and trying new things WITH

them, we are not necessarily experts. That will provide them with an example of what we are asking them to do – try new occupations.)

- Please participate with me in the introductions, debrief, etc. Use your therapeutic use of self!!!

Session 2

1. Name / Title of Group: Charcuterie Board Décor
2. Purpose and Rationale of Group
   - Cooperative group activity for team-building and deepening connections
   - Decorating a board for charcuterie presentation encourages either group interaction in social setting (i.e. hosting or bringing snacks with friends) or even treating a solitary snack or meal as special. Can encourage nutrition and healthy eating.
   - Creative activity of decorating board as desired facilitates decision-making, creativity, and control of activity.
   - Link to next week's activity of charcuterie board "styling" to encourage continued participation.
   - General goals of group: decorate blank board for charcuterie styling; alternate is to use as home décor
   - Relevance to OT:
     - product-oriented activity for self-esteem
     - creativity to encourage greater participation in leisure and social activities
     - link to nutrition aspects of self-care
3. Group Goals (with associated outcomes)
   - Clients will invest in team membership and provide mutual support
     - Share opinions about type of design and use of boards
     - Support other group members during steps of activity
   - Clients will design and decorate 12" board (ideal use is charcuterie board, optional use is home décor)
     - Sand board
     - Paint base design (blackboard, stain, or paint and possibly dry brush)
     - Apply stencil if desired, pain, seal
     - Discuss options for "feet," handles, etc.
   - Clients will complete group debrief
     - Discuss opportunities for nutrition, self-care, social participation
     - Discuss how today's activities may influence home occupations
     - Discuss what parts of today's activities (if any) might be continued beyond the group
4. DETAILED Group Activities
   - 3:30-3:45: Introduce activity, discuss options for boards. (Bring consent forms for any new participants.) Ask about the plants from last week – progress on herb cuttings? Update on planter beds/
   - 3:45-4:30 Make boards (detailed instructions attached)
   - 4:30-5:00 Debrief
     - Food is often a component of socializing with others, and charcuterie presentations are a nice way to offer snacks or lighter food options for guests. Having serving pieces you enjoy can contribute to offering to host others.
     - If you have a personal goal to eat healthier, and it seems boring, laying out a healthy charcuterie option can be a way to make those foods seem more appetizing and fun. By organizing food in attractive ways, it makes solitary meals feel a little more special.
     - If you want "treat" foods, presenting them in an attractive and fun way can make them feel even a bit more indulgent, and by arranging in pretty ways, managing portions is easier.
     - The first step is making the board – today
     - The second step is food options – next week.
     - Debrief discussion
       - Do you usually eat alone or with others?

        - How did you socialize around food in the past ? Has that changed? (Can discuss holidays, family / friends, eating out, etc. and social aspects of food)
        - What are some of the ways you manage your health related to food?
        - Has the cancer journey changed your social practices related to eating or snacking?
        - What about the "crafting" aspects of today?
        - Do you feel creative? What benefits do you get from creativity?
        - Does having a product at the end of the session give you any sense of pride or purpose?
        - Was this new or something you've done before? What has made that successful or challenging for you in the past?
        - Is it something you would like to continue? (Alone or with others?) How can you address the past barriers?
        - Can any of our plants from last week be used?
    - 5:00-5:30 Team to clean and re-set area.
        - Go to ONEDRIVE to write in field notes and mark attendance (write in anything you noticed about participants that may be relevant or interesting to answer our research questions).
        - Discuss plan for leadership next week.
        - Set up recurring meeting for group planning. I'll need time to get supplies and equipment each week, and we'll need to plan ahead of fieldwork week.
5. Time, Environment, Supply Considerations
    - Murphy cut stencils ahead and brought to group
    - Sample made
    - Learning lab set up with stencils, transfer tape, paint, sponge brushes, stain, top coat, chip brushes, scissors, chalk, glue gun, twine (if they make a chalkboard design), wooden beads for feet,
    - Combine tables into one square, so people can interact. Supplies on cabinets alongside of Room 3325.
6. Supplies and Cost
    - Boards $9 each
    - All other materials supplied by Murphy
7. Group Roles, Limitations and Adaptations
    - Leader: Murphy
    - Team on Level I FW today!

