TRANSDIAGNOSTIC INTERNET-DELIVERED COGNITIVE-BEHAVIOUR THERAPY FOR RECENT CANCER SURVIVORS: A FEASIBILITY TRIAL AND EXAMINATION OF CLINICIAN PERSPECTIVES

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Nicole Mary Alberts, candidate for the degree of Doctor of Philosophy in Clinical Psychology, has presented a thesis titled, *Transdiagnostic Internet-Delivered Cognitive-Behaviour Therapy for Recent Cancer Survivors: A Feasibility Trial and Examination of Clinician Perspectives*, in an oral examination held on July 25, 2014. The following committee members have found the thesis acceptable in form and content, and that the candidate demonstrated satisfactory knowledge of the subject material.

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Abstract

Increased attention has been drawn to the challenges faced by cancer survivors following treatment completion. Although most survivors adjust well to these challenges over time, a subset of individuals experience clinical levels of anxiety and depression. Cognitive-behaviour therapy (CBT) has been shown as effective in reducing anxiety and depression among individuals who have received a cancer diagnosis. Despite the availability of this treatment, a large proportion of cancer patients and survivors do not seek treatment for emotional distress due to reasons such as geographical distance from providers, and the stigma of seeking help for mental health problems. Internet-based CBT (ICBT) programs employ the same principles and components as face-to-face CBT, but are administered via a computer and the Internet.

This dissertation is presented in the form of two studies. Each study contains a literature review and discussion, and both are followed by a general discussion. Given the potential benefits of ICBT for cancer survivors and the absence of existing programs, Study 1 evaluated the effectiveness and acceptability of a new ICBT protocol, Wellbeing After Cancer, designed to treat anxiety and depression among recent cancer survivors. Utilizing a within-groups pre-post design, the protocol comprised 5 online lessons delivered over 8 weeks and was based on an established ICBT treatment course (the Wellbeing Course). Eighteen individuals who completed primary cancer treatment within the past 18 months received CBT-based online lessons, homework assignments, once weekly contact from a therapist via e-mail or phone, and automated emails. Post-treatment data were collected from 18/18 (100%) participants. Participants improved significantly on the primary outcome measures, the Patient Health Questionnaire 9-Item
and Generalized Anxiety Disorder 7-Item, with within-groups effect sizes (Cohen’s $d$) at post-treatment of 0.71, and 0.90, respectively. The program was also rated as highly acceptable with all 18 participants reporting it was worth their time and they would recommend it to a friend. Patient feedback on the program provided further support for its acceptability, with participants identifying several strengths of the program.

Clinician attitudes towards Wellbeing After Cancer and ICBT more generally may impact program implementation efforts. Study 2 therefore evaluated the acceptability of Wellbeing After Cancer among clinicians currently working within cancer care. Using a qualitative research approach, 10 clinicians viewed a brief online video outlining the results of Study 1. Semi-structured interviews were conducted to obtain clinicians’ perspectives on the program and future implementation. ICBT and the program were viewed as acceptable by clinicians, with most envisioning themselves referring clients to the program rather than acting as therapists. Several program strengths as well as areas for improvement were identified. Approval from directors as well as clinician availability and time were seen as factors likely to influence training, delivery, and implementation. The results of Study 1 provide preliminary support for the acceptability and effectiveness of ICBT for cancer survivors following treatment completion. Moreover, they lay the ground work for future research focused on determining the efficacy of the program via a randomized controlled trial. The results of Study 2 provide preliminary support for the acceptability of ICBT interventions among clinicians within cancer care.

Together, the results of both studies indicate to researchers, clinicians, and healthcare providers that ICBT is a viable avenue for offering mental health services to cancer survivors.
Acknowledgement

The completion of this dissertation was a rewarding experience that challenged me to grow as a clinician, researcher, and person. I would like to acknowledge and extend my heartfelt gratitude to a number of individuals who inspired this growth and whose support and guidance made the completion of this dissertation possible.

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Dedication

First, I would like to dedicate this dissertation to my parents, Doug and Terry Alberts, who have always placed high value on education and thus taught me to do so as well. I am forever grateful for their whole-hearted support of my academic endeavours.

Second, I would like to dedicate this dissertation to the patients who participated in Wellbeing After Cancer. You are the reason why this project was developed. Your strength and courage in the face of significant adversity has been inspiring.

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1. Introduction

Cancer is an illness that touches the lives of many Canadians. Fortunately, advances in early detection and treatment have dramatically increased the likelihood of survival for individuals who face the disease directly. Currently, the five-year relative survival for all cancers combined is 62% (Canadian Cancer Society’s Steering Committee on Cancer Statistics, 2011). In 2007, approximately one in 44 or 2.3% of the Canadian population had been diagnosed with one or more primary invasive cancers in the previous 10 years (Canadian Cancer Society’s Steering Committee on Cancer Statistics, 2011). It is expected that the number of cancer survivors in Canada will continue to grow as medical treatments continue to improve and the population ages. As a result of these developments, cancer has transformed from being regarded as an immediately fatal disease to being viewed as a chronic disease (Ganz, 2005).

In the literature review that follows, a discussion of the prevalence and impact of anxiety and depression among cancer survivors will first be presented, followed by a brief overview of psychological interventions shown to effectively treat these conditions. Next, the review will focus specifically on research examining the use of CBT to treat anxiety and depression among cancer patients and survivors. This is followed by a discussion of CBT for chronic health conditions more generally and a discussion of transdiagnostic CBT. Finally, a description of ICBT will be presented, followed by a review of research examining the efficacy and effectiveness of ICBT among general mental health populations and medical populations, including cancer patients and survivors.
1.1 Anxiety and Depression among Cancer Survivors

Although most survivors appear to emotionally adjust to having a cancer diagnosis over time (Zucca, Boyes, Linden, & Girgis, 2012), research has shown that a subset of individuals experience clinical levels of anxiety and depression (Boyes, Girgis, Zucca, & Lecathelinais, 2009). Estimates of the prevalence for anxiety and depression among patients ranges between 5% and 50%, depending on the screening method, diagnostic criteria used, and timing of the assessment (Artherholt & Fann, 2012). Moreover, recent research has indicated that mixed anxiety and depression symptoms occur in 12.4% of cancer patients (Brintzenhofe-Szoc, Levin, Li, Kissane, & Zabora, 2009). This is problematic as the presence of cormorbid depression and anxiety is associated with a more chronic and disabling course for patients as compared to when either condition is present alone (Goldberg, Krueger, Andrews, & Hobbs, 2009).

The presence of emotional distress among patients and survivors is an important issue as it carries serious implications for both patients and health care systems. For example, research has indicated that depression and anxiety affect survivors' quality of life (Ferrell, Dow, Leigh, Ly, & Gulasekaram, 1995) and physical health, as depression is now a known risk factor for mortality (Pinquart & Duberstein, 2010). In regards to the latter, there is now clear evidence that a diagnosis of depression and higher levels of depressive symptoms predict elevated mortality among patients (Pinquart & Duberstein, 2010). Emotional distress is also relevant to economic issues within health care systems as distress in cancer patients is associated with increased physician time, more frequent hospital and primary care visits, and thus higher costs to the overall system (Carlson & Bultz, 2004; Hewitt & Rowland, 2002).
1.2 Cancer Survivors

With increasing success in curing and treating cancer, the definition of 'cancer survivor' has varied considerably across the literature. For some, a person is a cancer survivor beginning with their diagnosis and continues to be one for the rest of their life. Others have defined survivor as the time period between post-treatment and recurrence or evidence of disease. For the purpose of this dissertation, cancer survivor will be defined as the period following diagnosis and treatment and prior to the development of recurrence of cancer or death, which is consistent with the definition put forth by the Institute of Medicine and National Research Council (2005).

1.3 The Impact of Psychological Interventions

Increasing recognition of the distress experienced by some cancer patients has led to the development and evaluation of various interventions aimed at distress reduction. At times, studies focus on treatment of depression and anxiety while patients are in the process of treatment, while at other times studies address depression and anxiety following the completion of cancer treatment. Overall, this body of literature has demonstrated that psychological interventions such as psycho-education, cognitive behaviour therapy (CBT), relaxation, and mindfulness training can reduce anxiety and depression among cancer patients. Linden and Girgis (2012) conducted a review of meta-analyses that examined distress reduction among patients with varying types of cancer and who were at varying stages of disease progression (e.g., remission, palliative, receiving active treatment). Results indicated that treatment effects are consistently positive in reducing anxiety and depression. However, the observed effect sizes revealed considerable heterogeneity in outcomes, with effects ranging from $d = 0$ to about $d = 3$. 
One moderator of effect size included patient's level of distress at study entry, such that treatment was much more effective for patients who had higher levels of distress at study entry compared to those with lower levels of distress. Dosage of treatment also appeared to moderate outcome. Here the findings suggested that ultra-short treatments of four sessions or less were insufficient for notable benefit. Quality of life measures were only reported in three of the included reviews, therefore limiting the analyses that could be conducted. However, initial results showed positive effects such that quality of life tended to improve following treatment completion.

Similarly, a recent meta-analysis of RCTs revealed that five psychotherapeutic interventions were reliably superior in reducing depressive symptoms relative to control conditions for adults diagnosed with cancer who met an eligibility threshold for elevated depressive symptoms. Results also indicated that for the trials that included a longer-term follow-up (i.e., 6-24 months postrandomization), the follow-up effect sizes remained statistically significant, indicating that the effects were sustained over time (Hart et al., 2012).

1.4 Cognitive Behavioural Therapy for Depression and Anxiety among Cancer Survivors

CBT is an evidence-based form of psychological treatment that has been used to effectively treat anxiety and depression among cancer patients and survivors. A review of 15 randomized controlled trials of CBT and patient education found that CBT reduced depression ($ES = 1.21$) and anxiety ($ES = 1.99$) among cancer survivors. Moreover, CBT was found to be significantly better than patient education, which involved provision of information regarding the illness or symptom (s), symptom management, and/or
discussion of treatment options (Osborn, Demoncada, & Feuerstein, 2006). Within their review of meta-analyses containing various psychological treatments, Linden and Girgis (2012) also found consistent evidence that CBT can effectively reduce anxiety and depression among cancer patients and survivors, with the magnitude of the effect size again depending on the level of distress at pre-treatment (Linden & Girgis, 2012).

Although the studies included in these meta-analyses provide support of the effectiveness of CBT, it should be taken into consideration that most focused on treating anxiety and depression separately rather than concurrently. In addition, the studies varied in terms of when CBT was offered – with studies including patients in the active treatment, remission, and palliative phases.

Initial research examining the effects of CBT on health care utilization has also been promising. For example, a Canadian study examining early breast cancer patients found that women who had participated in a 6 week cognitive behavioural intervention had less depression, less overall mood disturbance, better overall quality of life and fewer psychiatric symptoms immediately following the intervention and at 2-years follow-up as compared to the control group (Simpson, Carlson, & Trew, 2001). In terms of economic costs, the total amount saved in the treatment group of 28 women compared to the control group was $6199 over the course of the study. These results are particularly noteworthy given that the participants in this program were not experiencing elevated distress levels prior to the intervention. This suggests that, if highly distressed patients were provided treatment (i.e., those who tend to be the highest utilizers of care), then savings would likely be maximized.
1.5 Cognitive Behavioural Therapy for Chronic Health Conditions

CBT has also been used to treat depression and anxiety among patients suffering from chronic health conditions other than cancer. For example, a Cochrane review last updated in mid-2005, suggested there was promising evidence that CBT could be effective for the treatment of depression in people with multiple sclerosis (MS; Thomas, Thomas, Hillier, Galvin, & Baker, 2006). A recent review of psychosocial treatment for depression and anxiety in patients with Parkinson’s Disease (PD) revealed that CBT successfully decreased depressive and anxiety symptoms in patients with PD (Yang, Sajatovic, & Walter, 2012). Similarly, a review of studies examining psychological interventions among individuals with diabetes also found that CBT was effective in reducing depression (Markowitz, Gonzalez, Wilkinson, & Safren, 2011).

CBT has also been used to treat the symptoms directly associated with chronic health conditions. For example, in a meta-analysis of 17 randomized trials of cognitive treatments, behavioural treatments, or both for irritable bowel syndrome (IBS) as compared to control treatments, those patients who were randomly assigned to CBT were significantly more likely to have a reduction in gastrointestinal symptoms of at least 50% (Lackner, Mesmer, Morley, Dowzer, & Hamilton, 2004). CBT has also emerged as a common component of multidimensional care plans for individuals suffering from chronic pain. As such, the use of CBT for pain management has been shown to be effective for a variety of chronic pain problems compared to wait-list controls and alternative active treatments (Morley, Eccleston, & Williams, 1999). Research has also provided evidence for the effectiveness of CBT in reducing fatigue among MS patients (van Kessel et al., 2008).
Although the core components of CBT remain relatively consistent when applied across chronic health conditions, these components are often tailored to the difficulties thought to be most pertinent for specific patient groups. For example, cognitive techniques aimed at IBS often focus on changing maladaptive thinking patterns underlying the perception of somatic symptoms, while behavioural techniques aim to modify dysfunctional behaviours through relaxation techniques, contingency management, or assertion training (Mayer, 2008). CBT for pain management typically involves psychoeducation around the cognitions and behaviour that affect the pain experience, training in cognitive and behavioural pain-coping strategies, and the application and maintenance of learned coping skills (Kerns, Sellinger, & Goodin, 2011).

Taken together, research examining the occurrence of emotional distress and chronic health conditions provides support for the effectiveness of CBT. However, review of this literature and the literature pertaining to cancer patients, indicates that depression and anxiety are typically addressed through separate protocols rather than one unified approach.

1.6 Transdiagnostic Cognitive-Behavioural Approaches

Transdiagnostic treatments are an approach that has the potential to concurrently alleviate anxiety and depression among cancer survivors. Transdiagnostic treatments aim to treat more than one anxiety or depressive disorder in the same treatment protocol through the provision of core CBT skills relevant to the target disorders. The historical roots of the transdiagnostic approach can be traced back to early CBT pioneers such as Ellis and Beck (Taylor & Clark, 2009). Ellis developed a theory of emotional disturbance and corresponding treatment in the early 1950s and 1960s, that included a truly
transdiagnostic approach to group treatment. Before his diagnosis-specific models and treatments, Beck developed a general theoretical framework for understanding psychopathology from a cognitive perspective. This framework would largely be considered transdiagnostic in its approach. In the decades following the work of Ellis and Beck, growing emphasis was placed on developing and testing highly specific theories and treatments – largely due to the development of the DSM and the increasing number of diagnostic labels. This development in turn led to decreased interest in transdiagnostic approaches.

