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Examining the Feasibility of Implementing a Mindfulness-Based Cancer Recovery Bibliotherapy for the Treatment of Psychosocial Distress in Women with Breast Cancer

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EXAMINING THE FEASIBILITY OF IMPLEMENTING A MINDFULNESS-BASED CANCER RECOVERY BIBLIOTHERAPY FOR THE TREATMENT OF PSYCHOSOCIAL DISTRESS IN WOMEN WITH BREAST CANCER

by
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Dedications

I would like to dedicate this manuscript to my mother, Holly D'Onofrio, my siblings, Lake Rachman, and Isabella D'Onofrio, my stepfather, Cliff Rachman, and my partner, Michael Squicciarini.

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Abstract

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Breast cancer is the most common cancer diagnosis and the second leading cause of cancer-related deaths for women in the United States. Clinical depression and anxiety occur frequently within this population. Subclinical symptoms are also common and include increased sense of vulnerability, agitation, and grief as well as fears related to pain, creating a burden for one's family, and death. Due to the variety of negative implications women experience from psychosocial distress, improving quality of life and reducing symptomatology becomes imperative. A plethora of research supports the use of Mindfulness-Based Cancer Recovery (MBCR). Considering the challenges present within traditional psycho-oncological care (e.g., interdisciplinary integration, financial funding, burden of time intensive oncological and psychological treatment, appropriate staffing, etc.), the current study examines the feasibility of implementing an empirically supported psychotherapeutic approach (i.e., MBCR) through an alternative modality of treatment (i.e., guided bibliotherapy). Participants included women with breast cancer who were recruited from an ambulatory oncology clinic. Results shed light on a variety of factors involved in determining feasibility. Implications of acceptability, recruitment capability, demand and data collection, design procedures and implementation, integration, and effectiveness are discussed.

Keywords: *feasibility study, psycho-oncology, breast cancer, bibliotherapy*

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Chapter 1

Introduction

With a lifetime prevalence of 13%, breast cancer is the most common cancer diagnosis and the second leading cause of cancer-related death for women in the United States (American Cancer Society, 2020). To an extent, experiencing psychosocial distress within the context of a cancer diagnosis and treatment is expected. However, clinically significant depression and anxiety occur frequently, with rates ranging from 1-50% and 30-40%, respectively. Subclinical symptoms are also common and include increased sense of vulnerability, agitation, and grief as well as fears related to pain, creating a burden for one's family, and death. Previous research suggests rates of depression are highest in younger women, within the first year following diagnosis, while undergoing adjunctive treatment including radiation, chemotherapy, or surgery, and with recurrence (Burgess et al., 2005; Fann et al., 2008; Hegel et al., 2002; Pasquini & Biondi, 2006; Miller, Bowen, Croyle, & Rowland, 2009).

Patients who experience significant distress or difficulties with the adjustment to cancer are less likely to adhere to medical treatments, attend cancer screenings, or maintain healthy living (Andersen, Kiecolt-Glaser, & Glaser, 1994; Andersen, Golden-Kreutz, Emery, & Thiel, 2009; Pinquart & Duberstein, 2010). Implications warrant research on psychological treatments, their efficacy, and ways to increase dissemination within this population. Since the formal beginnings of psycho-oncology in the mid-1970s, literature within this area continues to support integrative, collaborative, and patient-centered approaches to address distress (Holland, 2002; Watson & Dunn, 2016).

For example, the psycho-oncology consultation model of care (POCM) offers guidelines and recommendations for implementing brief interventions for inpatients receiving chemotherapy and radiation (Deshields & Nanna, 2010). In addition, ambulatory oncology clinics provide an opportunity for patients to receive more traditional interventions, including individual psychotherapy, support groups, and/or medication management.

A variety of psychotherapeutic treatments and related constructs have been shown to effectively reduce distress across the cancer care continuum. One such construct that has gained substantial attention over the past two decades is mindfulness. Mindfulness has been defined as purposefully and non-judgmentally attending to the present moment as to alter a negative response to distressing stimuli (Kabat-Zinn, 1982). Mindfulness can also be defined and understood as consisting of five independent, yet interrelated facets. These facets consist of the ability to observe and describe internal or external stimuli, act with awareness, accept without judgement, and reduce harmful reactivity to stressful experiences (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006).

Mindfulness-Based Stress Reduction (MBSR) was first coined by Jon Kabat-Zinn in 1990. He developed MBSR to reduce refractory and chronic pain as well as anxiety. Formal mindfulness practices within MBSR include body scan, mindful yoga, sitting meditation, walking meditation, and loving-kindness meditation. There exists a wide array of benefits that result from increasing our level of trait mindfulness through frequent practice and attendance to our state level of mindfulness. More specifically, mindfulness contributes to psychological wellbeing as it circumvents the negative implications of acute and chronic stress. Evidence continues to support mindfulness as a

transtherapeutic tool to target core cognitive, emotional, behavioral, and physiological processes that are present across several mental health conditions (Greeson, Garland, & Black, 2014; Shapiro & Carlson, 2017). As such, MBSR has been adapted and made applicable to numerous diagnostic populations for specific psychotherapeutic purposes.

Within mindfulness-based psychotherapies, the core therapeutic components are consistent with MBSR. Protocols are overtly geared towards the promotion and teaching of mindfulness-based practice (Shapiro & Carlson, 2017). For example, Segal, Williams, and Teasdale (2002) developed Mindfulness-Based Cognitive Therapy (MBCT) for those experiencing depression. In addition to MBSR, they addressed feelings of hopelessness, unworthiness, and persistent rumination present in depressive disorders. Those being treated with MBCT are taught to change their relationship with negative thought patterns in an effort to prevent or buffer against future depressive relapse (Segal, Williams, & Teasdale, 2002). In the mid-1990s, Linda E. Carlson, Ph.D., and her colleagues decided to adapt components from MBCT to create an in-person, group therapy program unique to individuals coping with cancer treatment and survivorship. Mindfulness-Based Cancer Recovery (MBCR) incorporates the core MBSR components of formal and informal mindfulness meditation as well as the focus on altering one's relationship with feelings of hopelessness.

Since the development of MBCR, strong empirical support has established its efficacy and effectiveness for individuals diagnosed with cancer, and more specifically, women coping with breast cancer. Carlson et al. (2013) first examined cortisol levels, perceived mood, stress, quality of life, and social support in a sample of 271 breast cancer survivors. Participants were randomized to group MBCR or Supportive-Expressive

Group Therapy (SET). Following 18 hours of professional contact within group protocols, results indicated MBCR to significantly improve stress, quality of life, and social support for distressed participants when compared to those in SET. Additional results from studies have indicated sustained improvements in chemotherapy or radiation side effects, stress symptoms, sleep quality, fatigue, anxiety, and depression (Blaes et al., 2016; Carlson, 2013; Carlson, 2016; Carlson et al., 2015; Carlson et al., 2019; Toivonen et al., 2020). One study also suggested MBCR to be an effective alternative to Cognitive-Behavioral Therapy for Insomnia (CBT-I; Schellekens et al., 2017).

Despite empirically supported treatments and opportunities to provide supportive psycho-oncological care, some of the longstanding attitudinal and logistical challenges continue to exist. Namely, the POCM and referral to ambulatory services largely relies on consistent and effective collaboration with medical providers (Deshields & Nanna, 2010). Unfortunately, previous research has shown nonreferral is commonly the result of the patient's reluctance to discuss psychosocial distress. Moreover, it has been posited that communication becomes further complicated by a mutual misconception between provider and patient, as they may both believe the other will initiate discussions regarding psychological symptoms (Kam, Knott, Wilson, & Chambers, 2012; Senf, Fettel, Demmerle, & Maiwurm, 2018). While the integration of behavioral consultation into medical care has been supported to promote interdisciplinary collaboration and improve patient follow-up on referral (IOM, 2008; Pincus, 2003), financial funding, staffing, and patient volume remain logistical challenges (Deshields & Nanna, 2010).

One alternative collaborative care model that aims to match the optimal intervention to the patient is the stepped-care model (SCM; Davison, 2000; van Straten et

al., 2015). Within a stepped-care approach, clinicians structure treatment in "steps." As such, treatment begins with the least intensive or invasive intervention for presenting concerns. O'Donohue and Draper (2011) outline SCMs specific for various diagnostic populations. The SCMs specific to depression (Broten, Naugle, Kalata, & Gaynor, 2011) and anxiety (Hazlett-Stevens, 2011) follow the same structure. These models typically define Step 1 as watchful waiting, or inactive monitoring of symptoms. If symptoms do not remit during the watchful waiting phase, patients might move to Step 2, which includes psychoeducation or self-administered treatments (e.g., bibliotherapy, mobile applications, and/or computer-based interventions). Step 3 consists of traditional forms of treatment, which are individual psychotherapy, pharmacotherapy, or a combined approach. Finally, as the highest level, Step 4 consists of intensive outpatient programs, partial day hospitalization, and inpatient programs (Broten, Naugle, Kalata, & Gaynor, 2011; Hazlett-Stevens, 2011).

Studies have been inconsistent with regards to examining the effectiveness of SCMs. Some meta-analyses have determined SCMs to be comparable to standard care (Firth, Barkham, & Kellett 2015; van Straten et al., 2015). However, other studies have found SCMs to be significantly more effective than standard care (Araya et al., 2003; Ell et al., 2008). Firth, Barkham, and Kellett (2015) partially attribute these differences to the heterogeneity of how controlled trials have organized the SCM approach. Within the SCM, treatment prescription typically starts with the least intensive option (i.e., watchful waiting). However, authors recommend considering the role of the patient when making "stepping decisions" (Firth, Barkham, & Kellet, 2015). Much like evidence-based behavioral practice in psychology (EBBP), the role of the patient within SCMs refers to

clinicians attending to treatment preferences, presenting symptomatology, and patient characteristics (American Psychological Association [APA] Task Force, 2016). For example, an individual presenting to an emergency department with severe depressive symptoms, suicidal ideation, and preference for inpatient services would not be appropriate for a watchful waiting approach or even outpatient follow-up. It has been empirically established that matching an individual with their preferred treatment has been found to improve clinical outcomes, the therapeutic alliance, adherence, motivation, and satisfaction (Iacoviello et al., 2007, Kwan, Dimidjian, & Rizvi, 2010; Lin et al., 2005; Lindhiem, Bennett, Trentacosta, & McLear, 2014; Norcross & Lambert, 2018; Norcross & Wampold, 2011; Swift, Callahan, & Vollmer, 2011; Swift & Greenberg, 2015). In fact, Carlson et al. (2014), found that women with breast cancer who were randomized to their preferred treatment, regardless of modality (MBCR versus SET), comparatively improved on measures of quality of life and spiritual well-being.

D'Onofrio, Haugh, and Herbert (2018) previously examined treatment preferences for depression in a sample of women diagnosed with breast cancer. The overarching aim was to explore a possible method for deciding which step to begin treatment with when utilizing a SCM approach. The authors systematically assessed symptom severity, treatment preferences, and perceived acceptability of the SCM. In addition, the authors explored additional patient characteristics to examine how these variables were associated with final treatment preference. Patient characteristics included resilience and illness perceptions, which have been associated with symptom severity and psychosocial functioning following a cancer diagnosis (Min et al., 2012; Sharpley, Bitiska, Wootten, & Christie, 2014).

Participants were presented with a description of the SCM as well as descriptions of the treatments included within each step. They were asked to indicate the step and corresponding treatment they would prefer if seeking help for depressive symptoms. Regarding characteristics and symptoms, results indicated less resilience and more harmful cognitive and emotional perceptions of illness were associated with increased levels of self-reported depression. Results also indicated that those who reported higher symptoms tended to prefer more intensive levels of treatment (e.g., Step 3 or Step 4). While this trend was observed, patients most frequently indicated a strong preference to begin treatment with Step 2 through a self-help approach. Patients also most frequently preferred guided compared to unguided self-help as well as the use of books as opposed to mobile applications or internet-based programs (D'Onofrio, Haugh, & Herbert, 2018). Given these indicated preferences, the current study considered guided bibliotherapy as a psychological treatment.

Guided bibliotherapy comes with a variety of advantages when compared with traditional forms of psychotherapy. For example, bibliotherapy is largely cost-effective (GoodTherapy, 2016), which acts to circumvent the barrier of financial funding – a major challenge to psychosocial care within oncology. In addition, a diagnosis of cancer likely presents the additional burden of time-intensive oncological treatments and/or frequent medical appointments. Bibliotherapy is self-administered and able to be completed at one's own leisure, which might be one way to reduce the burden of time involved in traditional psychotherapy. Finally, guided bibliotherapy has been demonstrated to be an effective, stand-alone treatment for minimal to moderate mental health symptoms (Bilich et al., 2008; Floyd, 2003; Gregory, Schwer-Canning, Lee, & Wise, 2004). Taken

together, meta-analyses have supported the use of bibliotherapy as an appropriate treatment within SCMs (O'Donohue & Draper, 2011; van Straten, Hill, Richards, & Cuijpers, 2015).

Due to the many advantages, bibliotherapy has been examined to treat common mental health concerns within oncology. Malibiran, Tariman, and Amer (2018) appraised existing evidence and found bibliotherapy to be "…acceptable and beneficial in alleviating patient-reported anxiety and depression and improving coping skills in patients diagnosed with cancer." In this review, the authors posited the predominant limitation is the lack of randomized control trials to establish causality. However, preliminary evidence does exist for mindfulness-based bibliotherapy, which has shown improvements in mindfulness, wellbeing, and quality of life as well as reductions in depression, anxiety, and stress (Hazlett-Stevens & Oren, 2017; Stahl & Goldstein, 2010; Taylor, Strauss, & Cavanagh, 2021). Taylor, Strauss, & Cavanaugh (2021) also found significantly greater effects on outcomes when non-digital mindfulness-based self-help interventions were used.

As mentioned previously, the efficacy of MBCR when implemented through a group therapy format has been established (Carlson, 2016; Carlson et al., 2015; Carlson et al., 2019, etc.). To further disseminate, the creators have also explored whether delivering MBCR through alternative formats results in similar efficacy. For example, MBCR was examined as an online eTherapy program. Results of feasibility and trial studies indicate significant promise in reaching and treating psychosocial distress in underserved populations (i.e., eCALM Trial; Zernicke et al., 2013, Zernicke et al., 2014; Zernicke et al., 2016). In addition, Linda E. Carlson, Ph.D. and Michael Speca, PsyD.,

wrote *Mindfulness-Based Cancer Recovery: A Step-by-Step MBSR Approach to Help You Cope with Treatment & Reclaim Your Life* (Carlson & Speca, 2011) for individuals to utilize as a home-based self-help.

However, *Mindfulness-Based Cancer Recovery: A Step-by-Step MBSR Approach to Help You Cope with Treatment & Reclaim Your Life* (Carlson & Speca, 2011) has yet to be empirically examined as a bibliotherapy. As a result, the overarching goal was to fill this gap in MBCR literature as well as attend to the previously found preferences for guided versus unguided self-help as well as the use of books (bibliotherapy) versus mobile applications or internet-based programs. To inform future research and possible randomized-control trial, the current study sought to examine the *feasibility* of implementing a MBCR guided bibliotherapy to reduce distress in a sample of women diagnosed with breast cancer. Patients were recruited from an ambulatory oncology clinic during a one-year period. Feasibility was primarily defined through estimated target rates of patient interest, eligibility, consent, and participant completion of an eight-week guided bibliotherapy protocol. Additional areas of focus for feasibility included exploration into the acceptability of the intervention, recruitment capability, demand and data collection, design procedures and implementation, integration within the clinic, and effectiveness of the intervention protocol. Our secondary goal was to continue exploring the potential impact treatment preferences might have on adherence and outcome.

Chapter 2

Method

Study Design

The overarching goal of the study was to examine the feasibility of implementing a protocol for an eight-week guided bibliotherapy in an oncology clinic for women with breast cancer. First, the study included a cross-sectional survey, which is referred to henceforth as the baseline survey. If patients completed the baseline survey and met additional eligibility criteria, they were presented with the option to participate in the guided bibliotherapy. Inclusion and exclusion criterion varied slightly for the baseline survey and the bibliotherapy. As such, informed consent was obtained for each component. The bibliotherapy involved a longitudinal and repeated measures design. Patients had the option to only participate in the baseline survey. However, for the bibliotherapy protocol, participants were asked to complete surveys at five additional time points. Time points included every two weeks across the eight-week protocol as well as a one-month follow-up survey to explore any maintained effects.