Session 3

1. Name / Title of Group: Charcuterie Board – Styling Fruits & Veggies
2. Purpose and Rationale of Group
    - General goals of group: style a charcuterie board (or platter) using a variety of dips, fruits, and vegetables
    - Cooperative group activity for team-building and deepening connections, building upon the previous 2 weeks
    - Link to previous week's activity of decorating a wooden charcuterie board for personal and social use
    - Styling a charcuterie board encourages creativity, decision-making, and social participation among group members to share materials and design ideas.
    - Decorating a board for charcuterie presentation encourages either group interaction in social setting (i.e., hosting or bringing snacks with friends) or even treating a solitary snack or meal as special. By styling charcuterie boards with fruits and vegetables, this session provides an opportunity for healthy eating in a fun and interactive environment.
3. Group Goals (with associated outcomes)
    - Clients will style a charcuterie board/platter using provided dips, fruits, and vegetables
        - Place at least one dip (or spread) on the board
        - Prepare fruits and vegetables for placement (cut, slice, cube, peel, etc.)
        - Intentionally place fruits and vegetables on board
    - Clients will invest in team membership and provide mutual support during board design
        - Share opinions about styling the boards (placement, preparation)
        - Support other group members during steps of activity
    - Clients will complete group debrief
        - Discuss opportunities for nutrition, self-care, social participation
        - Discuss how today's activities may influence home occupations
        - Discuss what parts of today's activities (if any) might be continued beyond the group
4. Detailed Group Activities
    - 3:30-3:45: Introduce activity, discuss options for styling. Ask participants about their experience the previous week (to inform Heidi, Ayoola, and Logan).
        - Dr. Murphy updates on planter beds
    - 3:45-4:30: Style boards using dips, fruits, and vegetables. Provide handouts with design ideas and general "rules" of charcuterie board design. Each client should create their own board (they will take home the food they touch)
    - 4:30-5:00: Debrief
        - Food is often a component of socializing with others, and charcuterie presentations are a nice way to offer snacks or lighter food options for guests. Having serving pieces you enjoy can contribute to offering to host others.
        - If you have a personal goal to eat healthier, and it seems boring, laying out a healthy charcuterie option can be a way to make those foods seem more appetizing and fun. By organizing food in attractive ways, it makes solitary meals feel a little more special.
        - If you want "treat" foods, presenting them in an attractive and fun way can make them feel even a bit more indulgent, and by arranging in pretty ways, managing portions is easier.
        - Debrief discussion / questions
            - Has the cancer journey changed your social practices related to eating or snacking?
            - How did you socialize around food in the past? Has that changed? (Can discuss holidays, family / friends, eating out, etc. and social aspects of food)

        - What benefits did you get from creativity with your food? Does pouring yourself into a project give you a sense of pride/purpose?
        - Have you done this before? Would you do this again? Are there other foods you'd like to prepare, and do you feel comfortable trying something new?

5. Time, Environment, Supply Considerations
    - Location: Learning Lab set up with fruits and vegetables (outline below), platters/boards, gloves, cutting boards, knives, cookie cutters, bowls (small and large for presenting and preparing dip), table cover
        - Option 1: Place food and utensils in the middle of the table for easy access
        - Option 2: Place food and utensils on the counter (cabinet side of room) and/or front table of Room 3325
    - Combine tables into a square (or three tables into a rectangle depending on attendance) to support social interaction and sharing of supplies.
6. Supplies and Cost
    - Vegetables
        - Celery (1 package) - $3
        - Cucumber (3) - $3
        - Cherry tomatoes (2) - $7
        - Carrots (1 bag) - $2
        - Bell peppers (red, yellow) - $2
        - Cauliflower (1 head) - $4
    - Fruits
        - Strawberries (2) - $10
        - Pineapple (1) - $3
        - Apples (3 large Gala) - $4
        - Kiwi (pack of 6) - $3
        - Watermelon (1, seedless) - $5
    - Hummus (store bought, plain) - $4
    - Best Veggie dip
        - Mayonnaise (store brand) - $2
        - Sour cream (store brand) - $2
        - Dill weed - $3
        - Minced onion - $4
        - Parsley flakes - $2
        - Salt - $2
    - Peanut Butter & Yogurt dip
        - Peanut butter (small jar) - $2
        - Plain Greek yogurt (store brand) - $5
    - Healthy Fruit dip
        - 4oz cream cheese (store brand) - $2
        - 5oz plain Greek yogurt
        - Honey (store brand) - $4
        - Vanilla (store brand) - $4

Total: $80 *Some items may be supplied by Murphy or students (ex. Only need a small amount of vanilla, dill weed, parsley, etc.)