Although diagnostic-specific treatments have been successful, several difficulties have also been noted. For example, learning how to apply several different treatment protocols can be a burdensome task for therapists, patients frequently present with multiple clinical problems, and diagnostic-specific treatments can be less time and cost efficient especially when considered within the context of group treatment (Taylor & Clark, 2009). In comparison, the potential benefits to patients and clinicians of a single transdiagnostic treatment protocol compared to several disorder-specific protocols are considerable and include reduced waitlist times, decreased need for further treatment once one disorder has been treated, and the potential for patients to concurrently learn to manage co-morbid disorders. In accordance, the past several years have shown a renewed interest in developing and testing transdiagnostic theories and treatments, with a corresponding expansion in this body of literature. Moreover, research examining transdiagnostic protocols has also shown promising effects, as recent meta-analyses of transdiagnostic treatments for anxiety disorders and depression have provided outcomes.
similar to traditional treatments that focus on one disorder (McEvoy, Nathan, & Norton, 2009; Norton & Price, 2007).

1.7 Barriers to Psychological Services

Despite the prevalence of emotional distress among patients and the presence of effective treatments such as CBT, it is estimated that over half of cancer patients do not seek treatment for these problems (Kadan-Lottick, Vanderwerker, Block, Zhang, & Prigerson, 2005; Muriel et al., 2009). Reasons for underutilization of services have included insurance coverage and cost issues, stigma and privacy concerns associated with receiving mental health services, and geographical distance from providers (Muriel et al., 2009). Mobility issues, convenience issues (e.g., time of day), and lack of access to providers even when health coverage is provided are also likely contributors to underutilization. Providers have also reported time constraints as well as lack of resources for follow-up psychological treatment as barriers to implementing routine screening and treatment for distress (Stanton, 2006; Vodermaier & Linden, 2008). Given the various barriers to receiving evidence-based mental health services such as CBT, it is perhaps not surprising that many patients report that their emotional needs go unmet (Stanton, 2006).

In addition to CBT, there are different ways that researchers and clinicians have attempted to address this unmet need. For example, some patients may attend support groups or participate in groups offered online. One rationale for groups is that written and verbal disclosure of thoughts and emotions facilitates effective cognitive and emotional processing, which is a component of adjusting to cancer. The process of both giving and receiving support to other group members may also have added benefit.
1.8 Internet Cognitive Behavior Therapy

Internet interventions are one type of treatment model that could help fill the service gaps identified above especially in the case when individuals have clinical levels of depression and/or anxiety. With the advancement of technology and the widespread availability of the Internet over the past decade, researchers have focused on using the Internet to deliver psychological interventions to various populations (Marks & Cavanagh, 2009). CBT is especially amenable to delivery over the Internet as it targets specific symptoms and behaviours and proceeds in a systematic manner (Ritterband et al., 2003).

Given this amenability, multiple Internet-based cognitive-behaviour therapy (ICBT) programs have been created − with programs designed to be either self-administered or therapist-guided (Ritterband et al., 2003). Self-administered ICBT is presented on structured web pages in a user-friendly format and is designed to be implemented by the client in the absence of the therapist. In the case of therapist-guided ICBT, the benefits of structured self-help materials are combined with therapist involvement in order to enhance support and direction in therapeutic activities (Postel, de Haan, & De Jong, 2008). Contact with the client typically occurs prior to treatment and then after each module with the therapist responding via e-mail or sometimes telephone after a brief delay (e.g., within one week).

ICBT has several potential benefits for cancer survivors and health care systems. For example, ICBT offers greater privacy and convenience in terms of both when and where patients access information. Here patients have ongoing access to treatment materials rather than being limited to information presented to them during face-to-face
sessions. This is an important aspect of treatment for patients who might already be overwhelmed by frequent medical appointments. ICBT may also be a more acceptable form of treatment among cancer patients and survivors when compared to other methods (e.g., face-to-face). Indeed, research has indicted that online learning and interactive communication tools are well received by cancer patients, and that many patients seek information and support online (Stanton, 2006).

From a health systems perspective, ICBT may also be particularly well suited to reducing health disparities. Given that ICBT is a scalable intervention, it is accessible by many people, simultaneously and repeatedly. This is in contrast to face-to-face interventions and virtually all other methods of mental health care, whereby only one person (or one group) benefits at one time. ICBT also has the potential to enhance the quality of care received by cancer survivors. More specifically, ICBT could be a useful tool for oncology and mental health providers, given the limitations on their time and availability. As suggested by Leykin and colleagues (2011), the ability to refer patients to evidence-based online interventions for treatment of emotional difficulties would be a valuable adjunct to clinical care. This method of referral would also be consistent with the stepped care approach to delivering treatment for psychological distress, which has been strongly advocated (Bower & Gilbody, 2005; Haaga, 2000). In this approach, patients start with the least intensive treatment that is most likely to work, with more intensive and costly interventions reserved for those who are insufficiently helped by the initial intervention (Braamse et al., 2010). Moreover, ICBT as an adjunct to clinical care may help reduce health-care costs, as recent trials of therapist-guided ICBT have
demonstrated that it is a cost-effective treatment (e.g., Hedman et al., 2013; Ljótsson, Andersson, et al., 2011).

Although ICBT has several benefits, it is important to acknowledge that limitations to this intervention do exist. For example, it requires that the client has access to a computer and the Internet as well as adequate reading and writing skills. ICBT is also not suitable for individuals presenting with severe mental health concerns, or who may be at high risk of committing suicide. Given these requirements, it follows that ICBT will be unsuitable for some individuals. Although there is evidence that a working alliance can be formed between client and therapist, it is likely that the relationship formed between client and therapist in face-to-face sessions will be stronger. As with any new type of intervention, ICBT also requires that therapists are trained in this method of therapy and subsequently are willing and available to provide ICBT services to clients following their training.

1.9 Efficacy of ICBT

ICBT has been used to effectively treat anxiety and depression (Andersson & Hedman, 2013; Andrews, Cuijpers, Craske, McEvoy, & Titov, 2010). It is notable that the effects found for ICBT for anxiety and depression appear to be comparable to the effects found for face-to-face treatments (Cuijpers, Donker, Van Straten, Li, & Andersson, 2010). Moreover, two trials of combined transdiagnostic and ICBT approaches for depression and anxiety have recently been reported. The first trial reported preliminary evidence from a randomized controlled trial for the efficacy of a transdiagnostic ICBT program to treat three anxiety disorders and major depressive disorder within the same program (i.e., the Wellbeing Course; Titov et al., 2011). The
treatment protocol consisted of 8 online lessons with additional materials administered over 10 weeks. In comparison to a waitlist control group, participants in the treatment group reported significantly reduced symptoms of anxiety, depression, and disability with results sustained after 3 months. The second study reported additional evidence for the efficacy of a brief version of the same program, that was shortened to 5 lessons and administered over 8 weeks (Dear et al., 2011). Results of this open trial revealed that participants' symptoms of anxiety and depression were significantly reduced at post-treatment and at 3-month follow-up. In addition, treatment gains were of a similar magnitude as those found for the original program. Together, results of these preliminary trials provide strong support for the efficacy of transdiagnostic ICBT for treating anxiety and depression.

The use of ICBT has also been expanded to medical populations and used to treat various health problems (e.g., Cuijpers, van Straten, & Andersson, 2008). For example, ICBT for irritable bowel syndrome (IBS) has been shown to reduce gastrointestinal symptoms when tested in randomized controlled trials (Hunt, Moshier, & Milonova, 2009; Ljótsson, Andersson, et al., 2011; Ljótsson, Hedman, et al., 2011). Internet-delivered treatments have also been developed to treat pain conditions such as low back pain, fibromyalgia, and rheumatoid arthritis (Macea, Gajos, Daglia Calil, & Fregni, 2010). A recent review of published RCTs showed that, overall, ICBT for chronic pain produced small-to-moderate effects (Hedman, Ljótsson, & Lindefors, 2012). Recent research has also shown ICBT to be effective in reducing depressive symptoms in adults with type 1 and type 2 diabetes (Pouwer, Cuijpers, Riper, & Snoek, 2011).
Although still relatively nascent, research is beginning to examine the use of ICBT with cancer patients and survivors. For example, an ICBT intervention designed to improve sleep in survivors demonstrated positive effects on several sleep indicators and fatigue (Ritterband et al., 2011). An ICBT protocol consisting of writing sessions and therapist support was found to significantly reduce post traumatic stress symptoms, anxiety, and fear of progression/relapse among a sample of long-term survivors of paediatric cancer, with effects sustained 3 months after the end of treatment (Seitz et al., 2014). Recent research has also examined the use of an ICBT program for cancer survivors (without therapist guidance) embedded into an Internet Support Group. Large treatment reductions in depression were found at post-treatment in addition to high rates of utilization (Duffecy et al., 2013). A 4-week online CBT program for coping with cancer related distress was also recently tested. (David, Schlenker, Prudlo, & Larbig, 2012). Results indicated that patient satisfaction with the program was high; however, reductions in distress were not observed. One potential reason for the lack of reductions was that the program suffered from a low level of compliance as completion of all 4 modules occurred in only 34% of the patients who completed the program. Moreover, it appeared that the modules failed to include components typically utilized to reduce anxiety and depression within CBT such as behavioural activation and cognitive restructuring. It is possible that had such content been included, then significant reductions in distress would have been observed.

The feasibility and acceptability of Internet-based interventions focused on cancer patient-caregiver communication (Zulman et al., 2012) and young couples’ coping and adjustment to breast cancer (Fergus et al., 2014) have also recently been examined in the
literature. However, the effectiveness of these programs in changing relevant outcomes (e.g., communication, distress, adjustment) was not reported. To our knowledge, an ICBT program designed to specifically target depression and anxiety among cancer survivors has yet to be developed and tested.

1.10 Online Therapy Unit for Service, Education, and Research

Given the multiple benefits and efficacy of ICBT, the Online Therapy Unit for Service Education and Research (http://www.onlinetherapyuser.ca) was developed in 2010. This unit is led by Dr. Heather Hadjistavropoulos, a Professor in Psychology and Director of Training in Clinical Psychology at the University of Regina. The unit has been responsible for developing a secure web application that allows residents of Saskatchewan to receive ICBT for anxiety and depression. It has also provided education and training in ICBT to diverse registered health professionals and students in Clinical Psychology, Nursing, Social Work, and Medicine in Saskatchewan. The website is currently in full operation and therapists trained in ICBT, including community providers and supervised students, provide ICBT to residents of Saskatchewan.

The Online Therapy Unit recently collaborated with the eCentreClinic (http://www.ecentreclinic.org/) at Macquarie University in Sydney, Australia. The eCentreClinic is an Internet-based research clinic that develops and tests state-of-the-art ICBT programs for people with symptoms of worry, anxiety (including OCD and PTSD), stress, depression, low mood, and other health conditions. The eCentre is led by Drs. Nikolai Titov (Director) and Blake Dear (Deputy Director). As previously mentioned, these researchers have developed and tested a transdiagnostic ICBT program designed to treat anxiety and depression entitled The Wellbeing Course.
2. Study 1

2.1 Purpose and Objectives

The purpose of Study 1 was to explore the benefits of a transdiagnostic ICBT program for treating anxiety and depression among cancer survivors currently in the re-entry phase. Similar to Stanton (2012; Ganz & Stanton, 2012), the re-entry phase was defined as the point from cancer treatment completion through 12 to 18 months. Given the limited research on ICBT for cancer patients, further study of this modality for the treatment of anxiety and depression is warranted, in particular for individuals in the re-entry phase. As previously mentioned, no known published studies have examined transdiagnostic treatment of anxiety and depression with cancer survivors using ICBT. Therefore, the primary objective of Study 1 was to determine whether a transdiagnostic ICBT program, adapted to meet the needs of cancer survivors currently in the re-entry phase, is efficacious for reducing anxiety, depression, and for improving secondary outcomes from baseline to post-treatment. Given that transdiagnostic ICBT has yet to be offered to cancer survivors, the secondary objective was to assess participants' satisfaction with the program and to gain feedback regarding participants' experiences undergoing ICBT.

2.2 Hypotheses

It was hypothesized that participants would (1) show significant improvements on measures of depression and anxiety; (2) show significant improvements on secondary measures including quality of life, pain, and fatigue; and; (3) report a high level of satisfaction with the program. Given the qualitative nature of receiving participant feedback, no hypothesis was made regarding cancer survivors' experiences with ICBT.
3. Method

3.1 Study Design & Ethics

The present study employed a single group open trial design comparing pre- to post-treatment. Because of the challenges inherent in evaluating complex interventions such as ICBT, the Medical Research Council's Complex Intervention Framework recommends a stepwise approach to evaluation, with feasibility work proceeding a full RCT (Campbell et al., 2000). Such work occurs within the Exploratory Phase – also referred to as Phase II. Activities in Phase II involve testing the feasibility of delivering the intervention, which includes examining its acceptability to providers and patients. Given resource constraints, feasibility studies are relied on to produce a set of findings that help determine whether an intervention should be recommended for efficacy testing (Bowen et al., 2009).

A Phase II/feasibility trial was viewed as essential to Study 1 given that an ICBT protocol for anxiety and depression has never been evaluated among cancer survivors. As a result of the findings in this phase, the intervention may need to be adapted to achieve optimal effectiveness (Campbell et al., 2000). For example, if the proposed intensity and duration of the intervention are found to be unacceptable to cancer survivors, then this will be adapted before proceeding to a RCT. Indeed, it has been recommended that a feasibility study is indicated when there are few previously published studies using a specific intervention technique (Bowen et al., 2009). Consistent with this approach, the effectiveness of a novel combined biobehavioural intervention and CBT for treating major depressive disorder among cancer survivors was evaluated via a Phase II trial (Brothers, Yang, Strunk, & Andersen, 2011).
To provide a further assessment of patient acceptance of the treatment, the present study also examined patient feedback and attitudes towards the program via semi-structured interviews conducted following treatment completion. A sample size of 15 was calculated as sufficient (one-tailed test, power at 90%, and alpha at .05) to detect within groups differences in effect size of 0.8, which was considered the minimum likely effect based on previous studies employing the Wellbeing Course (Titov et al., 2013) and studies examining the use of CBT among cancer survivors (Osborn et al., 2006).

Prior to proceeding with the study, ethics approval was received from the University of Regina Research Ethics Board (REB) and the University of Saskatchewan REB (see Appendix A) that manages ethics applications for studies involving cancer clinics within Saskatchewan. The study was registered with the Current Controlled Trials Register (ISRCTN60887190).