Inclusion and Exclusion Criteria

While it is possible for men to experience a diagnosis of breast cancer, the incidence rates are approximately 1.28% and mortality rates are 0.26% (Center for Disease Control and Prevention, 2020). As a result, the current study focused on and included only women diagnosed with breast cancer. With regards to the baseline survey, patients who were a) English-speaking, b) 18 years old or older, and c) diagnosed with breast cancer were eligible to participate. Patients with a primary cancer diagnosis other

than breast were excluded. With regards to the bibliotherapy, patients who were a) English-speaking, b) 18 years old or older, c) diagnosed with breast cancer, and d) experiencing mild to moderate levels of both depression and anxiety, as indicated by scores of 5-14 on the PHQ-9 and GAD-7, were eligible to participate. Patients who a) had a primary cancer diagnoses other than breast, b) were experiencing minimal or severe levels of depression or anxiety, as indicated by respective scores of 0-4 or 15+ on the PHQ-9 or GAD-7, and/or b) endorsing suicidal ideation, as indicated by a score of 1 or higher on item 9 of the PHQ-9 were excluded. Those who indicated any suicidal ideation were referred to the protocol within the clinic, which included additional risk assessment with the Columbia Suicide Severity Rating Scale (CSSR-S; Posner, et al., 2010).

Guided Bibliotherapy

Given the established empirical support for MBCR, the current study utilized *Mindfulness-Based Cancer Recovery: A Step-by-Step MBSR Approach to Help You Cope with Treatment & Reclaim Your Life* (Carlson & Speca, 2011). The self-help book was written based on the in person, eight-week group therapy program facilitated by the authors. Given the length of their program, an eight-week guided bibliotherapy was created. Eight weekly modules were developed to guide participants through reading and engaging in mindfulness-based practices discussed within the text (See Appendix A).

Feasibility

There has been a rising call for evidence-based practice (EBP). However, most EBP recommendations and/or guidelines have been developed following randomized-control trials (RCTs). While RCTs provide the ability to make causal inferences, increasing internal validity can decrease measures of external validity, such as

generalizability and dissemination (Green & Glasgow, 2006). As a result, psychological researchers are progressively placing emphasis on feasibility research within the initial phase of intervention development. According to Gadke, Kratochwill, and Gettinger (2021), the overarching benefit of feasibility research is the potential to optimize "real-world" implementation of EBP. Bowen et al. (2009) initially defined eight areas of focus commonly explored in feasibility studies as well as corresponding research questions and potential outcome measures. These eight areas included acceptability, demand, implementation, practicality, adaptation, integration, expansion, and limited efficacy. Gadke, Kratochwill, and Gettinger (2021) recently expanded upon these areas to include dimensions pertaining to recruitment, data collection, design procedures, and social validity. The current study focused on a number of these areas as well as the corresponding research questions and outcomes proposed by mentioned authors. Please see Table 1 for full descriptions of areas and corresponding research questions utilized in the current study.

Table 1

Key Areas of Focus, Research Questions, and Outcomes

Area of Focus	Research Questions	Outcomes
Acceptability	• To what extent is the SCM suitable or attractive to program deliverers and/or recipients? • To what extent is the MBCR bibliotherapy suitable or attractive to program deliverers and/or recipients?	• Satisfaction and acceptability ratings • Perceived appropriateness and fit within the organizational culture • Perceived effects on organization
Recruitment Capability	• Can participants who will be eligible for and benefit from the baseline survey be identified? • Can participants who will be eligible for and benefit from the MBCR bibliotherapy be identified?	• Patients identified for participation • Patients eligible for participation • Patients appropriate to approach for participation
Demand and Data Collection	• To what extent are components of the SCM likely to be used (i.e., bibliotherapy)? • Are data collection procedures appropriate?	• Expressed interest or intention to use (e.g., consent for participation) • Actual use (e.g., adherence) • Burden of repeated measures design
Design Procedures and Implementation	• To what extent can the MBCR bibliotherapy be successfully delivered to intended participants? • Is the research design appropriate?	• Potential impact of modifications • Qualitative data • Expectations of participants
Integration	• To what extent can bibliotherapy be integrated within the oncology clinic?	• Overall feasibility • Perceived fit within the organization • Sustainability and costs to organization
Effectiveness	• Is there preliminary evidence of potential for the MBCR bibliotherapy to bring about positive change?	• Individual data (n=3) • Change in measures over time

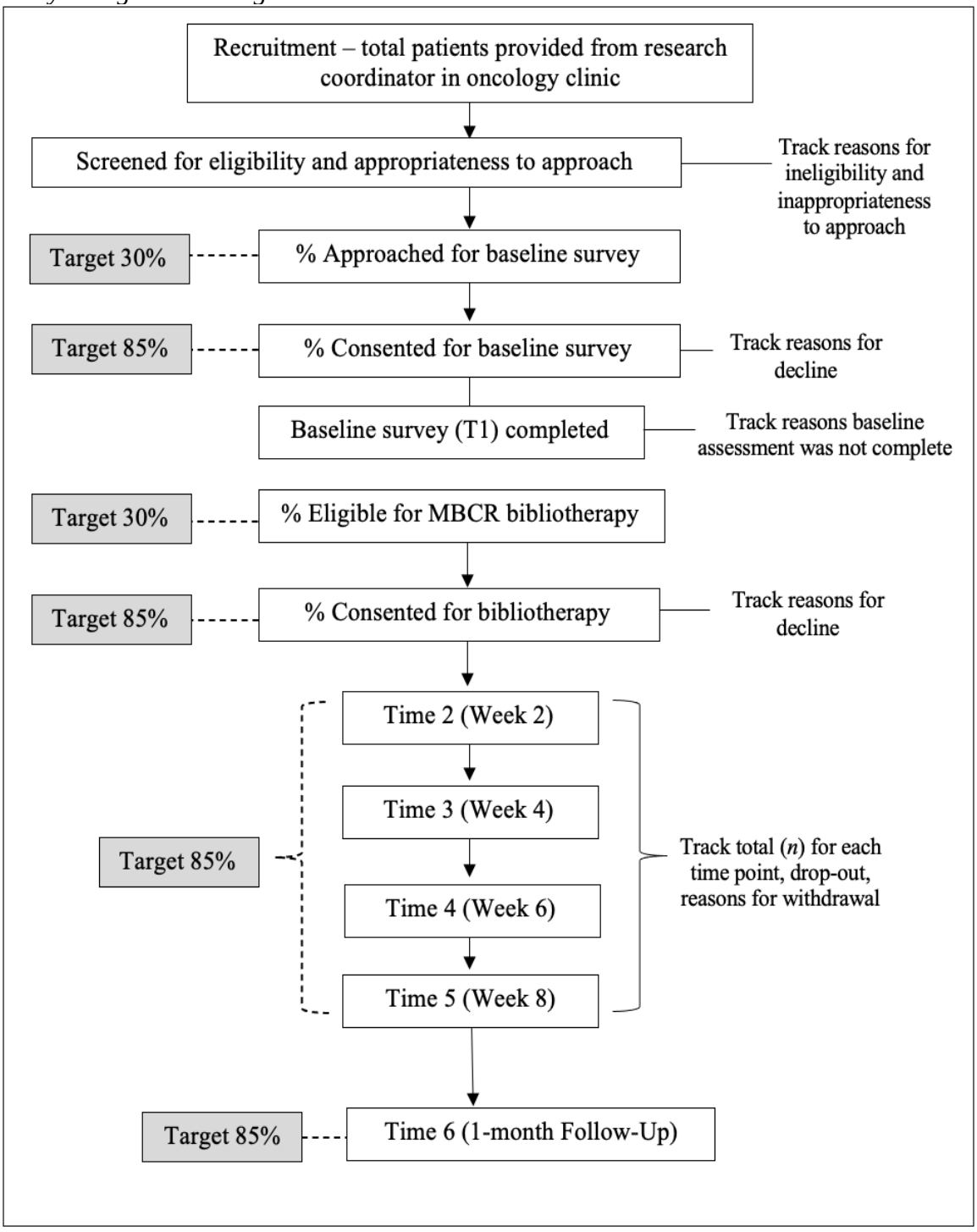
Note. Based on definitions found in Bowen et al. (2009) and Gadke, Kratochwill, and Gettinger (2021) on feasibility research.

According to Freedland (2016), feasibility studies should support the researcher's ability to conduct a successful randomized control trial (RCT) within the desired setting and with the desired procedure, patients, intervention, and measures. First, census data within the oncology clinic was obtained. The numbers documented of patients with newly diagnosed breast cancer were available during the previous two years. The clinic saw 142 new breast cancer cases in 2019 and 98 new breast cancer cases in 2020. Research coordinators of the clinic attributed the decrease in cases to the ongoing COVID-19 pandemic.

For the current study, benchmarks for feasibility were based on existing research within this topic area. Specifically, we deferred to the target eligibility, consent, and completion rates outlined in Zernicke et al. (2014). The authors examined the feasibility of an online MBCR eTherapy program for individuals who completed primary cancer treatment. To support feasibility, 30% eligibility rates of total patients screened for the baseline survey as well as the bibliotherapy were expected. Appropriateness to approach within the eligibility rate (i.e., total approached) was included. In addition, an 85% consent rate from eligible patients was expected. Finally, of those who consented to participate in the bibliotherapy, an 85% completion rate for each time point (Zernicke et al., 2014) was expected. Figure 1 illustrates the design and how participants were tracked throughout the duration of the study.

Figure 1

Study Design Flow Diagram



Participants

A total of 40 women completed the baseline survey. Ages ranged from 33 to 84, with a mean of 63.68 (*SD*=12.78) and mode of 71 years old. Thirty-two (80%) participants identified as White/Caucasian, followed by Black/African American (*n*=4; 10%), American Indian/Alaska Native (*n*=2; 5%), and Pacific Islander American (*n*=1; 2.5%); one participant preferred not to indicate race. Thirty-six (90%) participants identified as Non-Hispanic/Latinx, while three participants (7.5%) preferred not to indicate ethnicity. Five patients partially completed the survey. Specifically, participation was discontinued due to either patient fatigue, acute distress, difficulty using the provided iPad, and/or time constraint.

Of the 40 participants who completed the baseline survey, 10 patients consented to participate in the MBCR bibliotherapy. Ages ranged from 45 to 84, with a mean of 66.8 (*SD*=12.52) and mode of 84 years old (*n*=2). All participants (N=10; 100%) identified as White/Caucasian and Non-Hispanic/Latinx. Participants indicated a variety of oncological diagnoses, such as triple negative breast cancer, bilateral breast cancer (stage II and stage III) with lymph node involvement, hormone positive (HER-2) breast cancer, hormone receptor-positive (ER/PR+) breast cancer, and invasive ductal carcinoma. Three participants (30%) indicated to be in active treatment, while seven participants (70%) indicated to be in maintenance. Participants indicated experience with chemotherapy (*n*=6, 60%) radiation (*n*=4; 40%), and hormone therapy (*n*=2, 20%). Half of participants (n=5) indicated having previously undergone surgery. Seven participants (70%) indicated prior experience with symptoms of depression and anxiety. Of these seven participants, four participants (57.1%) indicated their experience only occurred

following their cancer diagnosis. Three participants (42.9%) indicated prior experience with psychiatric treatment, with equal dispersion across psychotherapy (talking treatment; *n*=1), medication (drug treatment; *n*=1), and a combined approach (psychotherapy and medication; *n*=1). Of those who indicated experience with symptoms without history of psychiatric treatment (*n*=4; 57.1%), two participants indicated reasons to include time constraint ("*Too many other appointments*") and perceived need ("*Thought I was managing at the time*"), while two participants preferred not to answer.

Measures

Patient Health Questionnaire, 9-Item (PHQ-9)

The PHQ-9 (Spitzer, Kroenke, & Williams, 1999) is a 9-item self-report questionnaire that assesses each of the Diagnostic and Statistical Manual for Mental Disorders (DSM) criteria for Major Depressive Disorder (MDD). Items are rated on a 4-point Likert scale, ranging from *not at all* (0) to *nearly every day* (3). Items are summed to obtain total scores that range from 0 to 27. A total score of 0 to 4 indicates a minimal level of depression, 5 to 9 indicates a mild level of depression, 10 to 14 indicates a moderate level of depression, 15 to 19 indicates a moderately severe level of depression, and 20-27 indicates a severe level of depression. A total score of 10 or greater is used as a clinical cut-off for the indication for a probable DSM-5 diagnosis of MDD. The PHQ-9 has high sensitivity (88%) and specificity (88%) as well as high reliability, with a Cronbach's alpha of 0.89 and test-retest of 0.84 (Kroenke, Spitzer, & Williams, 2001). The PHQ-9 demonstrated adequate internal consistency in the current sample *a*=90.

Generalized Anxiety Disorder Scale, 7-Item (GAD-7)

The GAD-7 (Spitzer, Kroenke, Williams, & Löwe, 2006) is a 7-item self-report questionnaire that assesses each of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria for Generalized Anxiety Disorder (GAD). Items are rated on a 4-point Likert scale, ranging from *not at all* (0) to *nearly every day* (3). Items are summed to obtain total scores that range from 0 to 21. A total score between 0 to 4 indicates a minimal level of anxiety, 5 to 9 indicates a mild level of anxiety, 10-14 indicates a moderate level of anxiety, and 15 to 21 indicates a severe level of anxiety. A total score of 10 or greater is used as a clinical cut-off for the indication for a probable DSM-IV diagnosis of GAD. The GAD-7 has high sensitivity (89%) and specificity (82%) as well as high reliability, with a Cronbach's alpha of 0.92 and test-retest of 0.83 (Spitzer, Kroenke, Williams, & Löwe, 2006). The GAD-7 demonstrated adequate internal consistency in the current sample a=0.94.

The Connor-Davidson Resilience Scale, 10-Item (CD-RISC 10)

The CD-RISC 10 (Connor, & Davidson, 2003) is a 10-item self-report questionnaire that quantifies an individual's level of resilience. Items are rated on a 5-point Likert scale, ranging from *not true at all* (0) to *true nearly all of the time* (4). To calculate the total score, items are summed and range from 0 to 40, with higher total scores reflecting greater levels of resilience. Total scores are typically compared to the means of the specific population being studied. One study indicated that the mean total score for the CD-RISC 10 in a sample of breast cancer patients was 27.6 (SD=5.9; Markovitz et al. 2014). The CD-RISC 10 has demonstrated good test-retest reliability (r =

0.88; Notario-Pacheco et al., 2014). The CD-RISC demonstrated high internal consistency in the current sample *a*=0.95.

Brief Illness Perception Questionnaire (IPQ-B)

The Brief IPQ (Broadbent, Petrie, Main, & Weinman, 2006) is a 9-item self-report questionnaire that assesses an individual's cognitive and emotional perceptions of their illness. The Brief IPQ includes eight items that are asked on a 10-point Likert scale and each item's Likert-scale is specific to the question being asked. The following is an example of a question and its corresponding Likert-scale: "How much does your illness affect your life?" with a 10-point Likert scale ranging from *no affect at all* (1), to *severely affects my life* (10). The ninth item on the Brief IPQ provides qualitative data. The ninth item is an open-ended question, which asks the individual to rank-order the three most important factors that they believe caused their illness. For the purpose of the current study, this item was excluded as a means to lessen psychological risk to the participant. To calculate the total score, items are summed and range from 10-80, with higher total scores indicating a more threatening view of the illness. The Brief IPQ has demonstrated good test-retest reliability at three and six weeks (*r*=.48 .70 and *r*=.42-.75, respectively; Broadbent, Petrie, Main, & Weinman, 2006). The Brief IPQ demonstrated adequate internal consistency in the current sample *a*=0.74.