- All other supplies (i.e., platters, utensils, cutting boards) supplied by Murphy and/or OT department tools

7. Group Roles, Limitations, and Adaptations
    - Leader: Heidi
    - Dr. Murphy, Logan, and Ayoola present

Session 4

Name/Title of Group: Routines to Rituals: Making the Mundane Meaningful
3:30 Welcome & Introductory Activity
Title: Routine to Rituals: Making the Mundane Meaningful
Introductory Activity: Why is the mug you brought your favorite or why does it hold special meaning to you?
3:40 Rationale & Goals
Rationale: OTPF-4 Definitions

- Routine: Patterns of behavior that are observable, regular, and repetitive and that provide structure for daily life. They can be satisfying, promoting, or damaging. Time provides an organizational structure or rhythm for routines. Routines are embedded in cultural and ecological contexts.
- Ritual: Symbolic actions with spiritual, cultural, or social meaning contributing to the client's identity and reinforcing values and beliefs. Rituals have a strong affective component and consist of a collection of events.

Goals:

1. Explore ways to elevate your morning coffee routine.
2. Explore mindfulness practices that could make activities in your daily routine more meaningful.
3. Consider what routine activities are embedded into our day.
4. Consider how you may turn routine activities into rituals for self-care.

3:45 Introduction
Question: How do you typically make your coffee at home?
Compare & Contrast: Cold Brew vs French Press

1. Cold Brew:
    a. Temperature: room temp
    b. Time: 24-30 hours
    c. Grind: course
    d. Roast: medium-dark
    e. Sensory Profile: sweet, smooth, less acidic, delicate/subtle flavors/aromas, cleaner cup
    f. Caffeine: higher, decaf today
2. French Press:
    a. Temperature: near boiling or ~200° F
    b. Time: 5-10 minutes
    c. Grind: course
    d. Roast: medium-dark
    e. Sensory Profile: robust, rich, sharp, dark, very aromatic, dirtier cup
    f. Caffeine: lower, decaf today
3. Customizations:
    a. Cream: dairy, milk alternatives, foam
    b. Syrups: every flavor under the sun, can be made at home
        i. Brown sugar
        ii. Lavender
        iii. Caramel
    c. Spices:
        i. *Cinnamon*
            1. Health Benefits: (take with grain of salt) antioxidant, anti-inflammatory, reduces risk for heart disease, cancer, and supports diabetes management
            2. Cultural/Spiritual Associations: attracts love & good luck, cleanses, protects,
        ii. *Nutmeg*

1. Health Benefits: (take with a grain of salt) antioxidant, anti-inflammatory, antibacterial, could boost mood, control blood sugar, and benefit heart health
2. Cultural/Spiritual Associations: attracts love, justice, money & luck; boosts spiritual connection, safe/adventurous travel

3:55 Make Foam

1. Pour small amount of heavy cream into cup
2. Add small amount of sweetener, spice, flavor if desired
3. Froth with hand-held frother (or whisk, or blender)
4. Set aside to pour over top of coffee

4:00 Cold Brew

1. Filter CB through cheese cloth into pitcher
2. Taste CB
3. Customize with sweetener, flavoring, foam as desired
4. Enjoy CB while starting mini CB kits
5. Make mini CB kits
    a. Grind beans
    b. Add spices if desired
    c. Cut cheese cloth pouch and strip
    d. Tie up grounds in pouch
    e. Place pouch in jar
    f. Fill jar with water
    g. Seal jar
    h. Wait 24 hours
    i. Pour, customize, enjoy