3.2 Participants and Recruitment

Participants were recruited through several methods, including posters placed in the Allan Blair Cancer Center, Saskatoon Cancer Centre, clinics associated with the Community Oncology Program of Saskatchewan, and doctors’ offices. The principal investigator (NA) also discussed the study via television and radio programs, articles published in local newspapers, and presented to several local cancer support groups. Finally, general practitioners, oncologists, and supportive care workers at both cancer centres were notified of the study and asked to provide referrals of any patients under their care who recently completed cancer treatment and may benefit from ICBT for anxiety and depression. Information about the study was also available on the Online Therapy Unit website.
Interested individuals contacted NA via e-mail or telephone. She completed a short telephone screening interview (Appendix B) and administered two questionnaires: the Patient Health Questionnaire 9-Item (PHQ-9; Appendix C) and the Generalized Anxiety Disorder 7-Item (GAD-7; Appendix D). The purpose of this initial interview was to provide further information about the program and the study, answer questions, and ensure that each participant met the basic inclusion criteria. Participants were required to meet the following inclusion criteria: (1) Resident of Saskatchewan, (2) 18 years of age or older, (3) a score above 4 on the GAD-7 or PHQ-9 (indicating at least mild anxiety or depression), (4) were not currently experiencing severe depression (defined as a total score > 22 or a score > 2 on question 9 of the PHQ-9), (5) in remission from any stage and any type of cancer as long as at least 1 month had passed since the completion of active treatment (radiation, chemotherapy, or surgery) but no longer than 18 months, (6) willing to have their physician, a medical clinic, or an emergency hospital be notified of their participation in the program, and (7) access to a computer, the Internet, and use of a printer. Exclusion criteria included: (1) currently receiving psychotherapeutic treatment for anxiety or depression elsewhere or in some other form, (2) started a new psychotropic medication for anxiety or depression or had a change in dosage within the past month, (3) current substance abuse or dependence (drugs or alcohol), and (4) current psychotic disorder or bipolar disorder.

The decision to keep the intervention open to patients in remission from any stage and type of cancer was made based on several face-to-face treatment trials for depression among cancer patients and survivors, which have included individuals with various types of cancer including breast, lung, gastrointestinal, lymphoma, and genitourinary (Brothers
et al., 2011; Foley, Baillie, Huxter, Price, & Sinclair, 2010; Hopko et al., 2008; Hopko, Robertson, & Carvalho, 2009). These studies have shown positive treatment effects, suggesting that treatments such as CBT can be applied across cancer types.

In terms of time frame, focus was placed on the re-entry phase of cancer survivorship given the relative lack of research regarding the use of psychological interventions during this specific phase. This is an important time to focus on as patients may be at increased risk of emotional distress given challenges such as the loss of a perceived safety net provided by active medical treatment, resumption or changes of former occupational and social roles, and a decline in interpersonal support (Stanton, 2012). Moreover, the literature suggests that treatment completion, in and of itself, can be a stressful milestone for cancer patients. For example, Ward and colleagues (1992) found that 30% of a sample of 38 breast cancer patients reported that treatment completion was upsetting. Other studies have observed that 27% of patients rated the end of radiation and 48% rated the end of chemotherapy as moderately or extremely stressful in a sample of 160 women with breast cancer (Green et al., 1998). In addition to these challenges, research has indicated that survivors in the re-entry phase often experience fear of cancer recurrence and distress due to physical problems related to cancer treatment (Costanzo et al., 2007).

Eligible participants took part in a more extensive assessment interview by telephone. Confidentiality and the limits to confidentiality were explained to participants at the outset of the assessment interview and additional demographic details (e.g., sex, ethnicity, type of cancer diagnosis) were obtained (see Appendix E). Participants were administered the Mini-International Neuropsychiatric Interview (M.I.N.I.; Sheehan et al.,
1998) and the M.I.N.I. Plus. Modules utilized from the M.I.N.I. included those for dysthymia, suicidality, manic episodes, social phobia, obsessive-compulsive disorder, post-traumatic stress disorder, alcohol abuse and dependence, non-alcohol psychoactive substance use disorders, psychotic disorders, and mood disorder with psychotic features. Modules from the M.I.N.I. Plus were used to assess for major depressive episodes, panic disorder, agoraphobia, specific phobia, and GAD (see Appendix F). The M.I.N.I. can be used effectively by telephone (Fattal, Link, Quinn, Cohen, & Franco, 2007) and has previously been used to assess for depression and anxiety in ICBT research (Dear et al., 2011; Titov et al., 2011). Following completion of the M.I.N.I., participants answered additional background questions in order to provide more contextual information for the therapist (Appendix G). The telephone interview lasted approximately 60 minutes. Participants who met any of the exclusion criteria during the assessment phase were referred to more suitable mental health services in their area.

In a subsequent telephone conversation, eligible participants were provided with a username and password, and instructed on how to access and navigate the program. Following this telephone call, participants accessed the program website, where they reviewed the study information page and provided their informed consent by selecting designated checkboxes on the online consent form (see Appendix H).

3.3 Outcome Measures

Measures were used to assess primary (i.e., anxiety, depression) and secondary (i.e., quality of life, pain, fatigue) outcomes considered to be relevant to cancer survivors. The majority of the questionnaires were administered at pre-treatment and post-treatment, while the PHQ-9 and the GAD-7 were administered weekly. All outcome measures were
administered through online questionnaires on the program website. Outcome measures used in Study 1 included:

**Depression.** The Patient Health Questionnaire 9-Item (PHQ-9; Kroenke, Spitzer, & Williams, 2001) was administered to assess symptoms and severity of major depressive disorder including suicidality. The PHQ-9 is a nine item measure that assesses depression symptoms based on DSM-IV criteria (see Appendix C). Participants are asked to indicate how often they have been bothered by any of nine problems within the previous two week period using a rating scale of 0 (not at all) to 3 (nearly every day). Responses are summed for a total severity score ranging from 0 to 27, with increasing scores indicate greater symptom severity (Kroenke et al., 2001). A total score of ≥8 has been identified as indicative of major depressive disorder in cancer patients (Thekkumpurath et al., 2011). Psychometric studies indicate that the PHQ-9 has high internal consistency (i.e., .86-.89; Kroenke et al., 2001) and is sensitive to change (Kroenke, Spitzer, Williams, & Löwe, 2010). In the current sample, Cronbach’s α = .91.

**Anxiety.** The Generalized Anxiety Disorder 7-Item Scale (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006) was administered as a generic measure of change in anxiety symptoms, as it has been increasingly used in this way in research and large scale dissemination studies (Clark et al., 2009; Richards & Suckling, 2009). The GAD-7 is a seven item measure designed to measure symptoms and severity of GAD based on DSM-IV criteria (Appendix D). It asks participants how often they have been bothered by a list of seven problems in the past 2 weeks (e.g., "trouble relaxing"). Each item is rated on a 0 (not at all) to 3 (nearly every day) scale and ratings are summed for a total score that ranges from 0 to 21. Research indicates that it has good internal consistency (.89) and
good convergent validity with other anxiety scales (Richards & Suckling, 2009). The GAD-7 also appears to be sensitive to DSM-IV congruent GAD, social phobia, and panic disorder with increasing scores indicating greater severity of symptoms (Löwe et al., 2008). A total score of ≥8 has been identified as representing a cut-point for anxiety disorders within primary care settings (K. Kroenke, Spitzer, Williams, Monahan, & Löwe, 2007). In the present sample, Cronbach’s α = .76.

**Depression and Anxiety.** The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) was administered as a supplementary measure of depression and anxiety. The HADS is a 14-item measure designed to assess anxiety and depression in medical and surgical patients (Appendix I). It contains subscales that measure symptoms of anxiety (HADS-A) and depression (HADS-D) during the past week. Participants rated each item on a four-point scale ranging from 0 (not present) to 3 (considerable). Total subscale scores range from 0 to 21. HADS-A scores of 9 or more and HADS-D scores of 8 or more are recommended as cutoffs for clinical levels of anxiety and depression in cancer patients (Bjelland, Dahl, Haug, & Neckelmann, 2002). The main advantage of the HADS is that it contains no somatic items, which could be confused with symptomatic manifestations of a physical illness such as cancer. The reliability and validity of the HADS subscales have been extensively established in a wide array of general medical and oncology patient samples (Bjelland et al., 2002). In the current sample, Cronbach’s α = .78 (HADS-A) and .89 (HADS-D).

**Quality of Life.** The Medical Outcomes Study Short Form (SF-12; Ware, Kosinski, & Keller, 1996) was administered to assess health related quality of life (see Appendix J). Physical and Mental Health Composite Scale scores are computed using the
scores of twelve questions and range from 0 to 100, where a zero indicates the lowest level of health measured by the scales and 100 indicates the highest level of health. The SF-12 has been shown to have good psychometric properties among individuals in the general population (Ware et al., 1996). Excellent internal consistency and good construct validity have recently been demonstrated in a sample of breast cancer survivors (Ashing-Giwa, Lam, & Xie, 2013).

**Pain.** The Brief Pain Inventory was administered to assess pain (BPI; Cleeland & Ryan, 1994). The BPI contains 4 items assessing pain severity and 7 items assessing pain interference (see Appendix K). Patients rate pain severity on a scale ranging from 0 (no pain) to 10 (pain as bad as you can imagine). Patients rate pain interference items on a scale ranging from 0 (does not interfere) to 10 (completely interferes). Psychometric studies of cancer patients have confirmed the two factor structure of the BPI and demonstrated good internal consistency (e.g. Cleeland et al., 1994). The BPI has also demonstrated acceptable test-retest reliability when pain is stable or when pain changes in a predictable way (Daut et al., 1983). For the BPI Severity subscale, Cronbach’s α = .96 in the current sample. For the BPI Interference subscale, Cronbach’s α = .98 in the current sample.

**Fatigue.** The Fatigue Symptom Inventory (FSI; Hann et al., 1998) was administered to assess fatigue. The FSI is a 14-item measure designed to assess the severity, frequency, and daily pattern of fatigue as well as its perceived interference with quality of life (Appendix L). Severity is measured on separate 11-point scales (0 = not at all fatigued; 10 = as fatigued as I could be) that assess most, least, and average fatigue in the past week as well as current fatigue. Perceived interference is measured on separate
11-point scales (0 = no interference; 10 = extreme interference). The FSI was developed for use with breast cancer patients and has been established as a reliable and valid measure of fatigue in cancer populations and healthy controls. A recent review of the psychometric properties of the FSI provided support for its reliability and validity (Donovan & Jacobsen, 2011). For the FSI Severity subscale, Cronbach’s $\alpha = 0.94$ in the current sample. For the FSI Interference subscale, Cronbach’s $\alpha = 0.97$ in the current sample.

**Treatment Satisfaction.** The Treatment Satisfaction Questionnaire was administered following treatment to assess participants' satisfaction with the program. This questionnaire contains six items that are designed to assess treatment satisfaction as well as additional variables (see Appendix M). Participants rated their level of satisfaction with treatment and the quality of the lessons and guides using a scale that ranged from 1 (very dissatisfied) to 5 (very satisfied). Using a scale that ranges from 1 (greatly reduced) to 5 (greatly increased), they also rated how the program has affected their confidence in managing their symptoms and their motivation for seeking treatment in the future. Finally, participants respond yes or no to indicate whether they would feel confident recommending the treatment to a friend and whether completing the program was worth their time. These questions were developed by the e-centre clinic and have been utilized in studies examining ICBT (e.g., Dear et al., 2011; Titov et al., 2011; Wootton et al., 2011).

Participants also completed the Post-Treatment Program Check-List following the program (see Appendix N). This was a study specific questionnaire designed to assess participants’ satisfaction with specific components of the program (e.g., reading about
survivors’ stories). Participants rated how helpful specific components of the treatment were using a scale that ranged from 0 (not at all helpful) to 10 (extremely helpful).

**Therapeutic Alliance.** The Working Alliance Inventory - Short-Form (WAI-S; Tracey & Kokotovic, 1989) was administered at mid and post-treatment to assess the quality of the therapeutic alliance between the clients and therapist (Appendix O). This questionnaire contains 12 items that cover three aspects of the therapeutic alliance: bond (degree of mutual trust, acceptance, and confidence between client and therapist), tasks (agreement on therapeutic tasks), and goals (agreement on therapeutic goals). Participants rate each statement on a 7-point Likert scale ranging from 1 (never) to 7 (always). The WAI-S has been used to assess therapeutic alliance in several studies examining online interventions, including a RCT comparing online with face-to-face CBT for depression (Preschl, Maercker, & Wagner, 2011), an intervention aimed at addressing post-traumatic stress symptoms (Wagner, Brand, Schulz, & Knaevelsrud, 2012), and in a study of working alliance in the prediction of outcomes resulting from tailored ICBT for anxiety disorders (Bergman Nordgren, Carlbring, Linna, & Andersson, 2013). In the current sample, Cronbach’s $\alpha = .98$ on the WAI-Task subscale, $.90$ on the WAIT-Bond subscale, $.77$ on the WAI-Goal subscale, and $.94$ on the WAI-Total score.

**Patient Feedback.** After completing treatment, participants were asked 5 open-ended questions via a telephone interview (Appendix P). For example, "What did you like about the program? What should we do to improve it?" and "What were some barriers to completing the program?" Questions were designed based on previous studies conducted in the Online Therapy Unit, and open-ended questions utilized by the eCentre clinic to examine patients' feedback.
Table 1 below illustrates which questions and scales were administered to participants at each phase of Study 1.
Table 1

*Questions and Scales Administered at Each Assessment Phase*

<table>
<thead>
<tr>
<th>Assessment Tool</th>
<th>Screening</th>
<th>Baseline</th>
<th>Weekly</th>
<th>Post-Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inclusion / Exclusion Criteria Questions</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generalized Anxiety Disorder 7-Item</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Patient Health Questionnaire 9- Item</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>M.I.N.I. and M.I.N.I. Plus</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demographics</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital Anxiety and Depression Scale</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Medical Outcomes Study Short Form</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Brief Pain Inventory</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Fatigue Symptom Inventory</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Treatment Satisfaction Questionnaire</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-Treatment Program Check-List</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working Alliance Inventory</td>
<td>x*</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Client Feedback Open-Ended Questions</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *Measure administered prior to Lesson 4 during Week 5 (mid-treatment).*
3.4 The Intervention

*Wellbeing After Cancer* was used as the intervention in the present study. It is based on the *Wellbeing Course* developed by the eCentreClinic (Dear et al., 2011) which is comprised of 5 transdiagnostic lessons based on cognitive behavioural and interpersonal therapy models.