Five Facet Mindfulness Questionnaire, Short Form (FFMQ-SF)

The FFMQ-SF (Bohlmeijer, ten Klooster, Fledderus, Veehof, & Baer, 2011) is a 24-item self-report questionnaire that assesses an individual's endorsement on the five facets of mindfulness. The facets of mindfulness include the following: a) observing (4 items; e.g., 'I pay attention to physical experiences, such as the wind in my hair or sun on

my face'), b) describing (5 items, e.g., 'I'm good at finding the words to describe my feelings'), c) acting with awareness (5 items, e.g., 'I find it difficult to stay focused on what's happening in the present moment'), d) nonjudging of inner experience (5 items; e.g., 'I tell myself that I shouldn't be feeling the way I'm feeling'), and (e) nonreactivity to inner experience (5 items; e.g., 'I watch my feelings without getting carried away by them'). Items are rated on a 5-point Likert scale, ranging from *never or very rarely true* (1) to *very often or always true* (5). Items that correspond to each specific facet are summed to obtain total subscale scores, while all items are summed to obtain a total overall score. Higher scores indicate greater endorsements of mindfulness. The FFMQ-SF subscales have demonstrated adequate to high reliability, with Cronbach's alphas ranging from 0.75 to 0.87, and good model fit through confirmatory factor analysis (Bohlmeijer, ten Klooster, Fledderus, Veehof, & Baer, 2011). Most of the FFMQ-SF subscales demonstrated adequate internal consistency in the current sample (observing, a=0.84; describing, a=0.84; acting with awareness, a=0.74; nonreactivity to inner experience, a=0.67). However, the subscale of nonjudging of inner experience demonstrated unsatisfactory internal consistency in the current sample, a=0.47.

Functional Assessment of Cancer Therapy – General (FACT-G)

The FACT-G (Cella, D. F., Tulsky D. S., Gray G., Sarafian B., Lloyd S., et al., 1993) is a 27-item questionnaire that assesses for four domains of health-related quality of life in cancer patients. Quality of life domains include physical, social, emotional, and functional wellbeing. Items are rated on a 5-point Likert scale, ranging from *not at all* (0) to *very much* (4). Items are reversed scored as indicated. Items that correspond to each domain are summed to obtain a subscale score. To account for any missing items, the

subscale score is multiplied by the number of items in the subscale and then divided by the number of items answered. Subscale scores can also be summed to derive a total FACT-G score. The higher the score, the better quality of life. The FACT-G has demonstrated adequate to high internal consistency in samples of patients diagnosed with various types of cancer (a=0.69-0.82; Cella, Tulsky, Gray, Sarafian, Lloyd, et al., 1993) and samples of patients diagnosed with breast cancer (a=0.78-0.90; Lee, Chun, Kang, & Lee, 2004) The FACT-G subscales demonstrated adequate to high internal consistency in the current sample (physical, *a*=0.86; social, *a*=0.77; emotional, *a*=0.79; functional, *a*=0.90).

Treatment Preferences

Questions used to assess participants' treatment preferences were adopted and modified from Haugh et al. (2019). Participants answered 9 to 24 items based on their responses and skip logic. Participants were first provided with a description of a SCM as outlined by Broten, Naugle, Kalata, and Gaynor (2011). Participants were then provided with a description of each step and treatment(s) within each step of the defined SCM. Following each description, participants were asked to rate how acceptable they perceived treatments to be on a 5-point Likert scale, ranging from *not acceptable* (1) to *very acceptable* (5).

Participants who rated certain treatments to be at least slightly acceptable (e.g., a rating of 2 or above) were asked additional questions based on the treatment. For example, participants who rated self-help to be at least slightly acceptable were also asked whether they would prefer guided or unguided self-help and whether they would prefer self-help delivered via books, mobile applications, or internet-based programs. For

all items pertaining to preference, participants were asked to rate the strength of preference on a 5-point Likert scale ranging from *not strong* (1) to *very strong* (5). Finally, participants were asked to indicate which step and treatment they would prefer to start with if seeking help for psychological symptoms and the strength of that preference.

Demographic, Medical, and Psychological History

With regards to demographic information, participants were asked to indicate their age, ethnicity, race, and income. With regards to medical information, participants were asked to indicate their stage of cancer diagnosis and any active, ongoing, or past treatment. With regards to psychological information, participants were asked to indicate any psychiatric history, including diagnosis and treatment.

Procedure

Participants were recruited through an ambulatory oncology center located in the Northeastern United States. Potential participants were identified with the help of the research coordinator, medical service assistants, and certified nursing assistants within the clinic. To identify potential participants, some demographic information was gathered prior to patient consent; however, information was protected under the oncology center's Health Insurance Portability and Accountability Act (HIPAA). Patients were approached in one of three ways: (1) either prior to or shortly following their scheduled appointment with their oncologist, (2) while getting chemotherapy in the treatment suite, or (3) getting vitals and/or blood work for upcoming treatment. Once approached, patients were provided with information about the study, including rationale and purpose, and asked to participate in the baseline survey. Electronic informed consent was obtained from those who agreed. Participants were asked to complete the PHQ-9 and GAD-7 via paper and

pencil, which allowed on-site researchers to score and determine additional eligibility for the bibliotherapy. Participants were then provided with an iPad and asked to complete the IPQ-B, CD-RISC 10, FFMQ-SF, and FACT-G electronically via the online survey-based platform of Qualtrics. Items to assess demographic, psychological, and medical history as well as treatment preferences questionnaire were also completed at time of consent.

Following completion of the baseline survey, patients who were eligible for the bibliotherapy were provided with a brief description of the protocol. Full written informed consent was obtained from those who agreed to participate. Participants were provided with a pre-paid paperback copy of *Mindfulness-Based Cancer Recovery: A Step-by-Step MBSR Approach to Help You Cope with Treatment & Reclaim Your Life* (Carlson & Speca, 2011). Participants were asked to provide their email address to receive weekly emails, which included weekly guided modules and biweekly surveys administered through Qualtrics. Included within weekly emails were prompts for participants to complete the module, any corresponding worksheets, and/or surveys (see Appendix B). Biweekly surveys included the PHQ-8 (alternative to PHQ-9; Kroenke et al., 2009), GAD-7, IPQ-B, CD-RISC 10, FACT-G, and FFMQ-SF. To reduce respondent fatigue, participants had the option to complete measures at the same time or at separate times during the week. Finally, participants were emailed one month following completion in the eight-week protocol and asked to complete follow-up surveys.

Data Analysis

Data analyses will be conducted using IBM SPSS Statistics (version 28.0.1.1). Quantitative analyses consisted of descriptive data pertaining to the baseline survey (e.g., SCM acceptability rates, treatment preferences, and strength of preferences) and

feasibility rates for eligibility, consent, and completion. Qualitative analyses consisted of behavioral observations within the clinic, reasons provided for declining participation in the survey, reasons for declining participation in the bibliotherapy, and reasons for withdrawing from the bibliotherapy. Information on modifications created and approved throughout active recruitment were also provided and discussed.

Chapter 3

Results

Active Recruitment Timeline

The current study was approved by the oncology clinic's Institutional Review Board (IRB) on February 8th, 2021. Researchers included the principal investigator (PI) and research assistants (RAs). In addition to the PI, three RAs were approved to conduct in-person data collection following IRB review. The RAs were trained and observed by the PI prior to collecting data on their own. Per our available personnel resources, on-site researchers were able to actively recruit from March 23rd, 2021, to February 4th, 2022 (approximately 46 weeks). The modal number of researchers in the clinic at any given time was one. Total recruitment in the clinic spread a total of 49 days (approximately 1.07 times per week), with a total of 166 hours of time spent in active recruitment.

Primary Outcome

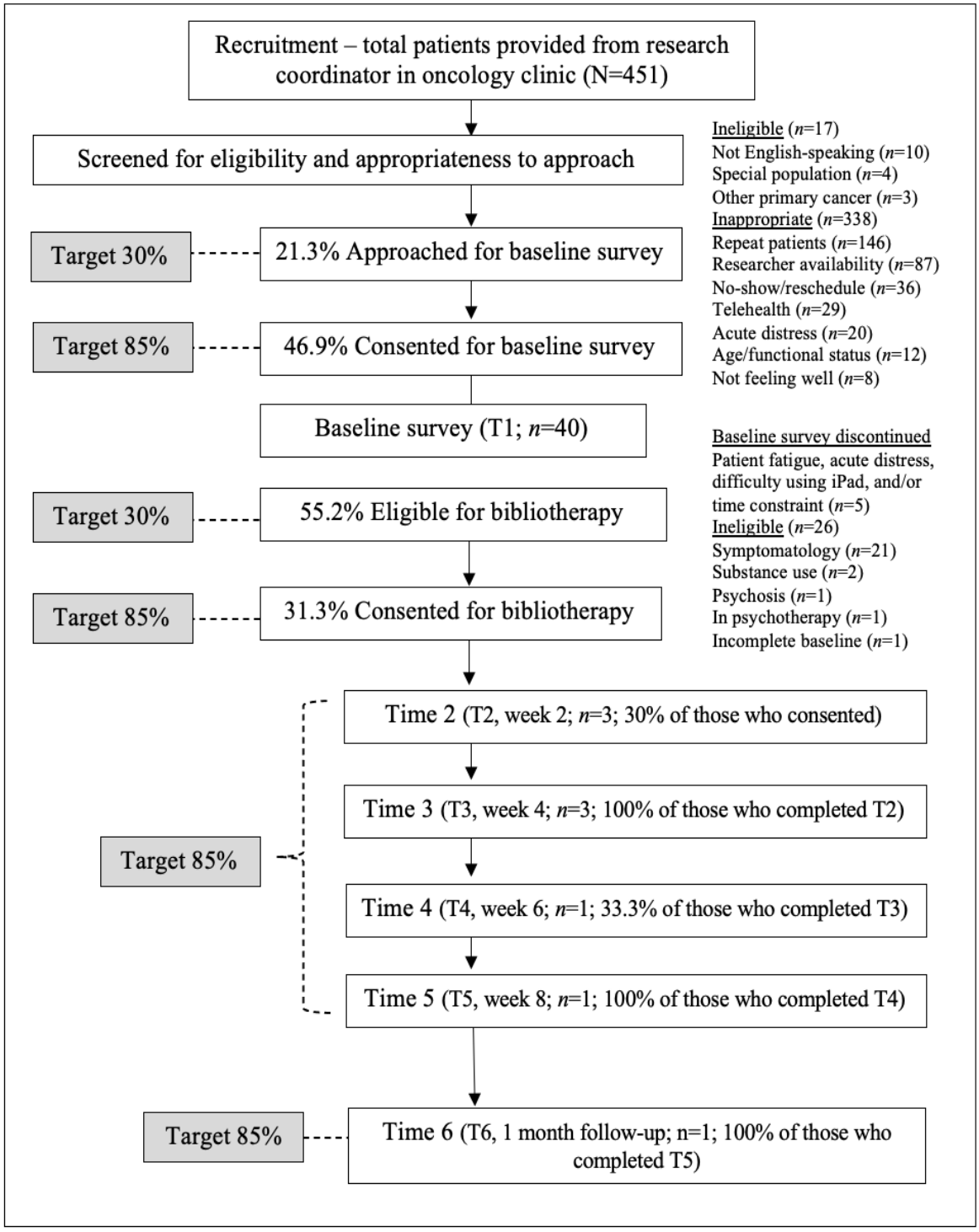
Feasibility

Target feasibility estimates and actual percentages are presented in Figure 2. Feasibility was considered achieved if actual percentages were within 5% of the target estimate. Targets were estimated based on Zernicke et al. (2014); a previous feasibility study for an online MBCR eTherapy program. Feasibility was assessed through the following: a) proportion of patients approached for baseline survey (estimate of 30%); target was not met with 96 patients (21.3%), b) proportion of patients who consented to participate in baseline survey (estimate of 85%); target was not met with 45 patients (46.9%), c) proportion of patients eligible for bibliotherapy (estimate of 30%); target was

met with 32 patients (55.2%), d) proportion of patients who consented to participate in the bibliotherapy (estimate of 85%); target was not met with 10 patients (31.3%), and e) proportion of participants who completed each time point in the bibliotherapy protocol (estimates of 85% for each); target was not met at T2 and T4 (30% and 33.3%, respectively), but met at T3, T5, and T6 (100%).

Figure 2

Feasibility and Target Rates Flow Diagram



Baseline Survey

Total Patients Approached for Baseline Survey

The oncology clinic's research coordinator screened appointments and identified potential participants through our basic inclusion criteria. A total of 451 patient names were provided across the data collection period mentioned previously. Any additional ineligibility through further examination was determined as well as whether patients were appropriate to approach. A total of 17 patients were ineligible upon further screening. Reasons for ineligibility included English not being the patient's primary language (Spanish- or Greek-speaking; *n*=10), the patient being part of a special population (age >90, identified neurocognitive impairment; *n*=4), or breast cancer not being the patient's primary cancer site (*n*=3).

In addition to ineligibility, a total of 338 patients were not appropriate to approach. The most frequent reason that a patient was not approached was if they were a *repeat patient* (*n*=146). In other words, the patient had been previously approached and they either a) participated, b) declined participation, or c) was previously determined to be ineligible. At times, researchers were unable to approach patients due to our own resources pertaining to researcher availability (*n*=87). More specifically, this was categorized if a) the on-site researcher missed the patient as they were obtaining consent or administering the study to another patient, b) the researcher was out of the office due to personal constraints and/or illness, or c) there was not enough time to approach given proximity to office closure. Researchers were unable to approach patients if they no showed/rescheduled their appointment (*n*=36) or if they were scheduled for a telehealth appointment (*n*=29). At times, researchers did not approach patients based on the

provider's discretion. Reasons included (per providers) perceived acute distress during appointment (*n*=20), if the patient's age and functional status were perceived as barriers to completing participation (*n*=12), or if the patient expressed not feeling well to the provider (*n*=8). In sum, researchers approached a total of 96 patients (21.3%) during active recruitment.

Reasons for Declining Participation in Survey

Of the 96 patients approached during active recruitment, 51 patients (53.13%) ultimately did not consent to participate in the baseline survey. Some patients (*n*=16) politely declined and did not provide any spontaneous information for not wanting to participate, while others provided information about their decision to decline. Of note, some patients offered multiple reasons. The most common reason patients expressed was not having enough time either prior to or following their appointment to complete the approximately 20-to-25-minute survey (*n*=20). Some patients denied a perceived need or benefit to participate given their distress had been either minimal or manageable (*n*=13). On the other hand, a similar number of patients declined as they reported too much acute emotional and/or physical distress (*n*=12). At times, patients also reported difficulty using the iPad technology provided to complete the survey (*n*=7). One patient acknowledged recent experience with depression and anxiety; however, she reported her distress was pandemic-related and not secondary to or exacerbated by her breast cancer; as such, she politely declined participation.

Stepped-Care Model (SCM)

Treatment Acceptability at Baseline

Participants who completed the baseline survey (N=40) on average indicated the SCM to be a moderately acceptable to acceptable treatment approach for depression and anxiety (*M*=3.78, *SD*=0.95, *mode*=4). In addition, participants on average viewed the SCM to be a probable improvement upon standard care for mental health treatment (*M*=3.85, *SD*=0.92, *mode*=4). Similarly, those who also consented to participate in the current bibliotherapy (*n*=10) on average indicated the SCM to be an acceptable treatment approach for depression and anxiety (*M*=4.00, *SD*=1.25, *modes*=4 and 5). In addition, participants on average viewed the SCM to be a probable improvement upon standard care for mental health treatment (*M*=3.60, *SD*=1.43, *mode*=4). Please see Table 2 for full description of acceptability ratings for the specific treatments offered within the SCM.

Table 2

Participant Treatment Acceptability Ratings within the SCM

	Total (N=40)	MBCR Subsample (*n*=10)
Treatment (Step)	*M* (*SD*)	*M* (*SD*)
Psychoeducation (2)	3.80 (0.99)	4.10 (1.29)
Self-Help (2)	3.70 (1.14)	4.00 (1.25)
Medication (3)	3.60 (1.24)	3.60 (1.51)
Combined P&M[(a)] (3)	3.50 (1.34)	3.20 (1.62)
Psychotherapy (3)	3.43 (1.36)	2.80 (1.62)
Watchful Waiting (1)	2.95 (1.32)	3.40 (1.51)
Inpatient Programs (4)	2.70 (1.36)	2.80 (1.48)
IOP/PHP[(b)] (4)	2.58 (1.36)	2.70 (1.49)

Note. [(a)] Combined P&M = Combined Psychotherapy and Medication; [(b)] IOP/PHP = Intensive Outpatient Programs/Partial Hospitalization Programs.

Treatment Preferences at Baseline

Unless treatments were indicated as not acceptable, participants were asked to indicate their preferred format, type, and modality for certain treatments (e.g., self-help, medication, psychotherapy). Regarding self-help (*n*=38), participants most frequently indicated preference for guided (*n*=32, 84.2%) compared to unguided (*n*=6, 15.8%) and books (*n*=20, 52.6%) compared to internet-based programs (n=14, 36.8%) or mobile applications (*n*=4, 10.5%). Strength of preference for guided versus unguided as well as type of self-help was moderately strong to strong (*M*=3.66, *SD*=1.05, *modes*=3.00 and 4.00; *M*=3.61, *SD*=0.97, *mode*=4.00, respectively). Regarding psychotherapy (*n*=35), participants most frequently indicated preference for problem-solving therapy (*n*=13, 37.1%), followed by cognitive therapy (n=8, 22.9%), mindfulness-based therapy (*n*=7, 20%), interpersonal therapy (*n*=5, 14.3%), and behavioral activation (n=2, 5.7%). Strength of preference was moderately strong (*M*=3.49, *SD*=1.04, *mode*=3.00).