4:20 French Press

1. Bring water to near boil in kettle
2. Place grounds in FP
3. Add spices if desired
4. Once near boil, bloom grounds for 1 minute
5. Fill FP with near boiling water

4:30 Introduce Mindfulness Practices (while waiting for FP to brew)

- One way to elevate any activity is by engaging in mindfulness practice.
- Today we will engage in two mindfulness practices, but there are endless ways to do this and no right or wrong way.
- The goal is to be present and aware. This can help us calm down, center/ground ourselves, identify and challenge negative thinking, and process our emotions.
- (Before pouring FP) Body Scan Activity:
    - Close your eyes
    - Find a comfortable, relaxed, neutral position in your seat
    - Don't worry about controlling your thoughts or your breathing
    - If you find that your mind is wandering, acknowledge those thoughts and bring yourself back to this moment
    - Bring your attention to the top of your head
    - Now slowly let your attention fall to your forehead
    - Eyes, maybe you now notice color or light dancing behind your closed eyelids
    - Notice your nose, maybe the tip of your nose is cold or warm
    - Lips, maybe they're chapped or dry, if you notice you are clenching your jaw let it relax
    - Move to your neck and shoulders, let your shoulders drop from your ears and let go of any tension you're holding there

    - Notice how you are holding your arms and hands, do you feel any gentle air movement, are you warm or chilly, do you feel fabric or are your arms exposed, notice what your fingers are doing and what they can feel in this moment
    - Now move your attention to your chest and stomach, maybe you feel them moving up and down with your breath, if you are noticing your chest is moving more than your stomach, focus on inhaling deeply into your belly
    - Focus on your bottom and the backs of your legs as they sit on the chair, feel the pressure that you are exerting onto the chair and the force that the chair is exerting on you to keep you in the air
    - Slide your attention all the way down your legs to your feet maybe noticing the feel of the fabric that makes up your pants along the way
    - Now notice your feet placed firmly on the floor, you can even bring attention to each individual toe, maybe wiggle them around, feel the connection you have with the ground beneath you and the warmth of your socks and shoes
    - Now open your eyes
    - *How did that feel?*
- Pour FP into mugs
- Customize, instruct them to not taste yet
- Mindful Sensing Activity:
    - See:
        - Different shades of coffee depending on cream or foam topping
        - Different sized mugs
        - Different ways of holding the mug
    - Hear:
        - Hum of technology
        - Things outside
        - Each other breathing
    - Touch:
        - Warmth of the mug
        - Texture of the mug
    - Smell:
        - What aromatics can you identify using the coffee wheel?
    - Taste:
        - What tasting notes can you identify using the coffee wheel?

4:45 Discussion & Wrap-up

- What did we think about today?
- Would you try any of these brewing methods at home?
- Would you use anything you learned today to elevate your current coffee routine to make it more meaningful to you?
- *The idea of self-care can sometimes feel overwhelming when you don't know where to start or don't like the feeling of adding one more activity to your to-do list.*
- What are other activities that are imbedded into your routine that you could maybe turn into more of a ritual?
    - Showering and brushing teeth are good times to practice body scans
    - Cooking is a good time to practice mindful sensing

5:00 End

Session 5

Name of Group: Songwriters Anonymous: Musical Journaling

3:30 Introductory Activity: What is a song that means a lot to you and why? Or have you ever had a song that got stuck in your head?

3:45 Rationale & Goals

Rationale: OTPF-4 Definitions

- Health Management—Activities related to developing, managing, and maintaining health and wellness routines, including self-management, with the goal of improving or maintaining health to support participation in other occupations.
    - Of course, health management includes medication management, eating well, doing what you can do to manage your health conditions well BUT…
    - Our framework lists "Social and emotional health promotion and maintenance" at the top. This refers to identifying personal strengths and assets, managing emotions, expressing needs effectively, seeking occupations and social engagement to support health and wellness, developing self-identity, making choices to improve quality of life in participation
- Medical treatments for cancer often focus on the physical. During that journey and when re-claiming broader wellness during survivorship, social and emotional health are important to continued health and wellbeing. Music can serve as a way to reflect, focus, bring a sense of peace and happiness into everyday tasks, whether it's listening to music or creating it.
- Research in the field of music therapy has shown that people with cancer can use music to decrease stress and negative emotions, improve sense of belonging, discover inner strength, increase relaxation, increase quality of life ((Duhovska and Millere, 2020).