The *Wellbeing Course* is based on a pragmatic model of psychotherapeutic change that assumes symptoms of anxiety and depression are the result of unhelpful habits of thought and actions, that is, maladaptive cognitions and behaviours (Titov et al., 2013). This model also assumes that interventions that are structured, systematic and promote adherence and commitment over several months are more likely to facilitate sustained improvements compared with sporadic or unstructured therapy sessions, which may only result in short-term symptom relief.

The *Wellbeing Course* and *Wellbeing After Cancer* are, therefore, highly structured interventions that participants complete over 8 weeks. Participants are strongly encouraged to learn about and practice the psychological skills taught in the course and to adopt these into their everyday lives. The course systematically teaches core psychological skills that aim to reduce the frequency of unhelpful cognitions and behaviours while increasing the frequency of helpful cognitions and behaviours that promote emotional health. Examples of the former include realistic thinking skills, planning, and problem solving skills, assertive communication, behavioural activation and graded exposure. Examples of the latter include patterns of catastrophic and self-defeating thinking, passive or aggressive communication styles, avoidance, and behavioural inhibition. The *Wellbeing Course* was designed as a low intensity
intervention, which could be used as a standalone intervention, an intervention for those on waiting lists for traditional therapy, as an adjunct to traditional therapy, or to facilitate treatment gains post-treatment (Kirkpatrick, Manoukian, Dear, Johnston, & Titov, 2013).

Like the Wellbeing Course, Wellbeing After Cancer included both text-based instructions and information as well as case-enhanced learning examples. Case-enhanced learning examples are education stories that identify problems that are then resolved by the learner, and are thought to assist in learning, adherence and engagement while reducing defensiveness. The structure of the program and content of lessons is shown in Table 2. Each lesson is presented in a slide format combining text and photos. Participants were instructed to read lessons in order over 8 weeks. Program components also included a summary of key concepts and suggested homework activities for each lesson (i.e., Do It Yourself Guide) and access to additional text-based resources about assertiveness skills, strategies for improving sleep, communication skills, strategies for managing beliefs and worry, additional mental skills, and answers to frequently asked questions about the application of skills described in the lessons and summaries.

Participants also had access to an additional resource addressing fear of cancer recurrence. Rationale for this resource was based on the high frequency of fear of recurrence among cancer survivors and its potential impact on emotional functioning, particularly if such concerns remain unaddressed over several months or years. In a study of women with breast cancer who were transitioning into the re-entry phase, 39% rated fear of recurrence as a dominant concern and nearly half felt that they had moderate to high unmet needs about addressing these fears (Stanton et al., 2005).
Table 2

*Program Content of Wellbeing After Cancer*

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Time Before Next Lesson</th>
<th>Made Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson 1</td>
<td>1 week</td>
<td>Education about the prevalence, symptoms, and treatment of depression and anxiety including an explanation of the functional relationship between symptoms. Vignettes describing impact of symptoms. Normalizing difficulties during recovery.</td>
</tr>
<tr>
<td>Lesson 2</td>
<td>2 weeks</td>
<td>Basic principles of cognitive therapy, including strategies for monitoring and challenging thoughts.</td>
</tr>
<tr>
<td>Lesson 3</td>
<td>1 week</td>
<td>Instructions about controlling physical symptoms including de-arousal strategies and scheduling activities. The importance of lifestyle factors. Managing symptoms of panic.</td>
</tr>
<tr>
<td>Lesson 4</td>
<td>2 weeks</td>
<td>Education and guidelines about behavioural activation. Education and guidelines about practicing graded exposure.</td>
</tr>
<tr>
<td>Lesson 5</td>
<td>2 weeks</td>
<td>Information about relapse prevention and constructing relapse prevention plans.</td>
</tr>
</tbody>
</table>
A portion of the content for the fear of recurrence resource was derived from a patient document developed by the American Cancer Society (2011). It provided information pertaining to common questions that survivors have about recurrence (e.g., Can I ever be sure that the cancer will never come back? What physical symptoms should I look for if I am worried about the cancer coming back?). In addition, the document presented information regarding mindfulness and acceptance based strategies for coping with the uncertainty of recurrence. For example, learning how to accept rather than fight the notion that one does not have control over some aspects of their cancer. Additional strategies within this resource included expressing feelings of fear with a trusted friend or family member as well as focusing on the present moment and factors within one's control (e.g., physical activity, healthy eating). Following development of this resource, it was reviewed by the research/clinical supervisor, a professor of social work with experience in end of life issues and ICBT, and a cancer survivor. Reviewers provided feedback on the content and appearance of the resource, which was subsequently modified prior to release with the program.

Minor modifications were also made to some of the text-based content of the Wellbeing Course in order to tailor the current examples and content to cancer survivors. For example, the course presents statistics pertaining to the rates of anxiety and depression among Australians. These statistics were modified to reflect the rates of anxiety and depression among Canadians and among cancer survivors. Additionally, two of the four case-enhanced learning examples were modified to reflect the experiences of two cancer survivors experiencing anxiety and depression. No major changes in
functionality or content were made to the *Wellbeing After Cancer* program during study completion.

**Therapist.** The principal investigator (NA) acted as the therapist and provided all clinical contact with participants. This contact occurred via weekly e-mails and telephone calls. NA received training in ICBT through the Online Therapy Unit. At the time of the study, she had approximately two years of experience delivering ICBT for the treatment of depression and anxiety, and had experience in the assessment of anxiety and mood disorders as well as in the administration of the M.I.N.I. NA also had training and experience with in-person CBT, including approximately 250 hours of direct patient contact and 125 hours of clinical supervision at the time of the study. NA was also supervised by the clinical/research supervisor throughout the program on an as-needed basis via telephone and e-mail. Consistent with the eCentre Clinic model, NA aimed to provide the following four components in each interaction with participants: (1) reinforcement of progress, (2) a summary of the key skills described in the program, (3) ‘normalizing’ of difficulties commonly experienced during treatment, and (4) encouragement to continue. NA contacted participants by telephone if they had not logged into the website for over seven days and if they experienced difficulties better addressed over telephone rather than e-mail.

In summary, *Wellbeing After Cancer* comprised the following components: 5 online lessons; a downloadable summary/homework assignment for each lesson (i.e., Do It Yourself Guide); two downloadable case-enhanced learning examples for each lesson (i.e., Survivor Stories); eight downloadable additional resources, regular automatic
reminder and notification emails; and instant messaging via the program website to allow secure email-type messages with the therapist.

### 3.5 Patient Interviews

Following treatment completion, participants were invited to take part in semi-structured interviews designed to gain feedback on their experiences in the program. Interviews lasted approximately 30 to 60 minutes. In total, 14 of the 18 participants took part in post-treatment interviews. Three participants could not be reached for the interview. Data saturation was determined as being reached at 13 interviews, thus one participant was not invited to complete the interview.

The interview schedule was devised by NA and her supervisor, with input from the dissertation committee. The same interview guide was used for each participant; however, the individual interviews were unique due to the open-ended nature of the questions and follow-up questions that could be elicited by participants’ responses to earlier questions. Participants were asked about what they liked about the program, what they disliked and/or how they would improve the program, the most helpful skill(s) taught in the program, barriers to completing the program, and their perceptions of whether a similar wellbeing program would be helpful to individuals undergoing cancer treatment. In addition, participants were asked about what advice they would offer to someone about to begin the program.

All the interviews were conducted over the telephone by NA, audio-recorded, and transcribed verbatim. It was assumed that participants completed the interview while at home, although they were not asked this explicitly. No one else was present during the interview besides the participant and the interviewer. Participants were aware of the
The purpose of the interviews, such that the researcher wished to obtain feedback on their experiences in the program. In regards to personal characteristics, NA is a Doctoral Candidate in Clinical Psychology, with training and experience in ICBT. She has also accrued training and experience in the assessment and treatment of mood and anxiety disorders among both medical and non-medical populations. As previously mentioned, she acted as the principal investigator and therapist. This meant that she was actively involved at every stage of the research process including participant recruitment, screening, and treatment. To enhance transparency, the interviewer kept an electronic field journal to record thoughts, feelings, concerns, and ideas throughout the interview process.

Acting as both the researcher and therapist put the interviewer in a unique position with both benefits and drawbacks. In terms of benefits, she was able to easily establish rapport with participants, who, in turn, appeared very comfortable discussing their experiences with the program, changes in their lives as a result of the program, and their experiences as cancer survivors more generally. Given her role as the therapist, she also had increased understanding of the contexts of participants’ experiences, including elements such as personal significance and emotional impact. However, she noted that it was sometimes difficult to not fall into this role during the interviews, as some participants asked questions regarding therapeutic content previously shared or asked for guidance in areas they found difficult. This meant that the interviewer sometimes provided psychoeducation or offered support over the phone (e.g., discussing the adaptive nature of anxiety, the frequency with which patients experience fear of recurrence).

Before beginning the interviews and throughout, the interviewer noted that she may be...
more inclined to discuss the positive aspects of the program. She made a conscious effort to follow-up and ask participants to elaborate on their responses when discussing what they disliked about the program or what they would suggest improving. She also emphasized the importance of participants being open and honest in providing constructive feedback, as this would help improve the program, and in turn, improve patient care in the future. Overall, her impression was that participants provided open and candid feedback on the program and felt comfortable in doing so. This candidness is reflected in the feedback provided.

3.6 Statistical Methods

Pre-treatment to post-treatment changes in questionnaire scores were analyzed using paired-sample t-tests. Tests were conducted using Bonferroni adjusted alpha levels of .005 per test, given the presence of 10 paired-sample t-tests. Effect sizes (Cohen's $d$) were calculated for within-groups changes, based on the pooled standard deviation.

Consistent with the model utilized by the Improving Access to Psychological Therapies program in the UK (Richards & Suckling, 2009) and the Wellbeing Course (e.g., Dear et al., 2011), two criteria of clinical significance were employed. First, pre-treatment and post-treatment PHQ-9, GAD-7, HADS-A, and HADS-D scores were compared with clinical cutoffs to provide an index of remission. This was defined as the proportion of participants who initially scored at or above and then subsequently below the following cut-offs: GAD-7 total score ≥ 8 (Löwe et al., 2008); PHQ-9 total score ≥ 8 (Thekkumpurath et al., 2011); HADS-A total score ≥ 9 (Bjelland et al., 2002), and HADS-D total score ≥ 8 (Bjelland et al., 2002). An estimate of recovery was made by identifying the proportion of participants who demonstrated a significant reduction in
their symptoms. This was defined as a reduction of 50% of pre-treatment PHQ-9, GAD-7, or HADS scores, as described in recent dissemination studies (Richards & Suckling, 2009).

3.7 Qualitative Analyses

All of the data sets were analyzed and coded by NA and an independent research assistant (NF). Given NA’s degree of involvement in the research process, it is assumed that the qualitative analysis is partly grounded in her interpretive assumptions and personal interests in the research topic. NF is an Honours student in Psychology, with training in qualitative research. She has limited knowledge in the subject manner and was able to provide an (objective) analysis of the material. Participant feedback provided during the post-treatment interviews, was examined using thematic content analysis (Hsieh & Shannon, 2005). This fundamental qualitative analytical approach is a descriptive way of presenting qualitative data. Thematic content analysis was used to allow for important themes and ideas to surface regarding participants' experiences with Wellbeing After Cancer. Themes were therefore derived directly from the data.

The qualitative software NVivo was used to manage the data, such that transcript text was sorted into seven content areas based on the questions asked. The interviews were reviewed several times to obtain an overall sense of their meaning, followed by the selection of relevant text for further analysis. Next, the relevant text was systematically searched for repeating ideas, which was defined as an "idea expressed in relevant text by two or more participants" (Auerbach & Silverstein, 2003). Repeating ideas were highlighted, copied into a repeating idea file, and grouped together according to meaning. When there were relevant text segments that were not repeated, the researchers searched
the text again to try and find text that would be consistent with the solitary text. If this was not possible, the researchers often decided to keep the text given the importance of reflecting differences in patient experiences as well as commonalities (Auerbach & Silverstein, 2003). In doing so, the researchers worked off the assumption that it may be important to report that only one person had a particular experience. Next, the repeating ideas were organized into larger groups that expressed a common theme, which was defined as "an implicit idea or topic that a group of repeating ideas have in common" (Auerbach & Silverstein, 2003). The process of identifying themes, grouping and regrouping repeating ideas, and re-labeling themes was repeated as needed. The names of themes were generated by using an easily understood phrase that expressed the common thread pulling each idea together. Major themes are indented and presented in bolded and italicized text below. When present, minor themes are italicized within the discussion of major themes.

Consistent with the collaborative nature of the coding process, each researcher (i.e., NA and NF) completed the coding process described above. The researchers then met to compare and contrast common themes derived from the interviews and to generate a summary of common themes. The final coding scheme was reviewed by the research supervisor.

4. Results

4.1 Baseline Data

The sample had a mean age of 53.61 ($SD = 9.59$) and 15/18 participants (83.3%) were female. Seventeen of eighteen participants (94.4%) reported Caucasian as their ethnicity and one participant (5.6%) reported Aboriginal/First Nations as his/her
ethnicity. Thirteen of eighteen participants (72.2%) reported being either married or living with their partner, 3/18 (16.7%) reported being divorced/separated, 1/18 (5.6%) reported being widowed, and 1/18 (5.6%) reported being never been married. Fourteen of eighteen participants (77.8%) reported having children. In terms of location, 7/18 (38.9%) participants resided in a town or village, 8/18 (44.4%) participants resided in an urban center, 2/18 (11.1%) resided in a small city, and one (5.6%) participant resided on a farm. On average, participants had completed 14.94 (SD = 2.47) years of education. Eight of eighteen participants (44.4%) reported currently receiving disability payments, 5/18 (27.8%) reported being retired, 1/18 (5.6%) reported part-time employment. 1/18 (5.6%) reported unemployment, and 2/18 (11.1%) reported their employment as “other,” which included being retired/receiving disability payments for one participant and currently being on medical leave for the other participant. Six of eighteen participants (33.3%) reported having had previous mental health treatment. Three of eighteen participants’ (16.7%) symptoms met DSM-IV criteria for a current anxiety disorder, 7/18 (38.9%) met criteria for a mood and anxiety disorder, and 8/18 (44.4%) did not meet clinical criteria. Among the total sample, observed disorders included Generalized Anxiety Disorder (9/18), Panic Disorder with Agoraphobia (4/18), Social Phobia (2/18), Agoraphobia (1/18), Post Traumatic Stress Disorder (1/18), Major Depressive Disorder (6/18), and Dysthymia (1/18). Overall, 5/18 participants (27.8%) reported currently taking medication related to their symptoms of anxiety or depression.