All participants (N=40) were also asked to indicate the step of the SCM they would prefer to start with if seeking mental health treatment. Participants most frequently indicated preference for Step 3 (*n*=17, 42.5%), followed by Step 2 (*n*=10, 25%), Step 1 (*n*=9, 22.5%), and Step 4 (*n*=4, 10%). Overall strength of preference was moderately strong to strong (*M*=2.70, *SD*=0.68, *modes*=3.00 and 4.00). Please see Table 3 for preferred treatments within each step and corresponding strength of preference. Similarly, those who consented to participate in the bibliotherapy (*n*=10) most frequently indicated preference for Step 3 (*n*=6, 60%), followed by Step 2 (*n*=2, 20%), and then Step 1 (*n*=1, 10%) or Step 4 (*n*=1, 10%). Overall strength of preference was strong (*M*=3.90, *SD*=1.20,

mode=5.00). Please see Table 4 for preferred treatments within each step and corresponding strength of preference.

Table 3

Preferences and Strength of Preferences for Treatments (N=40)

	Step	TWS[a]	Strength of Preference	
Treatments	*n* (%)	*n* (%)	*M*	*SD*
Step 1	9 (22.5)		3.00	1.58
Watchful Waiting		9 (22.5)		
Step 2	10 (25)		2.90	1.20
Combined P&S[b]		8 (80)	3.50	0.93
Psychoeducation		1 (10)	2.00	0.00
Self-Help		1 (10)	4.00	0.00
Step Three	17 (42.5)		3.82	0.95
Combined P&M[c]		11 (64.7)	4.09	1.04
Medication		4 (23.5)	3.25	1.26
Psychotherapy		2 (11.8)	4.00	1.41
Step Four	4 (10)		4.00	0.82
IOP/PHP[d]		3 (75)	3.67	1.16
Inpatient Programs		1 (25)	4.00	0.00

Note. [a] TWS = Treatment Within Step; [b] Combined P&S = Combined Psychoeducation and Self-Help; [c] Combined P&M = Combined Psychotherapy and Medication; [d] IOP/PHP = Intensive Outpatient Programs/Partial Hospitalization Programs.

Table 4

Preferences and Strength of Preferences for Treatments (n=10)

	Step	TWS[a]	Strength of Preference	
Treatments	*n* (%)	*n* (%)	*M*	*SD*
Step 1	1 (10)			
Watchful Waiting		1 (10)	5.00	
Step 2	2 (20)		3.00	
Combined P&S[b]		2 (100)	3.00	
Psychoeducation				
Self-Help				
Step Three	6 (60)		4.17	1.33
Combined P&M[c]		5 (83.3)	4.00	1.41
Medication		1 (16.7)	3.00	
Psychotherapy				
Step Four	1 (10)		3.00	
IOP/PHP[d]		1 (100)	3.00	
Inpatient Programs				

Note. [a] TWS = Treatment Within Step; [b] Combined P&S = Combined Psychoeducation and Self-Help; [c] Combined P&M = Combined Psychotherapy and Medication; [d] IOP/PHP = Intensive Outpatient Programs/Partial Hospitalization Programs.

Modifications

A total of four modifications were submitted throughout active recruitment. Modifications were based on researcher observations in the clinic that perceptively impacted overall recruitment as well as eligibility for the current bibliotherapy. The first modification (approved 4/08/21) allowed researchers to distribute a flyer to patients and providers. The flyer included a brief description of the study and PI contact information.

No additional correspondence via email or phone following the creation and approval of the flyer were received.

The second modification (approved 5/07/21) was focused on those who consented to participate in the current bibliotherapy. First, questions were added to weekly surveys to collect qualitative data from patients (e.g., *What did you like most about the readings?*). Reminder emails were also created to send participants each week to further prompt completion of modules/surveys and provide augmented space for participants to email the PI with questions or concerns (see Appendix B). Third, participants were asked to complete the FFMQ-SF and CD-RISC 10 monthly rather than biweekly.

The third modification (approved 7/01/21) focused on altering the exclusion criteria for the current bibliotherapy. With regards to symptomatology, the original criteria excluded those a) experiencing minimal or severe levels of depression and anxiety, and/or b) endorsing suicidal ideation as indicated by item 9 on the PHQ-9. The criteria were modified to only exclude patients experiencing suicidal ideation as indicated through item 9 on the PHQ-9 *as well as* meeting a moderate or high risk via assessment with the Columbia Suicide Severity Scale (CSSR-S). Prior to our third modification, patients were only presented with information pertaining to the bibliotherapy if they were determined eligible to participate. Prior to modification approval, 21 out of the 25 patients (84%) who had participated in the baseline survey were determined to be ineligible for the bibliotherapy due to symptom endorsement on the PHQ-9 and GAD-7. As a result, these 21 patients were not presented with any information on the bibliotherapy or the option to participate in the protocol further.

The fourth modification (approved 10/13/21) allowed researchers to reapproach those who participated in the baseline survey and were determined to not be eligible to participate in the bibliotherapy due to prior exclusion criteria. In addition, approval was obtained for an additional researcher to assist with data collection.

MBCR Bibliotherapy

Eligibility and Interest in Bibliotherapy

A total of 58 patients were further examined to determine eligibility for participation in the bibliotherapy. Twenty-six patients (44.8%) were determined to be ineligible. The most common reason was symptom endorsement on the PHQ-9 and/or GAD-7 mentioned previously (*n*=21). Following approval of the modification to alter exclusion criteria, the remaining five patients were ineligible for various reasons. Two patients disclosed histories of substance abuse, one patient was previously diagnosed with a schizophrenia spectrum disorder, one patient was currently receiving psychotherapy, and one patient only partially completed the baseline survey due to lack of time.

A total of 32 patients (55.2%) were eligible for the bibliotherapy and were presented with a brief description of the protocol. The brief description included information regarding a) the expectations for participation (e.g., weekly readings, biweekly surveys, assignments within each module), b) the rationale underlying the use of bibliotherapy, and c) a mindfulness-based approach. Twenty-two patients (68.7%) ultimately declined to participate in the bibliotherapy. Some patients politely declined without spontaneously providing information or reasons as to why (*n*=4). A total of 18 patients provided additional information regarding their decision to decline. Of note, patients tended to provide multiple reasons. One common reason reported was not having

enough time to dedicate to the protocol (*n*=9). Another equally common reason was they stated the bibliotherapy was not a good fit for them (*n*=9). For example, goodness of fit was categorized when patients reported a) adequate coping through established strategies and/or strong social support, or b) when their distress was not related to their breast cancer (e.g., occupational stress, pandemic-related stress). Less frequently, patients reported not being well-versed in or technologically savvy enough (*n*=3) and one patient expressed preference an internet-based program. Finally, one patient reported reading would be a strain for her due to a recent cerebrovascular accident.

Consent and Participation in Bibliotherapy

Of the 32 patients eligible for participation in the bibliotherapy, consent was obtained from a total of 10 patients (31.3%). Of those, 7 participants (70%) did not proceed past the baseline survey. Some patients withdrew from the study (*n*=4), while others simply did not reply to weekly emails and did not take any of the biweekly surveys (*n*=3). While two patients did not provide reason or information underlying their withdrawal, two participants reported time constraint and increased stress underlying their desire to withdraw. Two of the three participants who did not reply to weekly emails or biweekly surveys expressed concerns with using technology during participation in the baseline survey.

Three of the 10 patients (30%) who consented to participate in the bibliotherapy proceeded past the baseline survey. Regarding attrition, two participants (66.7%) did not proceed past week four (Time 3) of the eight-week protocol. Participant one dropped out and reported she was unable to complete the readings and practices in the self-help book because she was "*not feeling well due to new medication*." Participant two dropped out

and did not provide additional information. Participant three completed the full eight-week protocol, biweekly surveys, and the one-month follow-up survey. See Tables 5-7 for full description of measurement-based scores for each participant throughout the study.

Table 5

Participant One[(a)] Data During MBCR Bibliotherapy Protocol

	Baseline (Time 1)	Time 2 (Week 2)	Time 3 (Week 4)
Measure	Score (of total)	Score (of total)	Score (of total)
PHQ-9/PHQ-8[(b)]	12 (27)	5 (24)	2 (24)
GAD-7	6 (21)	5 (21)	2 (21)
IPQ-B	33 (80)	36 (80)	11 (80)
CD-RISC 10	24 (40)		24 (40)
FFMQ-SF (total)	67 (120)		78 (120)
Observing	14 (20)		15 (20)
Describing	10 (25)		14 (25)
Acting w/ Awareness	17 (25)		18 (25)
Nonjudgment	13 (25)		15 (25)
Nonreactivity	13 (25)		16 (25)
FACT-G	75 (108)	74 (108)	95 (108)
Physical	15 (28)	20 (28)	22 (28)
Social	26 (28)	12 (28)	26 (28)
Emotional	19 (24)	20 (24)	23 (24)
Functional	15 (28)	22 (28)	24 (28)

Note. [(a)] Participant dropped-out of study following Time 3 (Week 4). [(b)] The PHQ-9 was replaced by the PHQ-8 following baseline.

Table 6

Participant Two[a] Data During MBCR Bibliotherapy Protocol

	Baseline (Time 1)	Time 2 (Week 2)	Time 3 (Week 4)
Measure	Score (of total)	Score (of total)	Score (of total)
PHQ-9/PHQ-8[b]	2 (27)	2 (24)	0 (24)
GAD-7	0 (21)	0 (21)	2 (21)
IPQ-B	39 (80)	34 (80)	33 (80)
CD-RISC 10	23 (40)		21 (40)
FFMQ-SF (total)	76 (120)		91 (120)
Observing	15 (20)		17 (20)
Describing	16 (25)		19 (25)
Acting w/ Awareness	18 (25)		22 (25)
Nonjudgment	14 (25)		15 (25)
Nonreactivity	13 (25)		18 (25)
FACT-G	75 (108)	92.33 (108)	100.67 (108)
Physical	18 (28)	23 (28)	25 (28)
Social	18 (28)	23.33 (28)	25.67 (28)
Emotional	17 (24)	22 (24)	22 (24)
Functional	22 (28)	24 (28)	28 (28)

Note. [a] Participant dropped-out of study following Time 3 (Week 4). [b] The PHQ-9 was replaced by the PHQ-8 following baseline.

Table 7

Participant Three[a] Data During MBCR Bibliotherapy Protocol

Measure	Baseline (T1) Score (total)	Time 2 (Wk 2) Score (total)	Time 3 (Wk 4) Score (total)	Time 4 (Wk 6) Score (total)	Time 5 (Wk 8) Score (total)	Time 6 (Wk 12) Score (total)
PHQ-9/8[b]	0 (27)	0 (24)	0 (24)	0 (24)	0 (24)	0 (24)
GAD-7	0 (21)	0 (21)	0 (21)	0 (21)	0 (21)	0 (21)
IPQ-B	0 (80)	0 (80)	0 (80)	0 (80)	8 (80)	18 (80)
CD-RISC 10	40 (40)		40 (40)		39 (40)	39 (40)
FFMQ-SF	84 (120)		99 (120)		110 (120)	98 (120)
Observing	14 (20)		20 (20)		20 (20)	20 (20)
Describing	19 (25)		21 (25)		25 (25)	23 (25)
Awareness	21 (25)		25 (25)		25 (25)	21 (25)
Nonjudgment	13 (25)		13 (25)		19 (25)	10 (25)
Nonreactivity	17 (25)		20 (25)		21 (25)	24 (25)
FACT-G	108 (108)	76 (108)	108 (108)	108 (108)	80 (108)	80 (108)
Physical	28 (28)	28 (28)	28 (28)	28 (28)	28 (28)	28 (28)
Social	28 (28)	28 (28)	28 (28)	28 (28)	0 (28)	28 (28)
Emotional	24 (24)	20 (24)	24 (24)	24 (24)	24 (24)	24 (24)
Functional	28 (28)	0 (28)	28 (28)	28 (28)	28 (28)	0 (28)

Note. [a] Participant score patterns throughout study evidence a tendency of extreme response bias. [b] The PHQ-9 was replaced by the PHQ-8 following baseline. Awareness = Acting with Awareness; T1 = Time 1; Wk = Week.

Treatment Progress and Outcomes

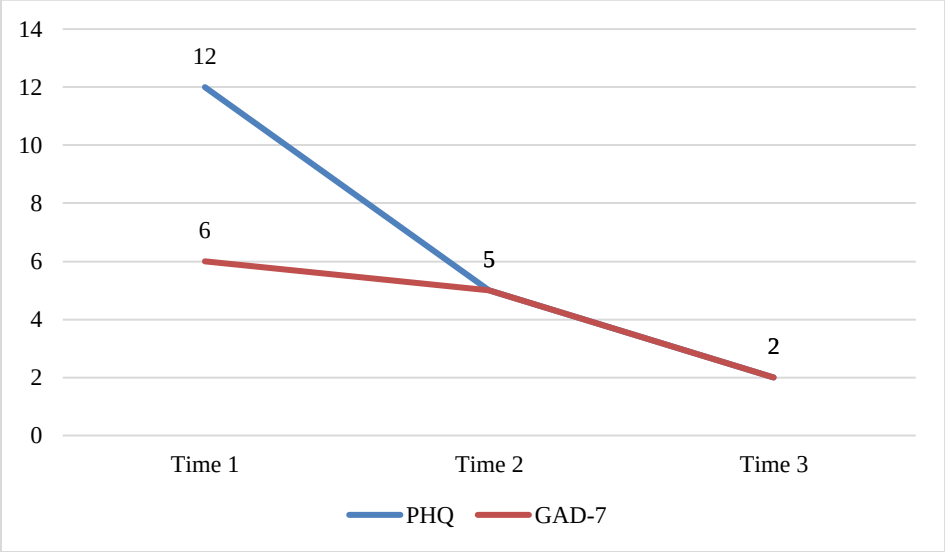
Participant One

Depression and Anxiety. When participant one completed the PHQ-9 in the clinic with the on-site researcher, they endorsed a score of 12 out of a possible 27, which indicates a moderate level of depressive symptoms. During the four-week period

participant one adhered to the study protocol, they experienced a 10-point decrease. A score of 2 indicates a minimal level of depressive symptoms. When participant one completed the GAD-7 in the clinic with the on-site researcher, they endorsed a score of 6 out of a possible 21, which indicates a mild level of anxiety symptoms. During the four-week period, participant one experienced a four-point decrease. A score of 2 indicates a minimal level of anxiety symptoms. See Figure 3 for scores throughout the study.

Figure 3

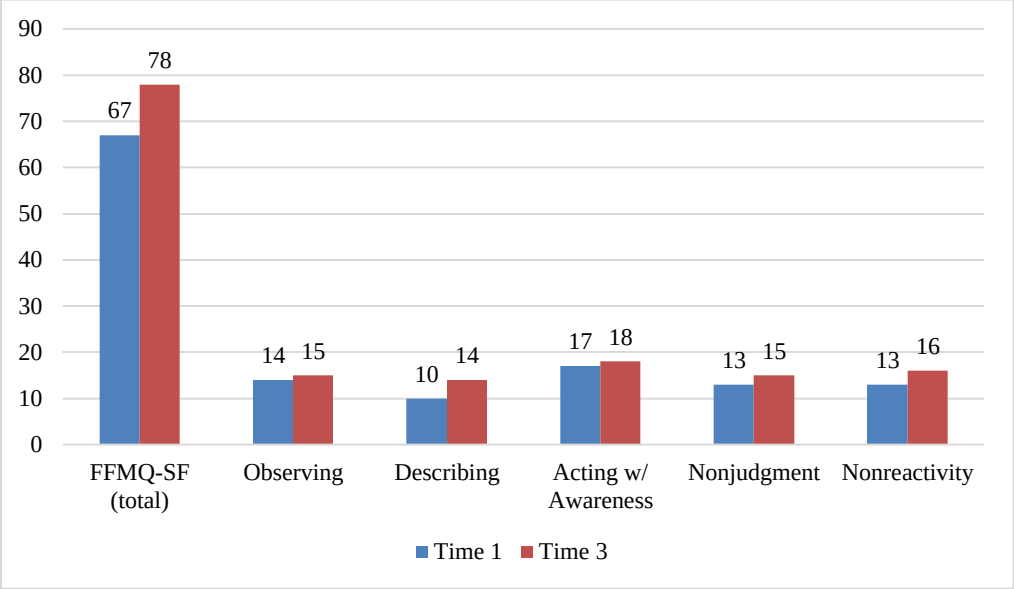
Participant One, PHQ-9 and GAD-7 Scores



Mindfulness. When participant one completed the FFMQ-SF in the clinic with the on-site researcher, they endorsed moderate levels of mindfulness with a total score of 67 out of a possible 120. Scores on the five mindfulness subscales ranging from 10 to 17. During the four-week period, participant one experienced an 11-point increase in their endorsed level of mindfulness with a score of 78 out of a possible 120. See Figure 4 for scores throughout study.