Goals: Group will…

1. Go through a guided song deconstruction and develop new, positive lyrics to it.
2. Reflect on their personal journeys and the positive supports that have been present in their lives.
3. Discover (and discuss) the positive benefits of music in their lives
4. Consider creative ways to regularly reflect throughout the week, including music

3:50 Introduction

Question to consider: What kind of role has music played in your life? What role does music generally have for the people listening and the people who made it?

- Possible Answers: It helps get you in a certain mindset (productive, happy, motivated, etc.), it can set a mood, it is something you can connect with, it can help the person tell a story or convey a feeling
- Today we are going to look at songs through the lens of a songwriter. A song has 2 parts, the melody and the lyrics that are put to the melody.

4:00 The Melody

- Introduce basic music concepts using piano
    a. What a basic note sounds like
    b. What a major chord sounds like and what feelings it evokes
    c. What a minor chord sounds like and what feelings it evokes
    d. How to put chords together
- Play brief samples of 3 different songs
    e. For each piece, ask the group to identify what type of mood or feelings are evoked when listening.

4:15 The Lyrics

- If the melody is the vehicle for conveying mood and feelings, the lyrics are in the driver's seat. They decide the destination. Different drivers want to go to different places and may have different destinations.
- I am going to play a piece of a song. Pay attention to the lyrics and the message that the writer of this song is trying to get across.
    - The lyrics are a bit somber, and he yearns for something he doesn't have
- Now to prove we can really be drivers and determine the direction of a song that someone else wrote. I am going to play the same song but put more positive lyrics that I wrote to the melody instead.

4:25 Guided Songwriting Process

- I like to think of this as a form of creative journaling. This is something I often do when I have something I need to get off of my chest or just need to process how I am feeling. So, with everything we've gone over, we're going to write more lyrics to add to this song. The topic or message I want us to convey is letting the listener know about the positive supports that we have currently or have had in the past. We'll find some common themes and figure out how we want to include them in our song.
- Group members will be given notebooks to brainstorm in
- Additionally, they will be supplied with a worksheet that has common supports that people have in their lives to stimulate ideas or topics.
- Music will play in the background as group members brainstorm.
- Group will come together after 5-10 minutes to share what they came up with.
- Group will take one idea from each participant to incorporate into the song.

4:40 Put All the Pieces Together

- We will put all the lyrics together and play our new song to see how it sounds.

4:45 Discussion/ Wrap Up

- Was this an enjoyable process for you? Why or why not?
- What songs (or genres of music) elicit positive emotions or responses? (May discuss differences in musical melodies or harmonies versus lyrics??)
- Do you think this is something that you would like to try incorporating into your life?
- Are there other creative ways to express emotion and promote wellbeing?
- Not everyone plays an instrument. Are there other ways we could incorporate music and /or self-reflection? (May discuss how writing lyrics, poetry, journaling can have some of the benefits we explored in writing a song as a group). (May discuss group or individual reflection – what supports you and why? How can you share music or creative pursuits with others?)

5:00 End

Session 6

Name / Title of Group: Creating Comfort with Crochet

3:30pm – Introduction / Warm-Up

- *What is something you have in your home that brings you comfort? What is your ideal comfy and cozy environment* (candles, blankets, fuzzy socks, etc.)?