Six of eighteen participants’ (33.3%) reported cancer diagnosis was Stage 3, 2/18 (11.1%) reported Stage 2, 3/18 (16.7%) reported Stage 1, 3/18 (16.7%) reported Stage 4, 2/18 (11.1%) reported being unsure of the stage, and 2/18 (11.1%) reported no stage was
assigned at diagnosis due to the type of cancer. In regards to cancer type, 7/18 participants (38.9%) reported a diagnosis of breast cancer, 2/18 participants (11.1%) reported colon cancer, and 2/18 participants (11.1%) reported non-Hodgkin lymphoma. Seven of eighteen participants (39.2%) reported the following cancer diagnoses: multiple myeloma, sarcoma, colorectal, ovarian, endometrial, prostate, and peritoneal mesothelioma. In terms of cancer treatment, 13/18 participants (72.2%) received two different types of treatment (e.g., surgery and chemotherapy), 4/18 participants received three types (e.g., surgery, chemotherapy, radiation therapy), and one participant (5.6%) received one type of cancer treatment. On average, participants reported 6.61 months ($SD = 5.34$) had passed since the completion of active cancer treatment. Seventeen of eighteen participants (94.4%) reported having a chronic health condition and/or health problems other than cancer.

### 4.2 Adherence and Attrition

Fourteen of 18 participants (77.8%) read the five lessons within the 8 week program and post-treatment data was obtained from all participants.

### 4.3 Primary Outcome Measures

Means, standard deviations and effect sizes for pre-treatment and post-treatment are shown in Table 3. Using the adjusted alpha levels of .005 per test, paired samples $t$-tests revealed statistically significant improvements from pre- to post-treatment on the PHQ-9 ($t_{17} = 4.53, p< .001$), GAD-7 ($t_{17} = 4.86, p< .001$), HADS-A ($t_{17} = 4.82, p< .001$), and HADS-D ($t_{17} = 3.74, p< .005$).
4.4 Secondary Outcome Measures

Paired samples t-tests revealed significant reductions from pre-treatment to post-treatment (Table 3) on the SF-12: Mental Component ($t_{17} = -4.34, p < .001$). Paired samples t-tests revealed no change in scores between pre- and post-treatment on the SF-12: Physical Component ($t_{17} = -0.63, p = .54$), BPI: Severity ($t_{17} = -0.57, p = .58$), BPI: Interference ($t_{17} = -0.29, p = .78$), FSI: Interference ($t_{17} = 1.94, p = .07$), and FSI: Severity ($t_{17} = 2.25, p = .04$).

4.5 Effect Sizes

Effect sizes for the outcome measures are included in Table 3. From pre- to post-treatment a large ($\geq .8$) within-group effect size was found on the PHQ-9, with a Cohen’s $d$ of 0.90. Moderate (0.64 - .71) within-group effects were found on the PHQ-9, HADS-A, HADS-D, and SF-12: Mental.
### Table 3

**Means, Standard Deviations and Effect Sizes (Cohen’s d with 95% Confidence Intervals) of the Primary and Secondary Measures.**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre-treatment mean</th>
<th>Post-treatment mean</th>
<th>Pre- to post-treatment within-group ES (d)</th>
<th>t</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHQ-9</td>
<td>10.56 (7.06)</td>
<td>5.67 (6.70)</td>
<td>0.71 (0.02 to 1.37)</td>
<td>4.53</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>GAD-7</td>
<td>9.11 (4.54)</td>
<td>4.67 (5.31)</td>
<td>0.90 (0.19 to 1.56)</td>
<td>4.86</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>HADS- A</td>
<td>9.83 (3.84)</td>
<td>7.11 (4.10)</td>
<td>0.68 (0.00 to 1.34)</td>
<td>4.82</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>HADS- D</td>
<td>8.17 (4.58)</td>
<td>5.06 (4.19)</td>
<td>0.71 (0.02 to 1.37)</td>
<td>3.74</td>
<td>&lt;.005</td>
</tr>
<tr>
<td><strong>Secondary</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SF-12: Physical</td>
<td>41.38 (11.88)</td>
<td>42.31 (11.33)</td>
<td>-0.63 (-1.29 to 0.04)</td>
<td>-4.34</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>SF-12: Mental</td>
<td>38.72 (10.24)</td>
<td>45.63 (11.37)</td>
<td>-0.64 (-1.29 to 0.04)</td>
<td>-4.34</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>BPI: Severity</td>
<td>2.22 (2.23)</td>
<td>2.38 (2.32)</td>
<td>-0.57 (-1.29 to 0.16)</td>
<td>-5.7</td>
<td>.58</td>
</tr>
<tr>
<td>BPI: Interfere</td>
<td>2.94 (3.09)</td>
<td>3.05 (3.11)</td>
<td>-0.29 (-1.29 to 0.71)</td>
<td>-2.9</td>
<td>.78</td>
</tr>
<tr>
<td>FSI: Interfere</td>
<td>3.44 (2.77)</td>
<td>2.88 (3.04)</td>
<td>1.94 (-1.29 to 5.17)</td>
<td>1.94</td>
<td>.07</td>
</tr>
<tr>
<td>FSI: Severity (av</td>
<td>4.76 (2.41)</td>
<td>3.69 (2.37)</td>
<td>2.25 (-1.29 to 5.81)</td>
<td>2.25</td>
<td>.04</td>
</tr>
</tbody>
</table>

*Note.* PHQ-9 = Patient Health Questionnaire 9-Item (PHQ-9); GAD-7 = Generalized Anxiety Disorder 7-Item (GAD-7); HADS-A = Hospital Anxiety and Depression Scale-Anxiety Subscale; HADS-D = Hospital Anxiety and Depression Scale-Depression Subscale; SF-12: Physical = Medical Outcomes Study Short Form: Physical Health Composite Scale; SF-12: Mental = Medical Outcomes Study Short Form: Mental Health Composite Scale; BPI: Severity = Brief Pain Inventory: Pain Severity Subscale; BPI: Interfere = Brief Pain Inventory: Pain Interference Subscale; FSI: Interfere = Fatigue Symptom Inventory: Interference Subscale; FSI: Severity = Fatigue Symptom Inventory: Severity Subscale. The standard deviation of the means and the confidence intervals of effect sizes are shown in parentheses. Higher scores on the SF-12 are indicative of better quality of life.
4.6 Clinical Significance

The numbers and percentages of people scoring above and below identified cut-offs of clinical significance and achieving a 50% reduction in their scores on the PHQ-9, GAD-7, HADS-D, and HADS-A are shown in Table 4. Regarding depression, of the participants who had a PHQ-9 score equal to or above 8 at pre-treatment, 6/11 (54.5%) scored below 8 following treatment, suggesting remission. At post-treatment, 6/11 (54.5%) participants met the criteria for clinically significant recovery on the PHQ-9, that is, post-treatment score at least 50% less than their pre-treatment score. Of the participants who had a HADS-D score equal to or above 8 at pre-treatment, 5/10 (50.0%) scored below 8 following treatment, suggesting remission. At post-treatment, 3/10 (30.0%) met the criteria for clinically significant recovery on the HADS-D.

In terms of anxiety, of the participants who had a GAD-7 score equal to or above 8 at pre-treatment, 8/11 (72.7%) scored below 8 at post-treatment, suggesting remission. At post-treatment, 7/11 (63.6%) participants met the criteria for clinically significant recovery on the GAD-7. Of the participants who had a HADS-A score equal to or above 9 at pre-treatment, 5/10 (50.0%) scored below 9 at post-treatment, suggesting remission. At post-treatment, 2/10 (20.0%) participants met the criteria for clinically significant recovery on the HADS-A.

4.7 Therapeutic Alliance

High ratings of therapeutic alliance were obtained on the WAI-S subscale and total scores (see Table 4). Therapeutic alliance remained stable from weeks 5 to 8 of the program, as no significant differences were found on WAI-S scores between time points (Table 5).
## Table 4

Proportion of Participants Above and Below Cut-Off Scores of Clinical Significance (remission) and Proportion Demonstrating at Least 50% Reduction in Pre-Treatment Scores (recovery).

<table>
<thead>
<tr>
<th>Measure</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHQ-9</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Pre-treatment score ≥ 8</td>
<td>11</td>
<td>61.1%</td>
</tr>
<tr>
<td>Pre-treatment score &lt; 8</td>
<td>7</td>
<td>38.9%</td>
</tr>
<tr>
<td>Post-treatment score ≥ 8 (non-remission)</td>
<td>5</td>
<td>45.5%</td>
</tr>
<tr>
<td>Post-treatment score &lt; 8 (remission)</td>
<td>6</td>
<td>54.5%</td>
</tr>
<tr>
<td>Post-treatment score ≤ 50 % pre-treatment (recovery)</td>
<td>6</td>
<td>54.5%</td>
</tr>
<tr>
<td><strong>GAD-7</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Pre-treatment score ≥ 8</td>
<td>11</td>
<td>61.1%</td>
</tr>
<tr>
<td>Pre-treatment score &lt; 8</td>
<td>7</td>
<td>38.9%</td>
</tr>
<tr>
<td>Post-treatment score ≥ 8 (non-remission)</td>
<td>3</td>
<td>27.3%</td>
</tr>
<tr>
<td>Post-treatment score &lt; 8 (remission)</td>
<td>8</td>
<td>72.7%</td>
</tr>
<tr>
<td>Post-treatment score ≤ 50 % pre-treatment (recovery)</td>
<td>7</td>
<td>63.6%</td>
</tr>
<tr>
<td><strong>HADS-D</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Pre-treatment score ≥ 8</td>
<td>10</td>
<td>55.6%</td>
</tr>
<tr>
<td>Pre-treatment score &lt; 8</td>
<td>8</td>
<td>44.4%</td>
</tr>
<tr>
<td>Post-treatment score ≥ 8 (non-remission)</td>
<td>5</td>
<td>50.0%</td>
</tr>
<tr>
<td>Post-treatment score &lt; 8 (remission)</td>
<td>5</td>
<td>50.0%</td>
</tr>
<tr>
<td>Post-treatment score ≤ 50 % pre-treatment (recovery)</td>
<td>3</td>
<td>30.0%</td>
</tr>
<tr>
<td><strong>HADS-A</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Pre-treatment score ≥ 9</td>
<td>10</td>
<td>55.6%</td>
</tr>
<tr>
<td>Pre-treatment score &lt; 9</td>
<td>8</td>
<td>44.4%</td>
</tr>
<tr>
<td>Post-treatment score ≥ 9 (non-remission)</td>
<td>5</td>
<td>50.0%</td>
</tr>
<tr>
<td>Post-treatment score &lt; 9 (remission)</td>
<td>5</td>
<td>50.0%</td>
</tr>
<tr>
<td>Post-treatment score ≤ 50 % pre-treatment (recovery)</td>
<td>2</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

*Note.* PHQ-9 = Patient Health Questionnaire 9-Item (PHQ-9); GAD-7 = Generalized Anxiety Disorder 7-Item (GAD-7); HADS-A = Hospital Anxiety and Depression Scale - Anxiety Subscale; HADS-D = Hospital Anxiety and Depression Scale-Depression Subscale.
Table 5

WAI-S Scores (Range: 1-7) at Mid- and Post-Treatment: Means, Standard Deviations, and T-Test Comparisons.

<table>
<thead>
<tr>
<th></th>
<th>Mid-treatment (Lesson 4/Week 4)</th>
<th>Post-treatment</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAI-S</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>5.94 (1.03)</td>
<td>5.88 (1.24)</td>
<td>.44</td>
<td>.67</td>
</tr>
<tr>
<td>Bond</td>
<td>6.22 (.88)</td>
<td>6.29 (.99)</td>
<td>-.52</td>
<td>.61</td>
</tr>
<tr>
<td>Goal</td>
<td>5.96 (.97)</td>
<td>5.96 (1.23)</td>
<td>0.00</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>6.04 (.89)</td>
<td>6.04 (1.05)</td>
<td>0.00</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Note. WAI-S = Working Alliance Inventory-Short-Form.
4.8 Treatment Satisfaction

Participants who completed the post-treatment satisfaction questionnaire reported a high level of satisfaction with the overall program with 14/18 (77.7%) reporting being either very satisfied or satisfied with treatment, 3/18 (16.7%) neutral, and 1/18 (5.6%) dissatisfied. No participants reporting being very dissatisfied with treatment. A high level of satisfaction was also reported with the quality of the Lessons and Do It Yourself Guides with 16/18 (88.9%) being either very satisfied or satisfied, 2/18 (11.1%) reporting neutral, and no participants reporting being dissatisfied with the Lessons or Guides.

All 18 (100%) reported feeling confident recommending the program to a friend, and all 18 (100%) reported completing the program was worth their time. The majority of participants also reported increased confidence regarding symptom management with 15/18 (83.3%) reporting greatly increased or increased confidence in learning to manage their symptoms as a result of participating in the program, 2/18 (11.1%) reporting reduced confidence, and no participants reporting greatly reduced confidence. Finally, 13/18 (72.2%) participants reported that participating in the program greatly increased or increased their motivation to seek treatment in the future if needed, while 5/18 (27.8%) of participants reported no change in motivation to seek future treatment.