Figure 4

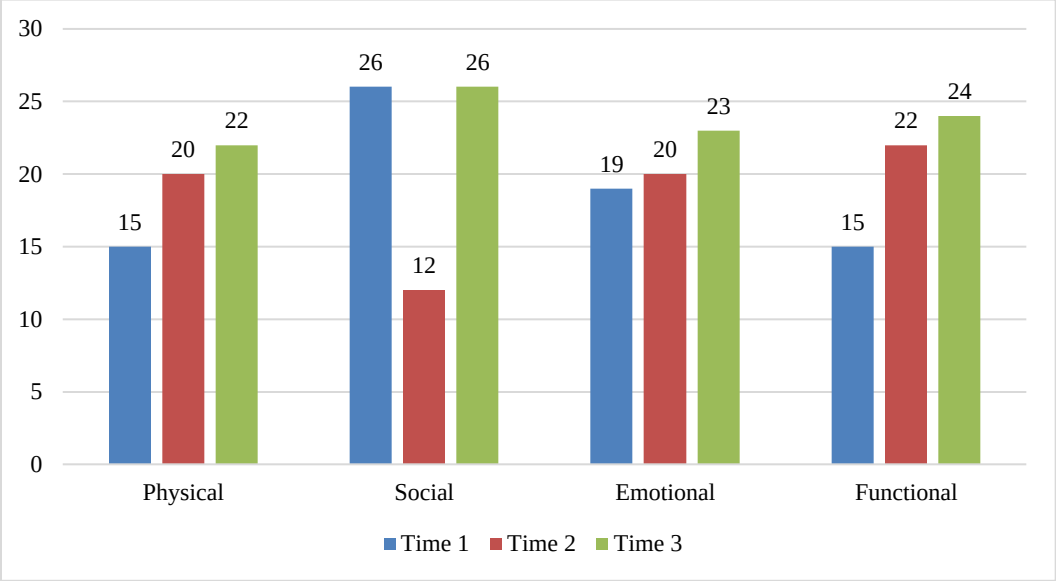
Participant One, FFMQ-SF Scores



Quality of Life. When participant one completed the FACT-G in the clinic with the on-site researcher, they endorsed moderate to high quality of life with a total score of 75 out of a possible 108. Scores on the four quality of life subscales ranged from 15 to 26. During the four-week period, participant one experienced a 20-point increase in their endorsed quality of life with a score of 95 out of a possible 108. See Figure 5 for scores throughout study.

Figure 5

Participant One, FACT-G Scores

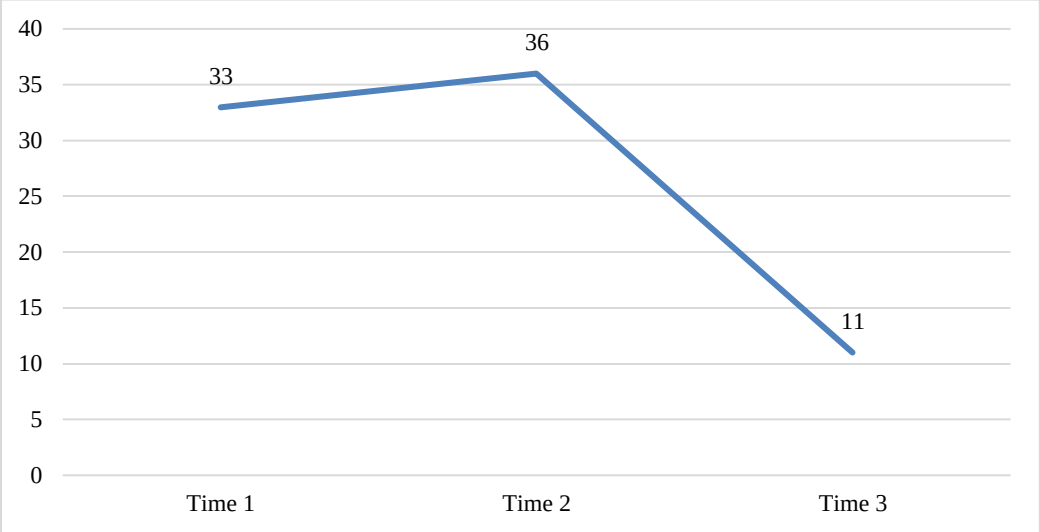


Resilience. When participant one completed the CD-RISC 10 in the clinic with the on-site researcher, they endorsed a moderate level of resilience with a score of 24 out of a possible 40. During the four-week period, participant one's level of resilience remained stable.

Illness Perception. When participant one completed the IPQ-B in the clinic with the on-site researcher, they endorsed a mild to moderately threatening perception of their illness with a score of 33 out of a possible 80. During the four-week period, participant one experienced a 20-point decrease with a score of 11 out of a possible 80. See Figure 6 for scores throughout study.

Figure 6

Participant One, IPQ-B Scores

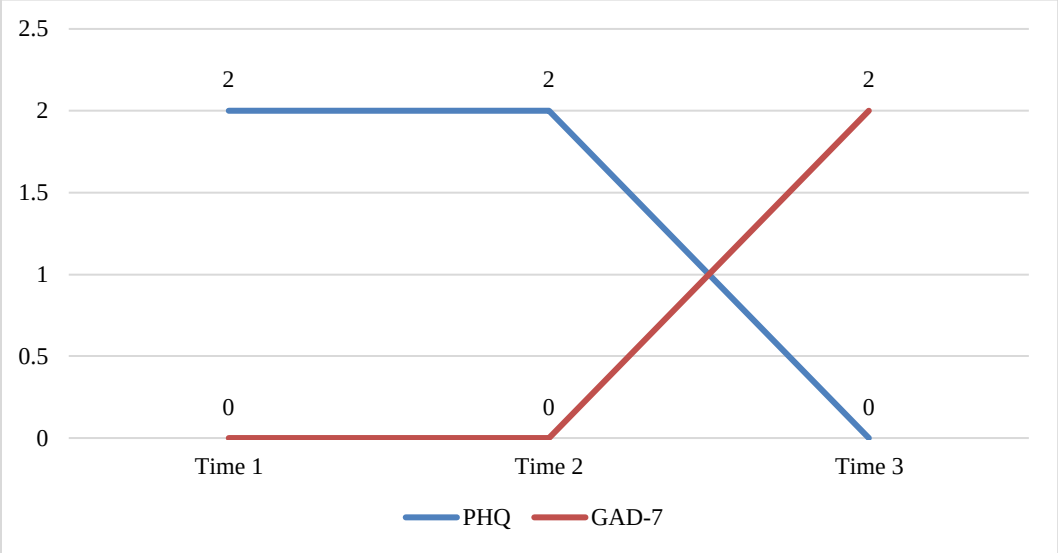


Participant Two

Depression and Anxiety. When participant two completed the PHQ-9 in the clinic with the on-site researcher, they endorsed a score of 2 out of a possible 27, which indicates a minimal level of depressive symptoms. During the four-week period participant two adhered to the study protocol, they experienced a two-point decrease. A score of 0 indicates no depression. When participant two completed the GAD-7 in the clinic with the on-site researcher, they endorsed a score of 0 out of a possible 21. During the four-week period, participant two experienced a two-point increase. A score of 2 indicates a minimal level of anxiety symptoms. See Figure 7 for scores throughout the study.

Figure 7

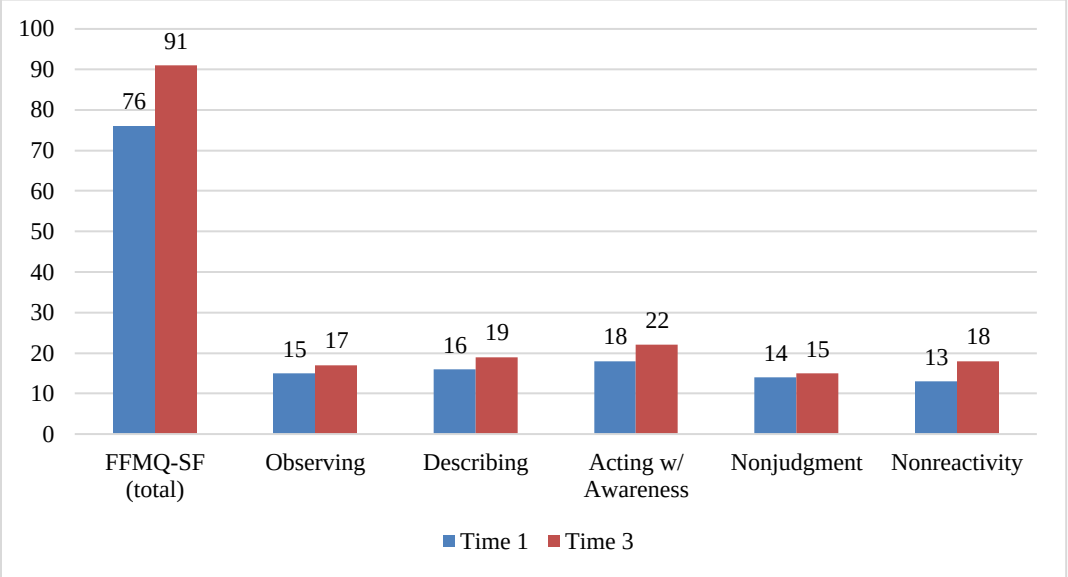
Participant Two, PHQ-9 and GAD-7 Scores



Mindfulness. When participant two completed the FFMQ-SF in the clinic with the on-site researcher, they endorsed moderate to high levels of mindfulness with a total score of 76 out of a possible 120. Scores on the five mindfulness subscales ranged from 13 to 18. During the four-week period, participant two experienced a 15-point increase in their endorsed level of mindfulness with score of 91 out of a possible 120. See Figure 8 for scores throughout study.

Figure 8

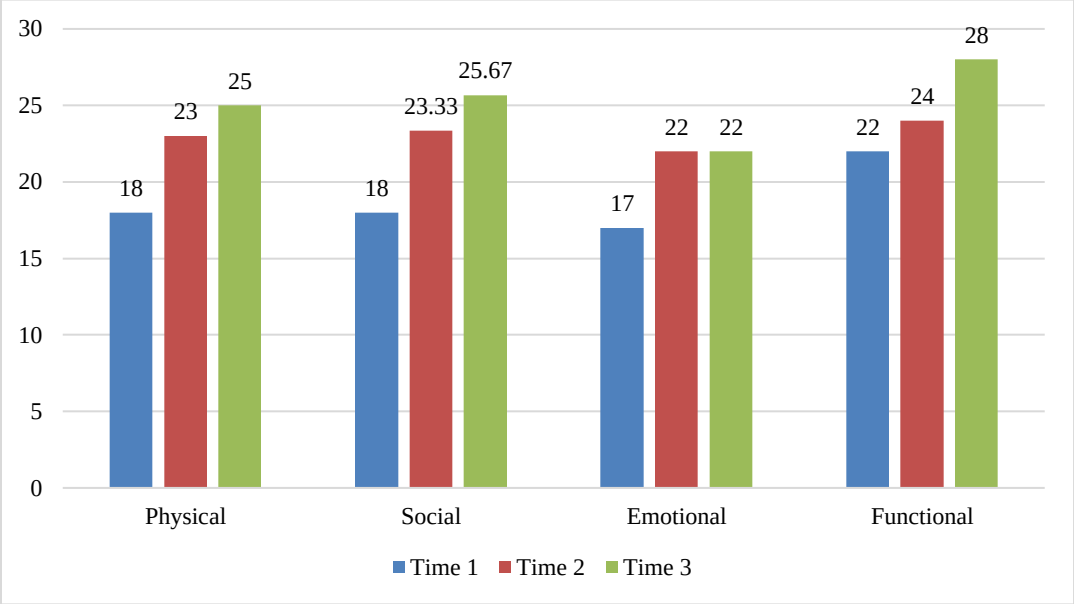
Participant Two, FFMQ-SF Scores



Quality of Life. When participant two completed the FACT-G in the clinic with the on-site researcher, they endorsed moderate to high quality of life with a total score of 75 out of a possible 108. Scores on the four quality of life subscales ranged from 18 to 22. During the four-week period, participant two experienced an approximately 25-point increase in their endorsed quality of life with a score of 100.67 out of a possible 108. See Figure 9 for scores throughout study.

Figure 9

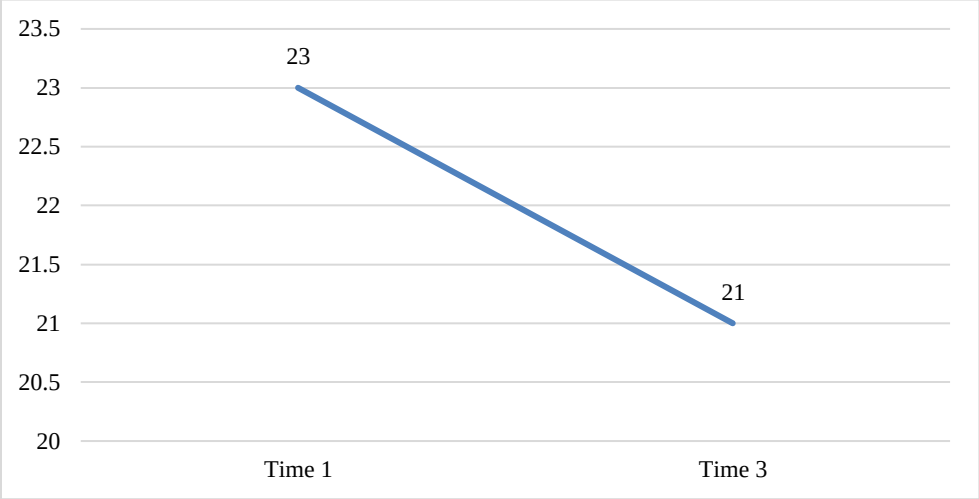
Participant Two, FACT-G Scores



Resilience. When participant two completed the CD-RISC 10 in the clinic with the on-site researcher, they endorsed a moderate level of resilience with a score of 23 out of a possible 40. During the four-week period, participant two experienced a two-point decrease with a score of 21 out of a possible 40. See Figure 10 for scores throughout the study.

Figure 10

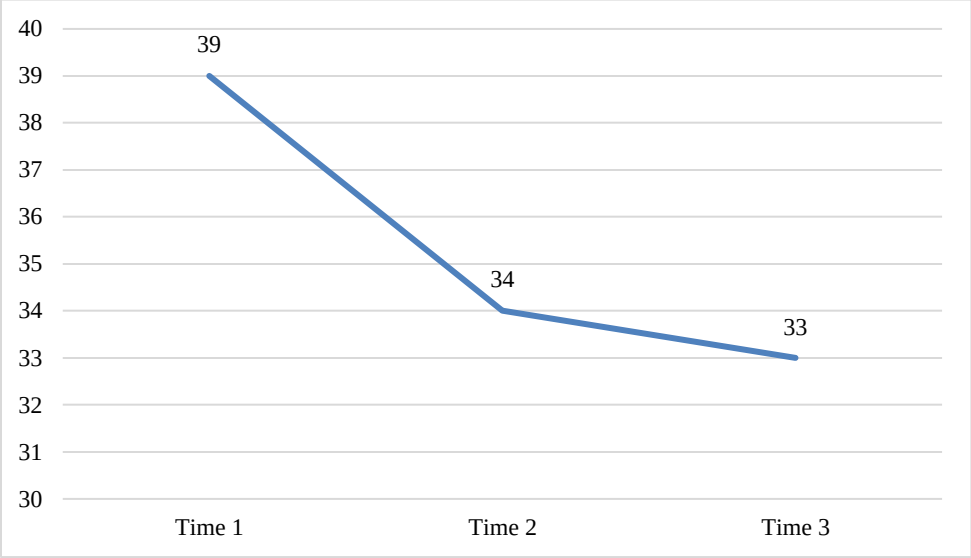
Participant Two, CD-RISC 10 Scores



Illness Perception. When participant two completed the IPQ-B in the clinic with the on-site researcher, they endorsed moderately threatening perception of their illness with a score of 39 out of a possible 80. During the four-week period, participant two experienced a six-point decrease with a score of 21 out of a possible 80. See Figure 11 for scores throughout study.