3:45pm – Rationale & Goals

- Goals:
    - Discuss occupational flow and how it relates to what we can do every day.
    - Create a hand-knitted blanket.
    - Explore other opportunities for flow and discuss what steps you can take to achieve flow in occupations that you enjoy.
- Evidence:
    - Research shows that participation in crocheting and/or knitting provides benefits to health and wellbeing.
    - Yarn & needlework is considered a skilled and creative occupation. According to the Journal of Positive Psychology, "spending time on creative goals during the day is associated with higher activated positive affect." Positive affect refers to positive moods people experience including joy, happiness, and optimism. Strong positive affect contributes to reducing stress and a broader perspective of happiness.
    - Hobbies like yarn work, have been shown to create a state of eustress. Eustress is defined as "stress that leads to a positive response," such that the hobby provides some challenge and requires focus, but you feel completely involved in the task. Additionally, engaging in hobbies that have a tangible outcome can lead to a sense of accomplishment.
- What is flow?
    - Everything I have discussed above relates to "flow," which is a key concept in occupational therapy. Occupational flow...
        - Is the total involvement in activity
        - Requires total concentration, a sense of control, and a sense of purpose
        - Is an active, not passive process
        - Relies on increasing the match of skills with the challenge
    - Depending on your level of experience and comfort with yarn work, you may achieve a state of flow when creating your blanket today.

3:50pm – Introduce activity

- Question: *What kind of experience do you have with yarn and needlework? Do you have any experience with hand knitting/crocheting (versus needle work)?*
    - Share my experience with making blankets / needlework
    - I am not an expert with yarn and needlework. I learned everything I know through YouTube videos. I have struggled with certain stitches. I have started blankets and realized I am making a triangle instead of a rectangle. With this, I want you to know that it is okay to not get it the first time or have to start over.

3:55pm – Choosing yarn

- Yarn – Using jumbo/chunky yarn so that it can be easily manipulated with our fingers; there are many options available for chunky yarn at craft stores (but it is expensive)
- Ask participants to select yarn color

4:00pm – Activity

- Teach first stitch – making a chain (this will be either the length/width of the blanket)

- Once everyone has a chain made, teach them the second stitch (look through each chain
    - Reminders:
        - Each loop should be a similar size (or else the blanket will be tight/loose in different areas)
        - There needs to be a loop through every chain and every loop in the following rows or else there will be a hole in that section of the blanket
- When one row is complete (loop through every chain), instruct to create another loop through the last loop – will be the start of the next row to work down the blanket in the other direction
- Repeat for all rows until the blanket is ready to be finished and tied off
- To join 2 skeins of yarn --> Tie the ends of each skein together in a tight knot, then option to...
    - Cut the ends off, leaving just the tight knot where the skeins have been combined
    - Continue with your stitch, allowing the ends to be loose and then weave into your blanket once you have completed surrounding stitches
- Teach how to finish the blanket
    - Will send a link to a video with directions

4:45pm – Debrief:

- What did you think of finger knitting? Would you do this again?
    - Could be a gift, serves as a sense of comfort
    - Mention price (this is not an inexpensive hobby)
- Did you achieve "flow" like I mentioned before?
    - If yes, what was that like? How do you know you were in a state of flow?
    - If not, when do you experience flow? (other hobbies, etc.)
- Is there something you've always wanted to try, but haven't?
    - How could you go about trying? What are the steps you could take?

Session 7

Name/Title of Group: Living a Life of Leisure

3:30 Welcome & Introductory Activity

Title: Living a Life of Leisure

Introductory Discussion: What does leisure mean to you? What are some leisure activities that you like to engage in currently?

3:40 Rationale & Goals

Rationale:

- OTPF-4: *"Non-obligatory activity that is intrinsically motivated and engaged in during discretionary time, that is, time not committed to obligatory occupations such as work, self-care, or sleep."*
- Pedretti: *"Participating in meaningful leisure occupations is vital to a healthy, balanced lifestyle…It has been suggested that one method of measuring whether a person is fully engaged in life is to consider the person's participation in leisure activities."*
    - *Psychosocial Benefits:*
        - *Increased sense of self-worth*
        - *Release of hostility and aggression*
        - *Shared control of self and environment*
        - *Experience of choice*
        - *Increased socialization*
        - *Development of leadership*
        - *Practice in adaptive behavior and coping skills*
        - *Increased attention span*
        - *Improved emotional wellbeing*
        - *Adjustment to living arrangement*
        - *Increased tolerance of groups and other people*
        - *Experience of intellectual stimulation*

Goals:

- Participants will explore art as a means to engage in leisure.
- Participants will create an art piece that reminds them to engage in leisure.
- Participants will identify strategies to engage in one leisure activity before the next session.