When asked to provide a rating from 0 (i.e., not helpful at all) to 10 (i.e., extremely helpful) indicating the helpfulness of specific components of Wellbeing After Cancer, participants rated each of the program components as helpful. Mean ratings ranged from 7.06 (SD = 2.62) for both writing about survivorship issues to my therapist and writing about survivorship issues to my therapist (SD = 2.71) to 8.83 (SD= 1.65) for
having a therapist who is responsive to my needs. Ratings of additional program components are presented in Table 6.
Table 6

Mean Ratings and Standard Deviations of the Helpfulness of Specific Program Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning about anxiety and depression</td>
<td>8.11 (1.71)</td>
</tr>
<tr>
<td>Learning about unhelpful thoughts and how to challenge them...</td>
<td>8.67 (1.41)</td>
</tr>
<tr>
<td>Learning strategies to manage under arousal (physical symptoms associated with depression)</td>
<td>7.50 (2.15)</td>
</tr>
<tr>
<td>Learning strategies to manage over arousal (physical symptoms associated with anxiety)</td>
<td>7.83 (2.20)</td>
</tr>
<tr>
<td>Learning about unhelpful behaviours (avoidance, safety behaviours)</td>
<td>8.17 (2.20)</td>
</tr>
<tr>
<td>Learning about practicing graded exposure (gradually facing the things you fear)</td>
<td>8.39 (1.38)</td>
</tr>
<tr>
<td>Learning about symptom lapses and ways to stay well</td>
<td>8.33 (1.37)</td>
</tr>
<tr>
<td>Access to additional resources (assertive communication, good sleep guide, problem solving, worry time, fear of cancer returning)</td>
<td>8.72 (1.90)</td>
</tr>
<tr>
<td>Access to Do It Yourself guides</td>
<td>8.50 (1.82)</td>
</tr>
<tr>
<td>Reading about survivors’ stories</td>
<td>7.83 (2.68)</td>
</tr>
<tr>
<td>Completing homework activities on my own following each lesson</td>
<td>8.28 (2.19)</td>
</tr>
<tr>
<td>Writing about my experiences to my therapist</td>
<td>7.06 (2.62)</td>
</tr>
<tr>
<td>Sharing my experiences with someone who cares</td>
<td>7.89 (2.52)</td>
</tr>
<tr>
<td>Having a therapist who is responsive to my needs</td>
<td>8.83 (1.65)</td>
</tr>
<tr>
<td>Being contacted by e-mail</td>
<td>8.61 (1.61)</td>
</tr>
<tr>
<td>Expressing my feelings</td>
<td>8.50 (1.38)</td>
</tr>
<tr>
<td>Writing about survivorship issues to my therapist</td>
<td>7.06 (2.71)</td>
</tr>
</tbody>
</table>

Note. The standard deviation of the means are shown in parentheses.
4.9 Time Spent/Contact Events per Participant

The mean total therapist time per participant was 178.11 min ($SD = 111.57$) including sending and reading instant message and telephoning participants. An additional average 111.11 min ($SD = 24.77$) per participant was required for administrative purposes, including the diagnostic telephone interviews. During the program, three automatic emails were sent to each participant, with the therapist sending a mean of 2.17 ($SD = 1.51$) pre-structured reminder e-mails, and a mean of 12.72 ($SD = 4.34$) additional personal emails per participant. The clinician also made a total of 37 telephone calls during the program ($M = 2.06$ per participant; $SD = 2.62$).

4.10 Patient Feedback

The six content areas explored during the post-treatment interview were (a) aspects of the program participants liked, (b) aspects of the program participants disliked and/or would improve, (c) barriers to completing the program, (d) most helpful skills, (e) perceptions of offering a similar wellbeing program to cancer patients in treatment, and (f) advice to someone about to start the program.

Aspects of the program participants liked.

"I'm not alone." Analysis of interviews revealed that participants liked learning there are other people with similar experiences, coping with depression, anxiety, or other challenges following cancer treatment, which helped them feel they are not alone in their experience:

I know when I was going through the treatment, obviously I saw people who were going through the treatment with me and then now that I’m well again, I kind of thought, you know, here I am out on my own. But
knowing there’s other people taking programs like this and that, it’s kind of, you know, you feel like, well, I’m not alone (Interviewee 1).

Participants also shared that the survivor stories included in the program helped them feel less alone:

But it was reading the stories about other people and knowing that you’re not alone. I mean, you know that you’re not alone, but when your feelings are validated just by reading someone’s story, I mean that is everything. And that just makes it, it’s like a little pressure, for me anyway, that was kind of lifted off of there and thinking ‘Yeah I know there’s other people out there that think that way.’ But when you actually read someone’s story and saying how they were feeling and that kind of stuff, I mean it kind of, I don’t know, it lifts a little bit of a pressure off of you (Interviewee 9).

**Design and organization.** Participants also described liking features of the program related to its design and organization. First, several participants reported they liked the layout of the program and how core concepts were explained. More specifically, participants indicated the program broke down complex concepts in a simple and easy to understand manner:

Just the breaking down of what’s going on. Like, simplifying the stuff into smaller steps...Just everything, why stuff is happening, what it’s meaning, how it’s affecting you mentally, physically. Like things to look for, like just making everything into baby steps, if you will, first (Interviewee 1).
Several participants also reported that the program was presented in a *simple and straightforward* manner, which made it easy to understand. In conjunction with this point, some participants reflected that this feature was especially appreciated given the difficulties they were experiencing with memory and attention following chemotherapy:

Well it was very simple. It was straightforward. You know what I mean? Like, it wasn’t complicated. You didn’t have to – like going through chemo you have kind of a brain scramble and you, as they call it, chemo brain, and sometimes you can’t, just the simplest things you can’t wrap your brain around sometimes. And yeah, it was simple (Interviewee 8).

In relation to the design of the program, participants further indicated that they liked having the *option to print off the materials*, as this allowed them to review the skills without having to be physically present at their computer. Participants further indicated that printing off the materials allowed them to repeatedly review throughout the program, and would allow them to continue to review the materials once the program ended. In regards to this point, one participant indicated that “The fact that we can print that and don’t have to sit at that computer - - like that’s amazing” (Interviewee 10).

*Length and pace.* Many of the participants indicated that they liked the spacing and timing of the program, noting that they would not want it any longer or shorter. For example, one participant stated “I think it would’ve been overwhelming to be done in five weeks,” and later added, “I wouldn’t want more. I wouldn’t want it to be longer, I wouldn’t want more in each lesson” (Interviewee 12). In addition to length, participants reflected that they liked the pace of the program (e.g., spending two weeks rather than one on some lessons):
The timing was you know … I always felt that I had enough time and I preferred having the extra time even if it … If I wasn’t quite sure whether I should be doing more, I just used it as a time that I could go back and check over some of the things and read over (Interviewee 4).

In conjunction with pacing, some participants reported experiencing no pressure while others reported experiencing good pressure during the program, indicating that this likely led to less procrastination on their part:

I like the time, the time factor to give you a chance to work on it. Because once you learn that new thing and it’s like ‘okay’, it takes you, honestly, yeah like that one with the thought challenging, it takes you the two weeks to actually get it in your head and start practicing it, yeah. So I liked that. I liked the, yeah… And that said though, I liked the fact that ‘Okay I have to practice this because in two weeks I know I’m going to get the next lesson.’ So you don’t get into this procrastination mode and you actually work on yourself, you know. It gives you that motive, yeah. So I really enjoyed that part (Interviewee 11).

Finally, some participants also indicated that they liked having continued access to the program for 3 months after it finished, as this gave them the option to go back and review specific sections of the program they felt could benefit from additional work.

**Flexibility.** Participants frequently reported that they liked how they could work through the program at times that worked for them. In relation, several participants reported they liked the fact that they did not have to make an appointment with a mental health professional. One participant illustrated this point, stating, “I guess doing it on
your own time is certainly a benefit... You know not having structured appointments and stuff, although I guess that’s probably not a big thing, but you know I found that definitely convenient" (Interviewee 5). Another participant stated, "You can do it on your time; you don’t have people pushing you to do it, there’s no appointments, there’s no set time where you have to be rigid with it and it’s good that way" (Interviewee 9). These points were further reflected in the quote below:

I really liked the … I guess the ability or the flexibility with being able to access some … Everything online on my own time. That was one of the key components for me, I really, really did appreciate that … That aspect (Interviewee 6).

In connection with the convenient aspects of the program, participants indicated that they liked being able to work on the program from the comfort of their own home. Some participants indicated that this added flexibility was especially helpful, as it meant they did not have to try and attend an appointment when feeling nauseous or fatigued.

*Privacy and fit.* Some participants also viewed themselves as more private people, and viewed the privacy inherent in the program as a better fit in comparison to alternative treatment options such as attending a cancer support group:

Because then I’m not sitting in a room with everybody that’s there for the same reason and I’m feeling like uhm… you know, I can’t handle my own emotions and oh my god, I’m here with-, and these people are the same. And it’s nothing against any of those people, right? But- being able to do this online and then having emails and talks with you, for me, I… to be honest, don’t know if I would’ve done it the other way (Interviewee 10).
This participant went on to add:

So if it wasn’t for your program, I would be feeling the same way I was before the start of it. Because… You know what? I guess I kind of in some ways I’ve always kind of been a… somewhat of a private person (Interviewee 10).

**Relationship with therapist.** Participants reported that they liked having contact with a therapist on a regular basis during the program. In discussing their relationship with the therapist, participants often described *specific features of this relationship* that they found valuable. As described by one participant, this meant validation of specific thoughts and emotions:

Well… I know that one thing I got out in the beginning was when you… when you understood, and in a way kinda even taught me that that statement… That I didn’t have to accept that statement ‘Well, stay positive’ as a valid… supportive statement (Interviewee 1).

Another participant described the collaborative nature of the relationship:

You know and I never felt … Mind you … And I’ve never dealt with a therapist before, but I always felt as if we were contributing something to one another … Like it wasn’t just all you or all me, it was kind of a combination of both (Interviewee 4).

Several participants also described *gaining a better understanding of the materials* through guided exploration with the therapist. For example, one participant stated: “I liked the idea and it was good for me to be in touch with you via email … Once
a week to kinda bring my thoughts together. That I found was good” (Interviewee 4). This view was also reflected in the following quote:

When I first sent you an email that’s as far as I had gotten in the exploration and the thinking on that. Probably partly because I didn’t know where to go next with it. Because it’s a lot of work to figure out where to go next with it. But then you’d fire back a few questions and then that made it really easy to kind of… Oh, and I-, okay, if I look at it and think about that-, and that also took away some of that uhm… uh… personal embarrassment about talking about how I felt. And I don’t know why. Maybe because I then had some answers for myself (Interviewee 12).

In addition to processing materials, participants also reported that checking in with the therapist via e-mail helped keep them on task and maintain structure with the program. Several participants further indicated that they liked knowing they were connecting with a “real person” despite it being an Internet-based program.

**Course content and associated changes.** Several participants identified specific skills and strategies they liked and found particularly helpful, including thought challenging, exposure, and controlled breathing. Participants often referred back to changes they have noticed in themselves as a result of learning these skills and concepts in the program:

And it has definitely helped me, I’m sleeping much better, I’m not worrying about what’s … Now a friend of mine was just recently diagnosed with … They know she has a mass on her brain, whether it’s
like I had or not, I don’t know … But I dealt with that really very well.
You know because it is something that could have kept me awake … And
I think I’m dealing with things better because of this [the program]
(Interviewee 4).

Some participants described having an improved ability to cope with symptoms in the moment:

And in all fairness, I will tell you right now, my anxiety levels are through the roof … And I am using every one of your magical steps in the program, because … I have found another lump … Under the same arm and onto the breast. So you know again I have tools now … To keep me a little calmer … But it’s still that waiting process too (Interviewee 2).

This participant later went on to add:

No, like in the end you have to allow yourself to have that good cry. And then you have to wipe yourself off and look at your paper and go okay, this is what I can do, this is how I can control … You know a little bit of what’s going on. And it’s … You know it is what it is and you can’t change that … You just need … Like for me personally I needed every one of those coping skills brought to my attention (Interviewee 2).

Another participant described increased acceptance of her cancer diagnosis in relation to working through the program, “I’m starting to realize that with your program, that I’m still me, just maybe a little bit of a different me but… That’s okay too” (Interviewee 10).


**Overall appreciation.** In discussing what they liked about the program, participants often expressed a strong sense of satisfaction with it and a sense of appreciation for the opportunity to be involved:

Well and I was talking to my husband about that and I said you know I think I’m lucky to have got in, because my … My symptoms were not severe, but they were … They were severe to me, but not as severe to anybody else. And … And I truly appreciate the fact, cause it just fit in right with what I needed (Interviewee 4).

In describing their satisfaction, participants often expressed excitement towards the program and their *hope for future success* with it. For example, one participant stated: “I hope that it’s something that you can bring to Saskatchewan, you know in the months or years ahead whatever the case, so that other people can really tap into that resource and make good use of it” (Interviewee 6). Some participants reported already *sharing specific concepts and skills* with others who may find it useful. Finally, in expressing their appreciation of the program, some participants described what they perceived as the *serendipitous circumstances* around hearing about the program:

I’m so glad I called you. I was like I never – this was the funny thing is I’ve never taken anything like off of posters. Like okay I read it, yeah okay, and then I – when I read that I’m like ‘Hmm’. So I took it at my last appointment and walked away with that number and it was like – and it sat beside my bed, my side table, and I’m like ‘Oh I should call, I should call’. And I’m like ‘I’m going to call’ (Interviewee 11).
**Program dislikes and ways to improve.**

*Additional information on physical side effects and secondary conditions.* Some participants reported that they would like to have additional information on topics such as common physical side effects following cancer treatment (e.g., sexual dysfunction, fatigue) and/or secondary diagnoses (e.g., fibromyalgia). Information pertaining to how these symptoms may influence or stem from anxiety and depression was also suggested.

*Increase flexibility.* Some participants indicated that they would have preferred to have more flexibility with the program. For example, one participant suggested that it may be helpful to allow clients to choose their own start date, stating “Maybe at the beginning of it letting the person say, okay, I want to start my week on this day whether it be a Tuesday or a Saturday or whatever works with their, like, work schedule...” (Interviewee 3). Although most participants indicated that they liked the length and pacing of the program, some also mentioned that it may be helpful to have more time with certain concepts and lessons:

*Break up the lessons.* Some participants indicated that the amount of information in each lesson was sometimes overwhelming. They also indicated that it may have felt like too much information given that they were already experiencing difficulties with concentration and functioning in general. To improve the program, they suggested that it would be helpful if the lessons were broken up into smaller chunks. One participant illustrated this point in stating, “Sometimes it was kind of hard, like some of the lessons to read were very, very long. And I would just break it up because it’s hard sometimes for me to concentrate, eh?” (Interviewee 8).
**More directive.** It appeared that some participants desired a more directive approach within the program. For example, some indicated that it would be helpful to have explicit and repeated directions regarding the importance of practice, re-reading the materials, and accessing the additional resources. Illustrative of a less common, but important difference in experience, one participant indicated that it may have been helpful to have more guidance around what to include in the weekly e-mails to the therapist. Specifically, she suggested that requiring patients to generate a specific question(s) may be one way to encourage individuals to write something in their e-mails. She further commented that given the power differential often inherent in doctor-patient relationships, clients may assume that this carries over to the therapist-patient relationship in the program:

> As a society we’ve been so programmed that the doctors have the say. We don’t question the doctors. We’re not allowed to question the oncologist. Why would we be allowed to question psychologists? So if there’s a way to set the guidelines so that you know to what level you’re allowed to question (Interviewee 3).