Figure 11

Participant Two, IPQ-B Scores



Participant Three

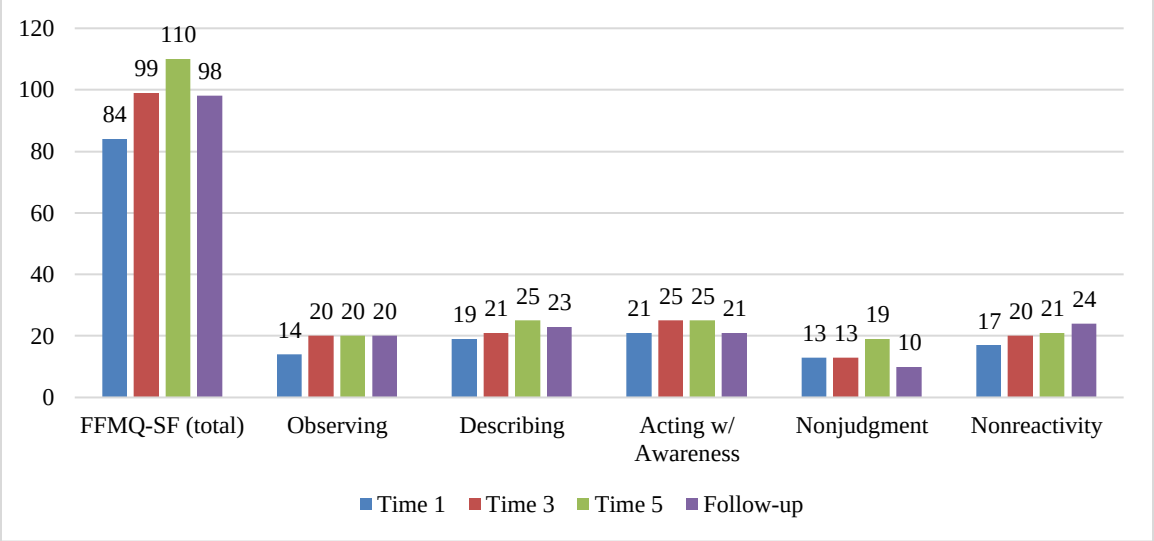
Depression and Anxiety. When participant three completed the PHQ-9 in the clinic with the on-site researcher, they endorsed a score of 0, which indicates no depressive symptoms. During the twelve-week period, participant three remained stable with regards to self-report depressive symptoms (score of 0). When participant three completed the GAD-7 in the clinic with the on-site researcher, they endorsed a score of 0, which indicates no anxiety symptoms. During the twelve-week period, participant three remains stable with regards to self-report anxiety symptoms (score of 0).

Mindfulness. When participant three completed the FFMQ-SF in the clinic with the on-site researcher, they endorsed high levels of mindfulness with a total score of 84 out of a possible 120. Scores on the five mindfulness subscales ranged from 14 to 21. During the eight-week period while participating in the bibliotherapy, participant three experienced a 26-point increase with a score of 110 out of a possible 120. When assessed

at one month follow-up, participant three experienced a 12-point decrease with a score of 98 out of a possible 120, though high levels of mindfulness were maintained. See Figure 12 for scores throughout study.

Figure 12

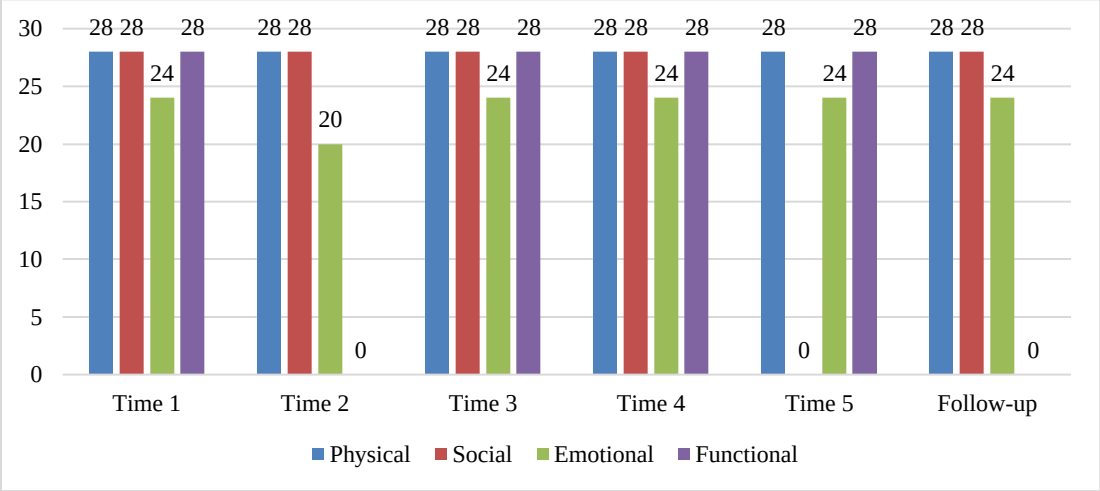
Participant Three, FFMQ-SF Scores



Quality of Life. When participant three completed the FACT-G in the clinic with the on-site researcher, they endorsed the highest level of quality of life with a total score of 108 out of a possible 108. Scores on the four quality of life subscales ranged from 24 to 28. During the twelve-week period, participant three's scores remained somewhat stable; however, score patterns evidenced a tendency for participant three to engage in extreme response bias for this measure. For example, participant three indicated no functional quality of life with a score of 0 at Time 2 (week two) and one-month follow-up; however, participant three indicated the highest level of functional quality of life with

a score of 28 out of a possible 28 at Time 3 (week four), Time 4 (week six), and Time 5 (week eight). See Figure 13 for scores throughout study.

Figure 13
Participant Three, FACT-G Scores

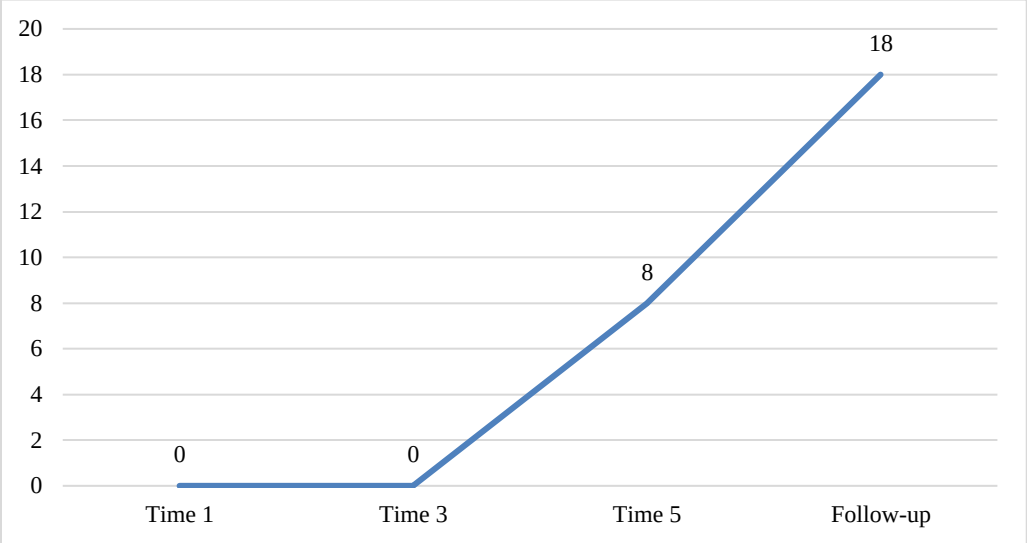


Resilience. When participant three completed the CD-RISC 10 in the clinic with the on-site researcher, they endorsed the highest level of resilience with a score of 40 out of a possible 40. During the twelve-week period, participant three's resilience scores remained relatively stable. However, at Time 5 (week eight) and one-month follow-up, participant three indicated a one-point decrease (i.e., score of 39 across both time points).

Illness Perception. When participant three completed the IPQ-B in the clinic with the on-site researcher, they did not endorse a threatening perception of their illness as indicated by a score of 0. During the twelve-week period, participant three experienced an 18-point increase with a score of 18 out of a possible 80. See Figure 14 for scores throughout study.

Figure 14

Participant Three, IPQ-B Scores



Patient Feedback while Participating in the Bibliotherapy

Following approval for the second modification, patients participating in the bibliotherapy (*n*=3) were asked to provide feedback through open-ended questions included in each biweekly survey. Open-ended questions assessed for any barriers or difficulties patients experienced when attempting to complete the assigned readings, what patients liked most about the readings, what patients liked least about the readings, and any difficulties patients experienced while attempting to engage in the mindfulness-based practices. Please see Table 8 for full descriptions of the feedback each participant provided during each time point.

Table 8

Participant (n=3) Feedback Elicited During Participation in Bibliotherapy

	Participant One [a]		
Question	Time 2	Time 3	Time 4
What got in the way of being able to complete the readings or practices? [d]			"Not feeling well due to new medication."
What did you like least about the readings?	"I didn't find anything I didn't like"	"I didn't like having to put the book down to do the exercises. It's inconvenient to have go back and forth to follow steps."	
What did you like most about the readings?	"I liked how easy it was to follow and understand"	"I enjoy the helpful information on how your body reacts to stressor's."	
Did you have any trouble or difficulties with the practices presented to you?	"I did not have any."	"It would be much easier to do if I had a video to watch how exercises are done. I do better with visual than verses reading them."	

	Participant Two [b]	
Question	Time 2	Time 3
What did you like least about the readings?	"Unused to holding to a schedule but I did it"	"It's a lot of info to understand."
What did you like most about the readings?	"Teaching me about being aware of things around me."	"I like the yoga idea."
Did you have any trouble or difficulties with the practices presented to you?	"Unable to focus and read so I went to insight meditation and used their body scan mindfulness technique for 15 min very enlightening."	"I did not have any trouble."

Questions	Participant Three [c]				
	Time 2	Time 3	Time 4	Time 5	Follow-up
What did you like least about the readings?	"I feel like I'm wasting my time because I am not depressed."	"Not anything they were helpful."	"It hard for me to say. I understand they are assuming that I'm not doing well but I am past so much of my treatment and am doing very well."	"It was all a little too late I hope I am through the worst of my cancer."	"All very informative."
What did you like most about the readings?	"Not much."	"The breathing exercises."	"It seems that are telling to get out of the dark places in my mind and not dwell on the negative."	"Ways to get through negative emotions."	"I can't say."
Did you have any trouble or difficulties with the practices presented to you?	"I did not have any."	"No."	"No."	"I did not have any."	"I did not have any difficulties."

Note. [a] Participant one did not provide measurement data following Time 3, but information was provided as to why they were unable to complete the readings for Time 4. [b] Participant two did not respond to emails following Time 3. [c] Participant three completed all time points. [d] The first question was only presented to participants if they indicated to have been unable to complete readings.

Chapter 4

Discussion

Target Rates for Feasibility

The trial is the first to assess the feasibility of implementing a guided MBCR bibliotherapy program to women with breast cancer in an ambulatory oncology clinic. The current study met the estimated target rate for patients eligible for the bibliotherapy (55.2%) and found evidence of retention throughout the bibliotherapy protocol. However, many of the other estimated target rates set for eligibility (i.e., total patients approached for baseline survey), consent, and completion were not met. As a result, feasibility as defined through meeting estimated target rates was not supported. However, a variety of additional areas of focus were considered within feasibility. As discussed previously, these areas were defined by Bowen et al. (2009) and Gadke, Kratochwill, and Gettinger (2021). In addition to estimated target rates, the behavioral observations during recruitment and qualitative data have shed light on these other areas of focus (e.g., acceptability, recruitment capacity, etc.).

Areas of Focus and Future Directions

Acceptability

As expected, based on previous literature (Broten, Naugle, Kalata, & Gaynor, 2011; Haugh et al., 2019; O'Donohue & Draper, 2011), results continued to suggest that the SCM is viewed to be an acceptable treatment approach and a probable improvement upon standard care. Regarding individual treatments within the SCM, psychoeducation and self-help had the highest acceptability ratings. Moreover, patients most frequently

indicated preference for guided versus unguided self-help and self-help books (i.e., bibliotherapy) versus internet-based programs or mobile applications. Taken together, these preferences supported the decision to use a guided bibliotherapy for the current study. On the other hand, with regards to the focus of MBCR, results for the baseline survey suggest patients tended to prefer a problem-solving or cognitive approach versus a mindfulness-based approach. Considering the importance of patient preference to treatment adherence and satisfaction (Carlson et al., 2017; Iacoviello et al., 2007), it might have been beneficial to present patients with the option to choose a guided bibliotherapy based on their preferred modality or theoretical orientation.

The research collaboration established prior to the current study was invaluable to efforts to recruit and retain participants. The study – in its entirety – was positively received among the research coordinators, providers, nurses, and staff. In addition to being welcomed and accommodated while on-site, there were immediate affirmations untoward the rationale for using a guided MBCR bibliotherapy. It soon became evident that treatments for addressing psychological distress within this context were limited. As such, the protocol was perceived by providers and staff as appropriate as well as a good fit within the organizational culture.

Recruitment Capacity

A total of 451 patients were identified for participation by the clinic's research coordinator for the baseline survey. Of those, only 17 patients were ineligible through further screening. However, an additional 338 patients were not appropriate for researchers to approach. The most overwhelming reason patients were not approached was if the patient was a repeat (i.e., already participated or declined). Based on census

data, the clinic saw 98 new patients diagnosed with breast cancer in 2020. While the census was projected to increase following the initial height of the COVID-19 pandemic, the clinic experienced a rise in COVID-19 related cases during December 2021 to February 2022. As a result, many of the in-person appointments were transitioned to telehealth. The researchers of the current study were able to approach a total of 96 patients for potential participation in the baseline survey, which aligned closely to the number of new patients seen in in the clinic during 2020.

Overall, the pandemic has largely reshaped the research landscape (Ramos, 2021). As time progresses, future researchers will likely continue to learn how to navigate pandemic-related challenges and increase flexibility in research protocols. Our initial rationale to have patients complete the baseline survey on-site was the written informed consent required for participation in the bibliotherapy. As those receiving oncological treatments (e.g., chemotherapy) have compromised immune systems, it would be beneficial to explore alternative options. Specifically, future research might consider ongoing discussion and inquiry from the Institutional Review Board (IRB). In addition, The Food & Drug Administration (FDA) published guidance for investigators when conducting clinical trials for medical products during the COVID-19 public health emergency (FDA, 2021). While these guidelines pertain specifically to medical products, answering whether it might be appropriate to obtain consent via phone call or video conference in this population is warranted given potential vulnerability.

With regards to identifying patients with the potential of benefiting from participation in the bibliotherapy, the estimated target eligibility rate (55.2%) was met. However, the proportion decreases to 33.3% when those who were eligible (n=32) are

compared with the total number of patients approached for the baseline survey (*n*=96). Ideally, researchers for the current study would have been able to present and provide the opportunity for all new patients to take part in the bibliotherapy. Attempts were made to be mindful of previous literature as well as what was learned during our prior research (Haugh et al., 2019). For example, literature has recommended including the use of physician recruiters and building personal connections with the providers and staff within the clinic (Johnston et al., 2010). The first modification assisted with effective communication with providers. Specifically, the creation of the flyer allowed us to easily describe the rationale for the study and discuss expectations for participation. In addition, many providers in the clinic asked on-site researchers to check-in prior to approaching patients. Through this additional check-in, the on-site researchers were able to reiterate the current study more frequently, make presence known, and form more meaningful connections. The providers were also able to review their scheduled patients for the day and inform the researchers which of their patients would be appropriate to approach.