3:45 Introduction

What to Create:

- Abstract art
- Landscape/scene (favorite place, favorite vacation spot/getaway)
- Objects (meaningful belongings, meaningful symbols)
- Words (inspiring words, meaningful words, favorite quotes)

What to Consider:

- Color palette that feels calming/peaceful, energizing/electric, insightful/meaningful; art medium
- Outcome: physical reminder to engage in leisure

3:55 Activity

Discussion: *(may be integrated into painting activity or as a wrap-up of the session)*

- What did you decide to create? What how did you make your decision? How does it remind you to engage in leisure? Do you feel like this will be a good reminder to engage in leisure?
- Did your experience of cancer change how you engage in leisure activities?
- What leisure activities have you enjoyed before but no longer enjoy?
- What are some strategies you can use to increase your participation in leisure?
- What is one leisure activity that you can engage in before our next session?

5:00 End

Session 8

Name / Title of Group: Never Too Old to Play Games: Social Participation

3:30pm – Introduction / Warm-Up

- *When was the last time you played a game? What game was it (maybe who was it with or was it solitary?)*
- *What positive benefits did you find from playing the game?*

3:45pm – Rationale & Goals

Rationale

We often associate play with kids, but play is something that we can benefit from at any age. Play may look different as adults and may look more like leisure like we explored last week with Logan.

Play can happen by yourself, but a lot of play opportunities include other people. Games can be a great way to engage in social participation and today we are going to explore this by playing some.

- Goals:
    - Discuss what social participation is and how it plays a role in all aspects of our lives.
    - Explore social participation through the use of various types of games.
    - Explore ways to engage in social participation outside of the group.
- Social Participation Definition
    - Activities that involve social interaction with others, including family, friends, peers, and community members, and that support social interdependence (Bedell, 2012; Khetani & Coster, 2019; Magasi & Hammel, 2004).
    - Essentially, social participation is being able to interact and engage with the people around you.
    - Participation can happen in: Community, family, friendships, romantic relationships, peer group, providing context for meeting new people
    - Participation can look different: Direct interactions, virtually, mobile, peoplewatching

Evidence

- https://doi.org/10.1016/j.maturitas.2021.06.015 - Effect of social participation on the development of physical frailty: Do type, frequency and diversity matter?
    - Researchers found that adults could decrease the risk of physical decline, and preserve memory, attention, and processing skills, through social participation (playing group games, interacting with family and friends, group sport activities, volunteering). This social participation ultimately helps sustain physical health, mental health, build social bonds and help adults build a sense of community by simply engaging with other people.
- https://doi.org/10.5014/ajot.2018.030627 - Systematic review of OT Interventions supporting social participation and leisure engagement for community dwelling adults.
    - There is mixed evidence that community-based group interventions and electronic gaming improves social participation. Researchers suggest case-by-case decisions about how to best support social participation.

3:50pm – Board Games: Rummy Cube

- We will transition into our first category of game activities.
- The group will be given a brief description of the game we will play by the group leader.

4:15pm – Guessing/Acting Games: Heads Up

- We will transition to our next game. We will be playing the mobile version of Heads Up
- The group leader will have it downloaded on their phone and explain the rules. Everyone will get at least one chance to be the guesser
- We will do 2 Rounds if time allows
    - Round 1: Group members can say any word except the actual word trying to be guessed
    - Round 2: Group members can only make either noises or act out the word trying to be guessed

4:35pm – Online Games: Family Feud

- We will transition to our last game. We will play an online version of Family Feud
- The group leader will be the "Steve Harvey" for the group and input the answers for the group
- The online version has us playing against a random person so it will be the group as a team vs the random person
- We will play 2 rounds of this game
- First round is holiday themed, second round will be random

*If games go faster than anticipated, group will be asked if there are any quick games/riddles that they would like to share or teach

4:50pm – Debrief:

- How did you feel while we played? (What was fun? frustrating? other emotions?)
- Would you incorporate what we did today outside of the group? (Facilitators and barriers)
- Are there any other ways you can or like to engage social participation and engagement with the people around you?
    - Examples: Puzzles, crafting, cooking, game nights, movie nights, volunteering, taking a class, Zoom/video calls