This participant also added that requiring patients to ask questions may provide a needed push at the beginning of the program, stating “If you’re doing it at first because you have to, then you get more out of it. And it turns into a want to” (Interviewee 3).

**Difficult to identify dislikes.** When asked about their dislikes, several participants expressed that it was difficult to identify features of the program they disliked. For example, one participant stated, “You know because I found it so useful … I have a
problem trying to find something wrong with it, because it just seemed like it came at the right time in my life” (Interviewee 4).

**Barriers to completing the program.**

*Finding the time.* Several participants reported that it was sometimes difficult to find time in their schedules to work on the program, and therefore had to ensure they dedicated time to working through the program each week. Some mentioned *particular commitments* that made it somewhat more difficult to schedule time for the program, such as trips and involvement with community organizations.

*Physical and mental barriers.* Participants also described experiencing both physical and mental barriers to completing the program. For example, some commented that their *difficulties with concentration and lack of energy* sometimes kept them from working through the lessons. Some participants attributed these symptoms to depression, while others characterized them as side effects from their cancer treatments (e.g., “chemo brain”). One participant added that increased *pain* levels sometimes prevented her from working on the program. In regards to mental barriers, one participant perceived her *initial fear* towards the program as interfering with her initial engagement. She further connected this experience to other times when she felt overwhelmed:

> So I did have that at the start, like oh my god, I don’t even want to do my normal things, why did I… Why did I listen to the oncologist and the doctor and send that email? In the first place, so… I guess in being honest I kinda thought I bit off way more than I could chew and it was new and what am I doing. And then… like I said, then I just started printing everything and… then I knew I was doing right (Interviewee 10).
**What barriers?** Finally, several participants found it difficult to identify barriers. As one participant stated, “I felt relaxed doing it so I never felt that there was any pressure or any barriers or anything that would make me anxious about it. So no, there wasn’t any for me” (Interviewee 9).

**Most helpful skills.**

*Thought challenging.* Participants frequently described thought challenging as the most helpful skill they learned during the program. Several participants further indicated *how thought challenging was helpful*. For example, one participant described how this skill helped her connect her thoughts with changes in her mood:

> No personally, that one, the thought challenging one was the key. It was like it opened my world. I mean because I often wondered why I would be fine, so – like I was going along and all of a sudden half way through the day I would drop. My whole mood, I’d just get so depressed and sit down. And then by a certain time of the day I’d be better and I didn’t realize how my thoughts were connected (Interviewee 11).

*Combination of skills.* In describing the most helpful skill, participants also reported that a combination of two skills was the most helpful, such as thought challenging and controlled breathing or thought challenging and graded exposure.

**Perceptions of offering a wellbeing program to cancer patients in treatment.**

Overall, there was a strong consensus among participants that the use of a program similar to *Wellbeing After Cancer* would be helpful for patients currently receiving cancer treatments. Participants who agreed with this idea discussed varying reasons as to why such a service would be beneficial as well as ideas for implementation.
Several participants were in support of this idea, but added that the use of such a program would also depend on individual factors.

**Left on your own.** Some participants indicated that they felt there was a lack of mental health/support services available while they were completing their treatments. In this discussion, some participants highlighted the comfort and compassion that these types of services could add:

Actually, yeah. I would because it’s kind of like shutting the barn door after the horse got out. There is nothing, when you’re going through the cancer treatment, you go there, the doctor says, yeah, still got cancer type attitude. Here’s another prescription type thing. Come back in three weeks. There is no, there’s no daily check-ins. There’s no compassion really to it. You’re not given the name of a person that you can call because you’re having a bad moment, you know (Interviewee 3).

Another participant elaborated on this point, stating “I think it would have been okay to know there’s another set of people that really do care about your wellbeing during this process” (Interviewee 2). Some participants described feeling left on their own after treatment finished, and suspected that being connected to a service while in treatment would have lessened this feeling when they ended.

**Convenient help.** Similar to the discussion of features participants liked, some participants indicated that a similar program would be helpful during treatment given its convenient nature. Participants also commented that the opportunity to complete a similar program from home would be especially appealing given the large amount of time they already have to spend in the cancer clinic:
And so yeah again if … You know knowing that a person would be able to access something like this … As opposed to having to go into the centre yet again … For something else, cause you’re in there so often as it is, it’s nice to be able to do something from your own … The comfort of your own home (Interviewee 6).

**Help managing difficult emotions.** When asked about the use of a similar program with patients currently in treatment, participants described experiencing a range of emotions during treatment including sadness, anxiety, anger, guilt, and frustration. They indicated that it would have been helpful to discuss these emotions as they came up – including a discussion of why they might feel a certain way, whether these emotions were normal, and strategies for coping:

> Because like I would have days when I was going through it that I just kept going through it and fine everything and then the next day I would be bursting into tears for seemingly to everybody else, no reason. But it was the futility and frustration and, you know, like all the things they’d just build up. Well, if you have someone to text the question to before it gets to that point or just, you know. Just to have that someone to contact type thing (Interviewee 3).

Some participants further reflected on the course of their own mental health difficulties, indicating that had they had assistance with emotional challenges during diagnosis and treatment, then their symptoms may not have worsened following treatment completion:

> But you know what? If there was something at the start then maybe you wouldn’t end where I ended. When radiation… When all was said and
done and that part was done, that’s when I thought that I was just going to be okay. And that’s when it fell apart for me (Interviewee 10).

**Help coping with treatments and side effects.** Some participants also indicated that a similar program would be helpful during treatment, as it could provide information regarding the cancer treatments themselves, associated side effects (e.g., fatigue, sleep difficulties, neuropathy), and strategies for managing these side effects. These participants felt as though they were not provided with adequate information on such topics when they received treatment:

> Oh yeah, there’s a lot of effects of chemo that nobody tells you about. Nobody. And I mean it’s… it’s like common knowledge. But that doesn’t help a person… It’s common knowledge to the people that have gone through the chemo before, but they don’t ever sit there and say okay, this is-, these are all the things that could happen to you and how to deal with them (Interviewee 7).

**Yes, but it depends.** Several clients reported that a similar program would likely be helpful while undergoing cancer treatments, but that this would also depend on several individual factors such as the types of cancer treatments being received (e.g., radiation, chemotherapy, surgery), the duration of treatment, and the patient’s reaction to the treatment. In regards to the latter, several participants reported that they would not have been able to participate in a similar program due to the significant side effects they experienced with treatment, including severe nausea, fatigue, and difficulties with concentration and sleep. Others indicated that it may be difficult to complete such a program given the ever changing and unpredictable nature of cancer treatment, which in
turn, required their full attention. In describing her personal experiences with treatment, one participant stated:

I know for me, I was really busy on just trying to stay alive. You’re pretty much focused on that and you don’t really think that you have a future. I mean that’s where I was at…You don’t even think that far away because you’re just thinking ‘I need to get through this’ and that’s all I’m caring about (Interviewee 9).

In discussing the potential use of a program during treatment, some participants suggested ways the program could be tailored to fit the individual needs of patients. For example, a "light" version of the current program, containing slightly less material was suggested. A completely self-led version of the current program involving a workbook rather than online format was also suggested.

Advice to someone about to start the program.

Practice. Several participants stressed the importance of practice. More specifically, participants indicated that repeatedly reading through the materials and practicing the skills was extremely helpful, and suggested that others do this as well. One participant illustrated this point in stating, “Read it. Read the stories, read the examples, and do the work, and then do it all over again” (Interviewee 12). Several participants stressed the importance of completing the homework activities, with one indicating that “If you’re going to do the program you’ve got to do the homework; otherwise it just becomes head knowledge and you don’t practice it and it doesn’t have as good a benefit. At least I wouldn’t have for me” (Interviewee 11).
**Make the time.** Several participants indicated that they would tell others to purposefully make time each week to work on the program and to commit oneself to the program. Some suggested that making a schedule could be helpful. Consistent with concepts taught in the course around behavioural activation, some participants indicated that people should push themselves to work on the program, even when they may not feel like it, as they will likely feel better afterwards:

> Regardless of how a person may feel or whatever, you know there’s days where you just like … can’t be bothered or whatever, but it’s like anything else, it’s like going out for a run, you know the worst part is just getting there … Is just getting started, once you get started you feel like a million bucks afterwards. And so I think the same applies here (Interviewee 6).

**Open and willing approach.** Some participants also discussed the importance of taking an open and willing approach to the program, the concepts presented, and one’s own reactions to the concepts. One participant stated that “I think you have to be willing to admit to your weaknesses … be willing to open yourself up and be honest about what you’re doing and about what your expectation is…and being willing to kind of explore” (Interviewee 4).

5. **Discussion**

The primary aim of the present study was to examine the feasibility, acceptability, and preliminary efficacy of a transdiagnostic ICBT program in reducing symptoms of anxiety and depression among cancer survivors in the re-entry phase (i.e., ≤ 18 months post active cancer treatment). The intervention was based on a previous course with
established acceptability and efficacy among a non-medical sample of adults experiencing anxiety and/or depression (Titov et al., 2013). The effectiveness of ICBT in regular clinical settings has been established, with evidence of sustained effects and moderate to large effect sizes (Andersson & Hedman, 2013). However, to our knowledge, no studies have investigated the use of ICBT for treating depression and anxiety among cancer survivors.

5.1 Primary Outcomes

It was hypothesized that participants would show significant improvements on the primary measures of depression and anxiety. These hypotheses were supported. The present study found a large within-group effect size on the GAD-7 and a medium within-group effect size on the PHQ-9. Similar results were also obtained with respect to clinically significant change. Using the PHQ-9 and GAD-7, 54.5% to 72.7% were classified as in remission (i.e., scored below clinical cut-off score of 8) at post-treatment and 54.5% to 63.6% were classified as recovered (i.e., post-treatment score at least 50% less than pre-treatment score). The present study also found a medium within-group effect size on the HADS-D and HADS-A. With respect to clinically significant change, 50% were classified as in remission (i.e., scored below clinical cut-off score of 8 on HADS-D and 9 on HADS-A) at post-treatment and 20.0% to 30.0% were classified as recovered (i.e., post-treatment score at least 50% less than pre-treatment score). It is unclear why a slightly larger effect size was found on the GAD-7 than on the PHQ-9, as this has not been observed in previous research. Although the mean differences in pre- and post-treatment scores were similar on both measures (i.e., 4.89 on the PHQ-9, 4.44 on the GAD-7), the SD on the PHQ-9 pre-treatment score was larger (SD = 7.06) than the
on the GAD-7 pre-treatment score ($SD = 4.54$), which may have contributed to the slightly smaller effect on the PHQ-9. It is also recognized that both the PHQ-9 and the GAD-7 are based on DSM-IV diagnostic criteria. The current findings are nonetheless viewed as relevant, as minor changes have been made to the DSM-5 (American Psychiatric Association, 2013) diagnostic criteria for Major Depressive Disorder and Generalized Anxiety Disorder. Moreover, within Study 1, these measures were used as a part of the screening process and to measure overall symptom change rather than provide a diagnosis.

Given that this is the first trial to examine ICBT for the treatment of anxiety and depression among cancer survivors, comparison of the clinical outcomes to other trials of transdiagnostic ICBT with cancer survivors is not possible. The outcomes of the present study are, however, consistent with the findings found for ICBT programs for post-traumatic stress and anxiety (Seitz et al., 2014) as well as depression (Duffecy et al., 2013) in cancer survivors, which have shown medium to large within group effects. The outcomes are also in line with the positive results of large meta-analytic studies examining ICBT for anxiety and depression in the literature (Andersson & Cuijpers, 2009; Cuijpers et al., 2009). Additionally, they are consistent with the outcomes found for face-to-face CBT treatments for anxiety and depression in cancer survivors reported in recent meta-analyses, with slightly larger effects observed for face-to-face treatments (Osborn et al., 2006). The magnitude of effect sizes in Study 1 are similar to the effect sizes reported in trials of the original Wellbeing Course (Dear et al., 2011; Kirkpatrick et al., 2013), with slightly smaller effects observed in the current study. The magnitude of the effect sizes, however, appears to be consistent with those reported in trials of ICBT
for anxiety and/or depression among medical populations. For example, in a similar ICBT protocol for pain, effect sizes were .79 on the PHQ-9 and .57 on the GAD-7 (Dear, Titov, et al., 2013) in comparison to .71 and .90 in Study 1. Given the results on the primary outcome measures, findings of the present study provide preliminary support for the effectiveness of ICBT for anxiety and depression among cancer survivors in the re-entry phase.

5.2 Secondary Outcomes

It was further hypothesized that participants would show significant improvements on the secondary measures of quality of life, pain, and fatigue. These hypotheses were partially supported. The present study found medium within-group effects on the SF-12: Mental Health Component Score. Significant effect sizes were not observed on the SF-12: Physical Health Component Score, the FSI-Interference Scale, the FSI-Fatigue Severity Index, or the Severity or Interference scales of the BPI. However, it should be noted that the mean pre-treatment scores on the BPI Severity and Interference indices were 2.22 and 2.94 respectively, which limited the potential for change given the scale range of this measure is 0 to 10. It has also been noted that combined modality cancer treatments may lead to prolonged side-effects such as persistent fatigue and lymphoedema (Ganz & Stanton, 2012). As most of the sample (94.4%) received two or more types of cancer treatment, it is possible that fatigue needed to be targeted directly in order for significant changes to be observed in Study 1. The difference in pre and post-treatment scores on the FSI:Interference scale was also approaching statistical significance (p = .07), suggesting that an increased sample size may have resulted in a statistically significant change on this measure.
5.3 Treatment Satisfaction

In addition to demonstrating effectiveness, it was hypothesized that participants would report a high level of satisfaction with the program. This hypothesis was supported. Satisfaction with the treatment protocol was high with 77.7% of participants reporting being either very satisfied or satisfied with treatment. All participants reported feeling confident recommending the program to a friend, and all reported completing the program was worth their time. Moreover, 83.3% reported greatly increased or increased confidence in managing their symptoms as a result of participating in the program. These findings are consistent with those reported in previous ICBT trials (Dear et al., 2011; Dear, Titov, et al., 2013; Kirkpatrick et al., 2013; Wootton et al., 2011), and add to this research by suggesting that ICBT is also viewed as an acceptable form of treatment by cancer survivors in the re-entry phase.