Demand and Data Collection

On-site researchers approached a total of 96 patients to ask about willingness to participate in the baseline survey and the response rate was 46.9%. Results indicated the most common reason patients declined was they did not have the time required to participate (*n*=20). Many of these patients initially expressed interest per researcher observations (e.g., "*Patient politely declined as she did not have the time; receptive to reapproach at a later date*."). In addition, some patients reported willingness to take the baseline survey at home if it was offered online (e.g., "*Patient mentioned being willing to provide email and identifying info to set up time for her to come in for the survey…She*

also mentioned if it was available online then she would have gladly taken a link.”). Taken together, our data collection procedures might be one prominent explanation for low use. The baseline survey took patients approximately 20 to 25 minutes to complete and some 30+ minutes due to their reading proficiency and/or ability to effectively use the provided iPad. If patients were eligible and interested in participating in the bibliotherapy, they would then be there for additional time to learn about the protocol, sign written consent, and receive materials (e.g., self-help book). Taken together, future research should explore ways to lessen the participant burden at baseline. This might include only administering necessary measures; for example, having patients only complete the FFMQ-SF, FACT-G, CD-RISC 10, and IPQ-B if they were participating in the bibliotherapy. These measures might have then been administered online at baseline reducing their time in the clinic.

Likewise, researchers approached a total of 32 patients to ask about their willingness to participate in the bibliotherapy and the response rate was 31.3%. Results indicated time constraints were one of the most common reasons reported from those who declined participation (n=9). In addition, seven of the 10 participants who consented to the bibliotherapy did not proceed past the baseline survey. Some participants did not respond to any emails (n=3) and some who withdrew (n=2) did so due to time constraint. Several attempts to lessen participant burden throughout the bibliotherapy protocol were made. Specifically, our second modification allowed for participants to complete the FFMQ-SF and CD-RISC 10 monthly rather than biweekly. The rationale for the modification was to decrease participant burden as well as to reflect the instructions of these measurements (i.e., please indicate the statement that best reflects your experience

"…*in the last month*" rather than the "…*past two weeks*"). In addition to time, the use of technology (e.g., completing surveys via email and online administration) was a concern. For example, one patient who consented and never responded to emails expressed difficulty accessing technology (e.g., "*Patient discussed only having email access on phone. We explained what emails will include and patient was receptive to trying*."). Future research might consider ways to reduce the burden of using technology; for example, providing paper copies of the weekly modules and ensuring surveys appear mobile-friendly when accessing Qualtrics.

Design Procedures and Implementation

It is possible some of the challenges faced recruiting participants for the bibliotherapy can be attributed to the initial inclusion criteria regarding symptomatology. Out of 26 patients who had completed the baseline survey, 21 patients (80.8%) were not eligible for the bibliotherapy due to symptom endorsement on the PHQ-9 and GAD-7. Their symptom endorsement (i.e., minimal symptomatology as indicated by scores <5 or severe symptomatology as indicated by scores 14+) was the only reason they were ineligible to participate. Moreover, as these patients were not eligible, they were not provided with any information on the rationale for using bibliotherapy or how bibliotherapy might be beneficial.

In response to the low volume of patients appropriate to approach for the bibliotherapy, attempts were made to improve recruitment efforts through modifications. Despite having similar eligibility criteria to Zernicke et al. (2014), the results and our observations indicated the initial criteria were too restrictive. As a result, the parameters regarding symptom endorsement were altered and expanded. In addition to our desire to

reach a higher number of patients, the episodic nature of psychological distress within the context of cancer treatment and survivorship was considered. Specifically, previous research suggests rates of depression are highest in younger women, within the first year following diagnosis, while undergoing adjunctive treatment including chemotherapy and/or surgery, and with recurrence (Burgess et al., 2005; Fann et al., 2008; Hegel et al., Pasquini & Biondi, 2006; Miller, Bowen, Croyle, & Rowland, 2009). Taken together, patients might experience varying levels of distress across the cancer care continuum. Patients who were not experiencing mild to moderate levels of distress at time of recruitment may still experience distress either later in treatment or during survivorship (e.g., fear of recurrence and/or recurrence). Following approval of this modification, on-site researchers were able to offer the opportunity to participate to a total of 28 patients compared to a total of four patients prior to approval. Unfortunately, the modification for these changes was not approved until July 2021, approximately halfway through active recruitment. Future research might initially consider a more inclusive eligibility criteria to optimize dissemination.

In addition to eligibility, patients who participated in the bibliotherapy were asked to provide feedback about their experience in the study through open-ended questions. Specifically, the current study assessed aspects of what participants liked the most and the least about the reading and/or practices, barriers that prevented participants from completing the assignments, and any difficulties faced when engaging in the practices. Results suggest those who received and used the bibliotherapy (n=3) liked the mindfulness-based content and practices the most (e.g., "*Teaching me about being aware of things around me*," "*I like the yoga idea*," "*The breathing exercises*"). They liked

needing to follow a schedule and the disconnect between reading the scripts during practices the least (e.g., "*Unused to holding to a schedule, but I did it*," "*I didn't like having to put the book down to do the exercises. It's inconvenient to have go back and forth to follow steps*."). Much like patient-centered care, future research might incorporate or allot for additional time within the protocol if necessary. The bibliotherapy and weekly modules offered the recommendation to record oneself reading the practice scripts. However, it may also prove to be beneficial to include online video or audio script resources to aid and further facilitate practice in future research.

Integration

As mentioned previously, the clinic's providers and staff were welcoming and accommodating to on-site researchers. To support integration, the perceived fit within the organization as well as feasibility, sustainability of the intervention, and costs to the organization must also be considered. To reiterate, the current study did not meet most of the estimated target rates during active recruitment. In addition to factors already discussed, it is possible that our own resources negatively impacted recruitment rates. Specifically, the second most common reason for not approaching patients for the baseline survey was researcher availability (n=87). This frequently occurred when the on-site researcher missed the patient as they were obtaining consent or administering the study to another patient. Moreover, during the 46 weeks of active data collection and with the help of research assistants, we were only able to recruit for 49 days, with a total of 166 hours. Many of these days also consistently fell on the same day of the week (e.g., Tuesday or Friday). Future research would need to significantly increase researcher

availability; for example, having more than one researcher on-site as well as researchers present multiple times a week and potentially varying times during the day.

In order to make this research more feasible in the future and make treatment be fully integrated into a clinic, it will be important for providers and staff to be willing and able to provide guided MBCR without being reliant on the treatment team. There are certain things about the protocol that make integration logistically possible. First, the modules are created and can be provided via paper booklet for readers to use with the self-help book. To determine whether the patient's distress is appropriate for self-help, providers might continue to employ widely used screeners for depression (PHQ-9) and anxiety (GAD-7). Staff could easily utilize their already established protocol for assessing any expressed suicidal ideation. The clinic's Oncology Social Worker is already and would continue to be a practical point of contact for questions and concerns that arise.

There are also certain things about the protocol that make integration challenging. First, the *Mindfulness-Based Cancer Recovery: A Step-by-Step MBSR Approach to Help You Cope with Treatment & Reclaim Your Life* (Carlson & Speca, 2011) is priced at roughly ~$20 per paperback copy. Purchasing copies in wholesale would be possible (e.g., 100 – 499 units at 55% discount rate), though this would be a cost incurred by the clinic. In addition, a clinic "champion" (Johnston et al., 2010) might be necessary to keep referring patients to the bibliotherapy protocol. The research coordinator was immensely helpful throughout our collaboration; however, she is not always on-site and is employed more specifically within the network's administrative department. Taken together, these barriers would need to be discussed and resolved prior to long-term integration.

Effectiveness

The individual results from participants (*n*=3) provide preliminary support for the use of the guided bibliotherapy as a viable treatment option. The following clinical improvements were reported during participation: a) depressive and anxious symptomatology either remained stable or decreased, b) total scores and facet scores (observing, describing, acting with awareness, nonjudgmental evaluation, and nonreactivity) of mindfulness increased; c) scores for total quality of life and domains of quality of life (physical, social, emotional, and functional) either increased of remained stable, d) endorsed resilience increased, and e) perceived illness became less threatening.

Of note, participant three experienced an increase in how threatening she perceived her illness throughout the study. One possible explanation for this increase might be related to her endorsed increase in mindfulness. Specifically, being more aware of her internal and/or external stimuli as they relate to her illness might have led her to rate certain items higher. For example, her ratings indicated that increases in her mindfulness ratings corresponded to indicating that her illness affected her less emotionally than it has previously. In addition, her ratings indicated that increases in her mindfulness ratings corresponded to an increase sense of control over her illness.

Limitations of the Current Study

As discussed previously, a predominant limitation of the current study was the number of patients who were appropriate to approach for participation. The access to patients directly impacted the ability to recruit and retain a sample size adequate to meet estimated target rates and support feasibility. A multitude of factors contributed to how our access to patients was limited, such as the ongoing pandemic, our own researcher

availability and resources, difficulties faced with recruitment capacity, and our data collection procedures. Discussion has been offered regarding insights into these areas of focus as well as how future research might resolve and circumvent such limitations.

In addition to these areas, a major limitation lies within the lack of diversity present within our sample. Every woman who participated in the bibliotherapy protocol identified as White/Caucasian and Non-Hispanic/Latinx. Numerous health disparities exist within oncology and, more specifically, for women diagnosed with breast cancer. For example, Black women experience the highest rate of severe breast cancer and are more frequently diagnosed with triple negative breast cancer when compared to White, Hispanic/Latinx, and Asian/Pacific Islander women. While Hispanic/Latinx women experience lower rates than Black and White women, they experience a higher number of barriers to screening and more advanced breast cancers than White women. Breast cancer is also the most common and leading cause of cancer-related death Hispanic/Latinx women (Yedjou et al., 2020). It is crucial for future research to make efforts to recruit and accommodate diverse women; for example, those who were not English-speaking were excluded. However, future research might translate study materials to increase access and dissemination.

A final limitation pertains to the impact a protocol has on the advantages on self-administered treatment. As discussed previously, one of the major advantages of using bibliotherapy is that it is self-administered and able to be completed at one's own leisure. A diagnosis of cancer presents the additional burden of time-intensive oncological treatments and/or frequent medical appointments. One common reason for declining participation in the bibliotherapy was not having enough time to dedicate to the protocol

(*n*=9). Moreover, two participants withdrew from the protocol due to time constraints and increased stress. Future research might consider flexibility with regards to the burden of a measurement-based and time-based protocol. For example, exploring additional qualitative assessment and the option of administering focus groups rather than biweekly self-report questionnaires. Future research might offer the option for participants to request breaks if necessary and emphasize the opportunity to return to the protocol when personal responsibilities have lessened.

Conclusions

During the previous two decades, extensive empirical support and efficacy for the use of MBCR as an in-person treatment and online eTherapy program has been established (Blaes et al., 2016; Carlson, 2013; Carlson, 2016; Carlson et al., 2015; Carlson et al., 2019; Toivonen et al., 2020, Zernicke et al., 2014). For the current study, many of the indices used to evaluate feasibility did not meet pre-established criteria to suggest that implementation of the program as designed is feasible. However, there are several other factors that suggested the use of MBCR delivered via bibliotherapy may be feasible. Of note was the fact that the treatment had demonstrated efficacy for those that did enroll. More specifically, participants evidenced decreases in depressive and anxious symptomatology with roughly four weeks of bibliotherapy use. Participants also reported increases in resilience, levels of mindfulness, and dimensions of quality of life. Previous research indicates stable social support can improve emotional and physical wellbeing (APA, 2019; Uchino, 2009). Moreover, increasing resilience and mindfulness can buffer against and mitigate future distress through pathways of increasing emotional

nonreactivity, cognitive flexibility, and acceptance (Bergin & Pakenham, 2016; Creswell & Lindsay, 2014; Davis & Hayes, 2012).

In closing, it is possible that this treatment remains feasible with the recommended adjustments that arose from the current attempt at implementation. Taken together, the use of MBCR as a guided bibliotherapy to treat psychosocial distress in a population of women with breast cancer remains a viable treatment option, although significant work moving from viable to realized is still needed. Future research may utilize (and be mindful) of what was learned from the current study to further support the feasibility of implementing and integrating MBCR guided bibliotherapy in oncology clinics for women with breast cancer.

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Appendix A

Weekly Modules

Week One

Please read the following:

- Chapter One: ***Mindfulness and Cancer***
- Chapter Two: ***Stress and Cancer***

As you read these chapters:

- Think about how the introduction to mindfulness might relate to your own experience. While there might be differences and **your experience can only be your own**, you might recognize similarities.
- Try to pay close attention to how the authors define mindfulness. Ask yourself the below questions:
    - Do you live within the ***present moment*** as much as you would like?

      _____
    - Can you recall times when you feel like you are living in ***autopilot***?

      _____
    - Can you recall times when your mind has been elsewhere, either in the ***past*** or ***future*** rather than in the ***present***?

      _____
- Consider your stress and begin to recognize your own symptoms of stress by taking the self-assessment on page 21.
    - This book is yours! Check off your own symptoms on pages 21 and 22. Identifying your own symptoms might help you to recognize them even more when they happen in your daily life. **You can also write them here**:

      _____

      _____

      _____

      _____

Week Two

Please read the following:

- Chapter Three: ***Beginning the Program***

As you read chapter 3:

- When you read about ***intention, attention, and attitude***, ask yourself the following questions:
    - Why do I want to do this?

      _____

      _____
    - What is my intention behind learning mindfulness meditation?

      _____

      _____
- Try to maintain an open mind while reading the helpful attitudes, which are outlines on pages 37 and 38.
- Set aside a time to complete Practice 3.1 on page 40, which is: ***Mindfully Eating a Raisin***. It might be easiest to use a raisin during this practice. However, if you do not like raisins or do not have any accessible, use something small, edible, and textured.
    - As the authors discuss, you can read the instructions first or read the instructions as you go through the practice.
- After you complete the practice, answer the following questions that the outline:
    - What was it like for you to eat a raisin (or chosen food) in this way?

      _____

      _____
    - How did it taste?

      _____

      _____
    - How is it different from the way you usually eat things?

      _____

      _____

- Set aside time to complete Practice 3.2 on page 42, which is: ***Mindful Breathing***. After you complete the practice, answer the following question the authors outline:
    - What did you notice from doing this practice?

      _____

      _____

- Focus on how the authors define diaphragmatic breathing or "belly breathing." Attempt a few breaths to ensure understanding of this kind of breathing.
- Read through Practice 3.3 on pages 47-50, which is: ***Body Scan***. This practice is longer than ***Mindfully Eating a Raisin*** and ***Mindful Breathing***. Perhaps take 15 minutes now to complete this practice.
    - After you complete the body scan, notice how you feel. Explore any potential similarities or differences between your experience and the example of Sarah on page 50.

      _____

      _____

- ***Create a schedule for yourself this week.*** Set aside 15 to 30 minutes of time per day for seven days to practice the body scan. You might practice during a certain time of day, for example, in the morning or before bedtime.
    - Try to stick to your schedule. If you miss a scheduled practice, ***it is okay!*** Try to reschedule for later in the day or complete a morning and nighttime practice the following day.
    - You can use the attached worksheet to create your schedule, or you can write it in a notebook or planner.

Schedule to practice body scan

(*indicate time and circle identified preference*)

Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
Practice Body Scan at: _____ AM / PM (*circle*)	Practice Body Scan at: _____ AM / PM (*circle*)	Practice Body Scan at: _____ AM / PM (*circle*)	Practice Body Scan at: _____ AM / PM (*circle*)	Practice Body Scan at: _____ AM / PM (*circle*)	Practice Body Scan at: _____ AM / PM (*circle*)	Practice Body Scan at: _____ AM / PM (*circle*)
Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)
Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)

***Note:** Your schedule does not have to start on Sunday; for example, depending on when you read the above chapter, your practice might run from Wednesday to the following Tuesday.*

Week Three

Please read the following:

- Chapter Four: ***Responding to Stress***
- Chapter Five: ***Mindful Movement***

As you read chapter 4:

- Try to pay close attention to the difference between ***stress reaction*** and ***stress response*** defined by the authors.
- Think about your own experience. Much like how you identified your own stress symptoms in chapter two, identify the following:
    - Your ***physical stress reactions***: these might include elevated heart rate, sweating, muscle pains, or other physical symptoms:

      _____

      _____

      _____

    - Your ***behavioral stress reactions***: these might include those short-term or quick fixes you might do to help with stress, such as isolating yourself or substance use:

      _____

      _____

      _____

- Now, try to pay close attention to how the authors define ***stress response*** or how we might respond to stress. You might notice that you already engage in helpful strategies during times of stress? It so, what are they?

  _____

  _____

  _____

- Read through Practice 4.1 on pages 63-66, which is: ***Sitting Meditation***. Choose a sitting posture and practice sitting meditation. This practice can take up to 30 minutes, but you can start with 10 to 20 minutes and build up to 30 minutes.
- ***Create a schedule for yourself this week.*** Set aside 15 to 30 minutes of time per day for seven days to practice the body scan and sitting meditation. Alternate between the two practices.

- Try to stick to your schedule. If you miss a scheduled practice, ***it is okay!*** Try to reschedule for later in the day or complete a morning and nighttime practice the following day.
- You can use the attached worksheet to create your schedule, or you can write it in a notebook or planner.

As you read chapter 5:

- Try to pay close attention to the context of yoga and the foundations of yoga practice. The authors discuss several areas to get you started with a yoga practice, including ***your own safety***.
- Read through Practice 5.1 (***Lying Yoga Poses***) and Practice 5.2 (***Standing Yoga Poses***).
    - In addition to alternating between body scan and sitting meditation, choose at least one of these two yoga sequences to ***work into your schedule*** three times.
    - You can use the attached worksheet to create your schedule, or you can write it in a notebook or planner.
    - Remember that the authors suggest practicing yoga ***before*** a body scan or sitting meditation practice. Yoga might also be beneficial in the morning or at night.

Schedule to Practice

(*indicate and circle identified practice and time*)

Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
PPractice Body Scan / Sitting Meditation at: _____ AM / PM (*circle*)	***Practice*** Body Scan / Sitting Meditation at: _____ AM / PM (*circle*)	***Practice*** Body Scan / Sitting Meditation at: _____ AM / PM (*circle*)	***Practice*** Body Scan / Sitting Meditation at: _____ AM / PM (*circle*)	***Practice*** Body Scan / Sitting Meditation at: _____ AM / PM (*circle*)	***Practice*** Body Scan / Sitting Meditation at: _____ AM / PM (*circle*)	***Practice*** Body Scan / Sitting Meditation at: _____ AM / PM (*circle*)
Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)	Practice complete: Yes / No (*circle*)
Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)	Rescheduled for: _____ (*if needed*)

***Note:** Your schedule does not have to start on Sunday; for example, depending on when you read the above chapters, your practice might run from Wednesday to the following Tuesday.*

Yoga Practice

Day:_____	Day:_____	Day:_____
Practice before: Body Scan / Sitting Meditation Time: _____ AM/PM Practice complete: Yes / No Rescheduled for *(if needed):* _____	***Practice before:*** Body Scan / Sitting Meditation Time: _____ AM/PM Practice complete: Yes / No Rescheduled for *(if needed):* _____	***Practice before:*** Body Scan / Sitting Meditation Time: _____ AM/PM Practice complete: Yes / No Rescheduled for *(if needed):* _____

Week Four

Please read the following:

- Chapter Six: ***Balancing Breath***
- Chapter Seven: ***Stories we Tell Ourselves***

As you read chapter 6:

- Try to pay close attention to the differences between the ***sympathetic nervous system*** and the ***parasympathetic nervous system***. As the authors suggest on page 101, ask yourself the following question:
    - How do you breathe when you are in a tense situation, scare, or getting ready to face a physical challenge? Check all that might apply:
      ___ I sharply draw in a few deep breaths

      ___ I hold my breath

      ___ I start to hyperventilate (breathe faster)

      ___ Other: _____
- Read through and attempt each type of ***mini-breathing practice***. Once you practice each, write down which mini practice or practices you might use during times of stress:

  _____

  _____
- Remember you can practice a ***"mini" at any point*** during the day on an as needed basis.

As you read chapter 7:

- Think about your own <u>life stories</u>. Try to pay close attention to the nature of thought and how some of our life stories can be distressing.
- Read and review common ***Pitfalls in Thinking***.
    - Can you relate with any of these defined pitfalls?
- If so, keep in mind how ***Mindfulness for Observing Thoughts*** might help you to begin recognizing these thought patterns through the questions outlined on page 115.

- Read through the instructions for Practice 7.1 on pages 115-117, which is: ***Challenging Your Assumptions***.
    - Think of a time you might have experienced a pitfall in thinking. Complete the practice by filling in the ***situation, emotions, automatic thoughts, distortions of thought, alternate response,*** and ***outcome***.
    - You can use the space provided to run through an example:

Situation: Describe the events surrounding an unpleasant emotional experience. List just the facts, as a video camera might capture, without any interpretation.	
Emotions: Describe the emotion aroused, such as anger, sadness, or fear, and how strong it is on a scale from 1 to 10.	
Automatic Thoughts: What thoughts can you identify that preceded or contributed to the negative emotion?	
Distortion of Thought: Identify the possible distortions or limitations in each automatic thoughts from the list of "Pitfalls in Thinking" in the previous section.	
Alternative Response: How could you think or behave differently in the situation?	
Outcome: How would you feel or behave if you substituted the alternative response for the automatic thought? Has the emotional intensity shifted?	

- Read though Practice 7.2 on pages 118 and 119, which is: ***Mindful Walking Meditation***.
    - As the authors suggest, create a schedule in which you alternate between practicing ***Sitting Meditation*** and ***Mindful Walking Meditation***, while also including a practice of ***Lying Yoga Poses*** or ***Standing Yoga Poses*** within the next week.
    - You can use the attached worksheet to create your schedule, or you can write if in a notebook or planner.

Schedule to Practice

	Practice #1 (*circle*)	**Practice #2** (*circle*)
Sunday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Monday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Tuesday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Wednesday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Thursday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Friday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Saturday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No

***Note:** *Your schedule does not have to start on Sunday; for example, depending on when you read the above chapters, your practice might run from Wednesday to the following Tuesday.*

Week Five

Practice this week:

- Use your schedule created last week to continue ***Sitting Meditation***, ***Mindful Walking Meditation***, and ***Yoga Poses*** throughout this week.

Please read the following:

- Chapter Eight: ***Meditation with Imagery***
- Chapter Nine: ***A Day of Silence***

As you read chapter 8:

- Try to pay close attention to how all senses are included within ***imagery*** and how incorporating imagery into meditation might be beneficial to you.
- Read through Practice 8.1 on pages 123-125, which is: ***Mountain Meditation***.
- Incorporate the use of nature and imagery into a sitting meditation practice this week.
    - You can approach the ***Mountain Meditation*** through one of the ways the authors suggest given your preference:
        - Ask a friend to read the practice out loud
        - Create a recording and listen to the practice
        - Allow the instructions to guide you as you read through the practice.

As you read chapter 9:

- Try to pay close attention to why a ***Day of Silence*** might be beneficial as well as the sample provided on page 130.
- Read through Practice 9.1 on pages 131-133, which is: ***Loving-Kindness Meditation***.
- Start to plan your own day of silence.
    - You can use the attached worksheet to create your own structured schedule.
    - Remember the tips and recommendations for how to plan for a day of silence on page 135.
        - Prepare your materials (e.g., recordings, breaks, lunch) beforehand.
- Find a day during **WEEK SIX** that is best for you to have a day of silence.

My Own Day of Silence Schedule

Time Block	Activity or Practice

***Note:** Incorporate 10-minute breaks and enough time for lunch into your schedule.*

Possible Practices:

- Diaphragmatic Breathing
- Body Scan
- Sitting Meditation
- Mindful Walking Meditation
- Lying Yoga
- Standing Yoga
- Standing Meditation
- Mountain Meditation
- Lake Meditation
- Tree Meditation
- Sitting Loving-Kindness Meditation
- Eating Meditation
- Choiceless-Awareness Meditation
- Sound Meditation

Week Six

Practice this week:

- Use your schedule created last week to continue ***Sitting Meditation***, ***Mindful Walking Meditation***, and ***Yoga Poses*** throughout this week.
    - You could also modify your schedule on your own or with the provided blank worksheet.
- This is also the week you should have your ***Day of Silence*** scheduled; during which, you will use the schedule you created last week.

Please read the following:

- Chapter Ten: ***Deepening and Expanding***
- Chapter Eleven: ***Moving into the World***

As you read chapter 10:

- Read through Practice 10.1 on pages 138-139, which is: ***Choiceless Awareness*** as well as the example of how an individual used this practice provided on page 140.
    - Incorporate this practice into your ***Day of Silence***.

As you read chapter 11:

- Begin to think about the possibility of seeking a **support group** that might aid in continuing mindfulness practice.
    - Many groups are available in-person or online virtually. Information might be available through asking your doctor or medical provider.

Schedule to Practice

	Practice #1 (*circle*)	**Practice #2** (*circle*)
Sunday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Monday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Tuesday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Wednesday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Thursday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Friday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Saturday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No

***Note:** *You will not be following this schedule for your Day of Silence. You will use the schedule created last week instead. For example, if you scheduled your Day of Silence for Saturday, you can block that day out from this schedule.*

Week Seven

Practice this week:

- As you continue ***Sitting Meditation***, ***Mindful Walking Meditation***, and ***Yoga Poses*** throughout this week, also incorporate Loving-Kindness Meditation and Choiceless Awareness practice into your routine.
    - You could create this new schedule on your own or with the provided blank worksheet.

Please read the following:

- Chapter Twelve: ***Mindful Coping with Cancer-Related Symptoms and Side Effects***

As you read chapter 10:

- Try to pay close attention to the symptoms and corresponding practices that might be relevant to you and your experience:
    - Read through Practice 12.1 on page 153, which is: ***Who are you?***
    - Read through Practice 12.2 on page 156, which is: ***Sleep Practice.***
    - Read through Practice 12.3 on page 160, which is ***Reducing Anticipatory Nausea.***
- Think about how some of these practices might be incorporated into your routine. This would be dependent on relevance to you.

Schedule to Practice

	Practice #1 (*circle*)	**Practice #2** (*circle*)
Sunday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Monday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Tuesday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Wednesday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Thursday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Friday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Saturday	Sitting Meditation / Walking Meditation ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No

***Note:** *You will not be following this schedule for your Day of Silence. You will use the schedule created last week instead. For example, if you scheduled your Day of Silence for Saturday, you can block that day out from this schedule.*

Week Eight

Practice this week:

- Use your schedule created last week to continue ***Sitting Meditation***, ***Mindful Walking Meditation***, ***Yoga Poses***, ***Loving-Kindness Meditation***, and ***Choiceless Awareness*** throughout this week.
    - You could also modify your schedule on your own or with the provided blank worksheet.

Please read the following:

- Chapter Thirteen: ***Knowing Your Fear and Other Difficult Emotions***
- Chapter Fourteen: ***What Now?***

As you read chapter 13:

- Try to pay close attention to how ***avoidance*** actually acts as a ***reinforcer***.
- Read through how the authors describe quieting the anxious mind and think about how ***sitting with an uncomfortable emotion*** might benefit you in the long-term.

As you read chapter 14:

- This about how you might incorporate ***informal mindfulness*** into your daily life. As the authors suggest on page 171, choose a cue to remind yourself to practice mindfulness every day.
- Read through Practice 14.1 on page 172, which is: ***Living Meditation*** as well as Practice 14.2 on pages 175-176, which is ***Healing Meditation.***
    - With these two practices in mind, think about how you might use mindfulness to increase your daily awareness to live moment by moment.

Schedule to Practice

	Practice #1 (*circle*)	**Practice #2** (*circle*)
Sunday	Sitting Meditation / Walking Meditation Loving-Kindness / Choiceless Awareness ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Monday	Sitting Meditation / Walking Meditation Loving-Kindness / Choiceless Awareness ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Tuesday	Sitting Meditation / Walking Meditation Loving-Kindness / Choiceless Awareness ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Wednesday	Sitting Meditation / Walking Meditation Loving-Kindness / Choiceless Awareness ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Thursday	Sitting Meditation / Walking Meditation Loving-Kindness / Choiceless Awareness ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Friday	Sitting Meditation / Walking Meditation Loving-Kindness / Choiceless Awareness ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No
Saturday	Sitting Meditation / Walking Meditation Loving-Kindness / Choiceless Awareness ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No	Lying Yoga Poses / Standing Yoga Poses ***Time:***_____ AM / PM ***Practice Complete:*** Yes / No

Appendix B

Email Examples

[Example of Weekly Check-In Email]:

Hi _____,

This is the first email for the study you are now participating in, which is entitled "*Examining the Feasibility of Implementing a Mindfulness-Based Cancer Recovery Through Guided Bibliotherapy to Reduce Psychosocial Distress in Women with Breast Cancer.*" As I mentioned yesterday, you will receive weekly emails that will include the instructions for that week. Every two weeks, the email will include the links to surveys. Your emails will be coming to you each: **Wednesday/Saturday** and you will also get a reminder email each: **Saturday/Tuesday**.

Regarding your participation for this week, please refer to your **Week One Module** (the PDF attached to this email). As you will see, your reading for this week includes **Chapters 1 and 2** of your self-help book. Please try to pay close attention to the "*As you read these chapters:*" section in the module. This is meant to help guide you through the reading and includes questions for you to think about and/or answer.

Please respond to this email if you have any questions. This email is monitored daily. As a result, your questions might not be answered immediately, but they will be answered within 24 hours. If you have any concerns that you think might be best addressed through a phone conversation, you can respond to this email requesting a phone call from the Principal Investigator. Along with your request for an additional phone discussion, please provide the phone number to best contact you as well as the day and time you might be best reached. **You will receive an email indicating when you will be contacted about your concerns.**

Sincerely,
Juliana

[Example of Weekly Reminder Email]:

Hi _____,

This email is to serve as a friendly reminder to complete this week's module for your participation in the study entitled, "*Examining the Feasibility of Implementing a Mindfulness-Based Cancer Recovery Through Guided Bibliotherapy to Reduce Psychosocial Distress in Women with Breast Cancer*."

To remind you, regarding your participation for this week, please refer to your **Week One Module** (PDF attached to this email). As you will see, your reading for this week includes **Chapters 1 and 2** of your self-help book. Please try to pay close attention to the "*As you read these chapters*" section in the module. This section is meant to help guide you through the reading and includes questions for you to answer.

Please respond to this email if you have any questions. This email is monitored daily. As a result, your questions might not be answered immediately, but they will be answered within 24 hours. If you have any concerns that you think might be best addressed through a phone conversation, you can respond to this email requesting a phone call from the Principal Investigator. Along with your request for an additional phone discussion, please provide the phone number to best contact you as well as the day and time you might be best reached. **You will receive an email indicating when you will be contacted about your concerns.**

Sincerely,
Juliana

[Example of Weekly Check-In Email (with surveys)]:

Hi _____,

This email is to serve as a check-in for the study you are currently participating in, which is entitled "*Examining the Feasibility of Implementing a Mindfulness-Based Cancer Recovery Through Guided Bibliotherapy to Reduce Psychosocial Distress in Women with Breast Cancer*."

Regarding your participation for this week, please refer to your **Week Two Module** (PDF attached to this email). As you will see, your reading for this week includes **Chapter 3** of your self-help book. Please try to pay close attention to the *"As you read these chapters"* section in the module, which is meant to help guide you through the reading and includes questions for you to answer. **This week, the module also includes instructions for how to create a schedule to engage in mindfulness-based practices throughout this week.**

In addition, please complete the following surveys by clicking the links below or by pasting them into your browser's search bar. **As a reminder, your identification number is: XX**. You have the option to complete all surveys at the same time OR you can complete each survey separately. Please complete only one of these options; specifically, if you choose to click the link for "All surveys," you should not click the links for each individual survey. **Please make sure surveys are completed on: XXX by 11:59pm.**

- All Surveys: https://rowan.co1.qualtrics.com/jfe/form/SV_4184MOX22MZkeoZ
- Survey 1: https://rowan.co1.qualtrics.com/jfe/form/SV_6XND8W1CNLnFrcp
- Survey 2: https://rowan.co1.qualtrics.com/jfe/form/SV_cCLPOYulKomOzzv
- Survey 3: https://rowan.co1.qualtrics.com/jfe/form/SV_1H9QmqbDnojVFvD
- Survey 4: https://rowan.co1.qualtrics.com/jfe/form/SV_23rFFOXksRgO58x

Please respond to this email if you have any questions. This email is monitored daily. As a result, your questions might not be answered immediately, but they will be answered within the next 24 hours. If you have any concerns that you think might be best addressed through a phone conversation, you can respond to this email requesting a phone call from the Principal Investigator. Along with request for an additional phone discussion, please provide the phone number to best contact you as well as the day of the week and time of the day you are best reached. **You will receive an email including the day and time we will contact you about your concerns.**

Sincerely,
Juliana