5.4 Patient Feedback

Aspects of the program participants liked. Feedback from participants provided insight into perceived strengths of the ICBT program among cancer survivors. Many positive comments were made related to the nature and structure of the program. Several participants commented on the simple and straightforward style of presentation that broke down complex concepts into understandable components. The length and pace of the protocol used in Study 1 was also viewed favorably by participants, which lends further support to the acceptability of briefer (i.e., five rather than eight lessons) ICBT protocols (Dear et al., 2011). Participants further commented on the flexible nature of the program, such that they could work on the program at times that worked best for them. In relation, some participants liked having the option of completing the program from their home.
rather than having to attend an appointment in person, especially if they were not feeling well. Participants also indicated that they liked the privacy inherent in the program. Some indicated that this aspect of the program was particularly appealing because they viewed themselves as more private individuals, and thus felt more comfortable accessing services via an Internet-based format rather than an in-person format such as a cancer support group. Taken together, the apparent appeal of the private and convenient nature of the program among participants indicates that ICBT may be an especially attractive treatment option for patients who are transitioning out of active cancer treatment.

Participants expressed changes in feelings, thoughts, and behaviours in connection with working through the program more generally and in association with specific skills and strategies learned (e.g., thought challenging, exposure, controlled breathing). Specifically, participants described utilizing active coping strategies, moving towards acceptance of the cancer diagnosis, expressing emotions related to cancer and the challenges after treatment, and changes in their perceptions of situations. These findings are encouraging as coping through active acceptance of the cancer diagnosis and expressing emotions related to cancer has been shown to enhance psychological adjustment, whereas coping through attempts to avoid cancer-related feelings and thoughts has been found to predict less favorable adjustment (Roesch et al., 2005; Stanton et al., 2000; Stanton, Danoff-burg, & Huggins, 2002).

Participants often described feeling “less alone” in the challenges they faced following cancer treatment as a result of participating in the program. The experience of initially feeling alone is consistent with literature indicating that, following treatment completion, survivors often perceive themselves as having lost a safety net that was
present during active medical treatment (Stanton, 2012). In addition, there is evidence that family members’ attention to survivors’ needs often diminishes at the end of cancer treatment (Nijboer et al., 2000; Tuinman, Fleer, Hoekstra, Sleijfer, & Hoekstra-Weebers, 2004). This decrease in support may lead some survivors to feel more alone. The current findings suggest that ICBT programs could help fill the void that cancer survivors experience at this transitional juncture.

In examining what they liked about the program, participants described several features of their relationship with the therapist. For instance, participants described obtaining a better understanding of the program materials through exploring concepts and skills with the therapist. This is consistent with a recent study examining patient experiences with an ICBT program for depression. Participants noted that the therapist added to the program by assisting them in their understanding of the content (Lillevoll et al., 2013). In Study 1, assistance with validating specific thoughts and emotions and help with staying on task within the program were also noted as important by participants. Taken together, these findings lend further support to previous research demonstrating the importance of therapist support in ICBT programs (Andersson & Cuijpers, 2009).

Participants also discussed specific skills they found helpful. Among the skills taught in the program, the majority of participants described thought challenging as the most helpful. In relation, participants reported increased insights and awareness of negative thoughts and how they connected to changes in mood, which is similar to previous reports of participants' experiences with ICBT (Bendelin et al., 2011; Lillevoll et al., 2013).
Program dislikes and ways to improve. In addition to gaining feedback on strengths of the program, feedback was obtained on program weaknesses and areas for improvement. Some participants indicated that the program could benefit from additional information on common side effects following cancer treatment (e.g., sexual dysfunction, fatigue) and/or secondary medical conditions (e.g., fibromyalgia). This finding is consistent with data from a recent large scale survey examining cancer survivors' post-treatment concerns, which indicated that 89% of respondents reported at least one physical concern, and as many as 67% do not receive treatment for these physical concerns (Beckjord et al., 2013). The apparent need for information regarding physical concerns may therefore point towards a larger unmet informational need. Indeed, research indicates that unmet needs during post-treatment are common, with 34% of survivors reporting more than five moderate or severe unmet needs at the beginning of the post-treatment phase (Armes et al., 2009). Meeting these needs, whether through an ICBT program or face-to-face provision of information, is an important clinical priority given research showing that cancer survivors with fulfilled information needs have better health related quality of life and less anxiety and depression (Husson, Mols, & Poll-Franse, 2011).

Some participants indicated that they at times found the amount of information in each lesson overwhelming and, as a result, would suggest breaking up the lessons into smaller chunks. Participants further indicated that it may have felt like too much information given difficulties they were experiencing with concentration, fatigue, and overall functioning. This finding highlights the importance of taking into account the physical symptoms participants may be experiencing while working through ICBT
programs. It is also consistent with recent research examining the use of an ICBT program among individuals diagnosed with MS. Here the majority of participants indicated that fatigue and poor concentration due to MS, made working on the program for extended periods of time (i.e., one hour) difficult (Hind et al., 2010). Together, these findings suggest that the impact of physical symptoms may be an important consideration in the development and delivery of future ICBT programs intended for use with medical populations.

Although not frequently reported by participants, it was mentioned that further direction around what should be included in emails to the therapist would have been helpful. Specifically, one participant indicated that individuals may assume the power differential often present in oncologist-patient relationships, is also present in the therapist-patient relationship within ICBT programs. Additional information around the therapist’s role may be a helpful addition to ICBT programs used with populations who are less likely to have received psychological treatment in the past, and thus obtained some familiarity with the therapist-patient relationship. For example, approximately one third of the sample in Study 1 reported having received previous mental health treatment. This is in comparison to substantially higher estimates in studies examining the use of ICBT with non-medical populations, with estimates of receipt of previous mental health services ranging from 78 to 96 % (Dear et al., 2011; Dear, Zou, et al., 2013; Wootton et al., 2011).

**Barriers to completing the program.** Further illustrating the potential impact of physical side effects after treatment, some participants indicated that physical symptoms such as pain and lack of energy made it more difficult to work on the program. Others
described more mental barriers such as difficulties with concentration, either due to chemotherapy or depression. This finding is again consistent with those of Hind et al. (2010), who found that participants with MS experienced difficulties working through an ICBT program due to fatigue and difficulties with concentration. Within Study 1, one participant indicated that she initially experienced anxiety and fear towards her ability to successfully complete the program. This difference in experience highlights what may be an important consideration for the delivery of ICBT programs to both medical and non-medical populations. Similar to face-to-face treatment, it is likely that several factors would be helpful in alleviating participants initial fears including providing adequate information around what is required of participants in the program, clearly indicating the amount of time typically required, eliciting clients' feedback on potential concerns, normalizing any initial anxiety or worry at the outset of the program, and checking back on clients' concerns through the duration of the program.

**Perceptions of offering a similar wellbeing program to cancer patients in treatment.** Overall, the majority of participants felt that it would have been helpful to have access to a similar wellbeing program while completing cancer treatment. In discussing this point, participants often described reasons as to why they felt such a program would be helpful. For example, some felt there was a lack of mental health services available when they completed treatments. Some indicated that they felt left on their own once treatment ended, and that being connected to a service while in treatment likely would have lessened this feeling as they transitioned out of treatment. Such feelings are consistent with previous research, which has indicated that many survivors
report feeling ill-equipped to deal effectively with the range of challenges they face after treatment (Institute of Medicine and National Research Council, 2005).

Participants also felt that a similar program delivered during cancer treatment would be a convenient source of support, and that working on a program from home would be especially appealing as it would mean that they would be required to attend one less appointment at the cancer clinic. This finding adds to literature around the use of ICBT among medical populations, as it illustrates how the convenient nature of ICBT may have added appeal for individuals receiving or recovering from cancer treatments. Participants also reported that a similar program would have been helpful as they experienced various emotions during treatment (e.g., sadness, guilt, anger) and felt that they could have benefited from processing and understanding these emotions. Indeed, actively processing and expressing emotions during treatment has been linked to enhanced psychological and physical health (Stanton et al., 2000). It is therefore possible that an ICBT program incorporating these components could be helpful to patients currently receiving treatment. Highlighting an unmet need for information during cancer treatment, some participants indicated that a similar program would be helpful as it would provide information they did not receive regarding cancer treatments, physical side effects, and strategies for managing these effects. This finding is consistent with research indicating patients undergoing cancer treatment have unmet information needs (Puts, Papoutsis, Springall, & Tourangeau, 2012). Although many participants indicated that a similar wellbeing program would be helpful, several also discussed how the success of such a program would depend on certain individual factors such as the type of cancer treatment received, the duration of treatments, and the resulting side effects. These
findings suggest that, similar to post-treatment cancer survivors', ICBT will likely not meet the needs of all patients currently receiving treatment. Nonetheless, it appears to hold considerable potential in providing much needed information, skills, and support to a large number of patients.

**Advice to someone about to start the program.** In regards to advice to individuals about to start the program, several participants indicated that practicing the skills, in addition to reading through the material was integral to their success with the program. This suggestion is consistent with qualitative research of therapy process, which indicated that those who tested the ICBT material provided, applied it, and put insights into practice appeared to benefit more from ICBT (Bendelin et al., 2011). Several participants indicated that they would tell others to make time to work on the program and to commit to the program. This insight is consistent with recent research examining participants' experiences with an ICBT program for depression. Specifically, patients who described making a commitment to therapy appeared to obtain better outcomes in comparison to those who described less commitment (Lillevoll et al., 2013). In relation to this point, participants in Study 1 also indicated that taking an open and willing approach to the program would be helpful for future participants. Interestingly, this suggestion is also consistent with literature suggesting that individuals who have exceedingly high expectations of ICBT or express skepticism about CBT or Internet self-help treatment, tend to benefit less from the treatment (Bendelin et al., 2011), therefore suggesting that an open approach is likely conducive to ICBT treatment outcomes.
5.5 Limitations

Limitations of Study 1 include use of an open trial design and a small sample size. It should be noted, however, that the present study was designed as a proof of concept and feasibility study to gain preliminary data before conducting a randomized controlled trial of ICBT for depression and anxiety among cancer survivors. The encouraging results of the present study are consistent with those reported in the literature on the Internet-based treatment of depression and anxiety among non-medical populations (Andersson & Cuijpers, 2009; Pim Cuijpers et al., 2009; Dear et al., 2011) and medical populations such as individuals coping with chronic pain (Dear, Titov, et al., 2013; Macea et al., 2010). In addition, the recovery and remission rates were calculated from the metrics described in the statistical methods section. There are other methods of establishing recovery using the notion of 'reliable and clinically significant change.' For example, the Jacobson and Truax (1991) method takes into account the reliability statistics of the measures utilized. Such an analysis may have shed a different light on the results. However, we chose the analysis in Study 1 in order to facilitate comparison with trials of the Wellbeing Course (Dear et al., 2011; Kirkpatrick et al., 2013; Titov et al., 2011) and to maintain consistency with analyses described in recent dissemination studies (Richards & Suckling, 2009).

Study 1 also lacked measures of cancer-specific adjustment. For example, questionnaires assessing cancer-related intrusive feelings and thoughts, perceived cancer-related benefits, and fear of cancer reoccurrence. Given the small sample, patient experiences with the program cannot be regarded as representative for all cancer survivors who would receive ICBT for anxiety and depression. An additional limitation is the potential bias due to the same therapist conducting the treatment and follow-up
interviews. This bias was minimized by involving a second data coder with no prior connection to the treatment trial or the therapist. The therapist also continually reflected on the research process, her own role, and her expectations when conducting the interviews, coding, and interpreting the data. She was careful to include participants who were satisfied with the program as well as individuals who shared concerns and reported fewer benefits.

5.6 Conclusions

The present study aimed to evaluate the efficacy and acceptability of a new Internet protocol for treating anxiety and depression among cancer survivors currently in the re-entry phase of recovery. Results provide preliminary evidence for the efficacy of Wellbeing After Cancer, with encouraging clinical outcomes. Medium to large effects were obtained on measures of depression and anxiety. Satisfaction with the program was high. Participant feedback revealed positive experiences with the program, good fit with experiences, and potential areas for improvement.

6. Study 2

Over the past decade, there has been a growing realization in the field of psycho-oncology that clinical tools and interventions have gone underutilized despite proven benefits to cancer patients (Hack et al., 2011). As a result, research is beginning to focus on how to bridge the large gap that exists between clinical evidence and what is practiced in the health care system. This gap is often referred to as the "knowledge-to-action gap" (Graham et al., 2006) and efforts to narrow this gap referred to as knowledge translation activities. The term "knowledge translation" is defined by the Canadian Institutes of Health Research as "the exchange, synthesis and ethically sound application of
knowledge — within a complex system of interactions among researchers and users — to accelerate the capture of the benefits of research...through improved health, more effective services and products, and a strengthened health care system" (Canadian Institutes of Health Research, 2004). Knowledge translation is not possible if knowledge generated is not adequately transferred to the clinical practice setting (Graham et al., 2006; Grimshaw, Eccles, & Tetroe, 2004). Knowledge transfer refers to the technical process of bringing information from empirical findings to practitioners and caregivers (Hack et al., 2011).

Despite its importance, relatively little attention has been paid to the knowledge transfer component of knowledge translation. This is problematic as it is known that simple diffusion of information and passive dissemination of research findings are typically ineffective at changing practice (Chilvers, Harrison, Sipos, & Barley, 2002). As a result, more active and systematic efforts are required if promising evidence is to be implemented successfully.

6.1 Implementing Wellbeing After Cancer

Within implementation research, it has been suggested that the likelihood of a new intervention being implemented might be enhanced by involving clinicians in an advisory capacity throughout the research process (Hack et al., 2011). Failure to involve clinicians in this way could result in implementation failure. It was therefore viewed as vital that, after piloting the program and before further study (e.g., RCT), feedback first be received on Wellbeing After Cancer from individuals who could potentially play a large role in implementing the program into clinical practice. Input was therefore sought from clinicians providing supportive care to cancer patients/survivors through the cancer
centers located in Saskatchewan. Our interest was to explore their perceptions of 

*Wellbeing After Cancer* and its implementation into cancer care.

Past research that has examined therapists' attitudes towards ICBT has generated mixed results. For example, the mean reported attitude towards "e-therapy" of Norwegian psychologists was found to be neutral (Wangberg, Gammon, & Spitznogle, 2007). A study conducted by Gun, Titov, and Andrews (2011) examined levels of acceptability of Internet-based treatment programs for anxiety and depression among Australian health professionals. The findings indicated that the mean ratings of acceptability for mild and moderate symptoms were above the neutral rating point of 3/5, indicating acceptability. However, mean ratings for severe anxiety and depression indicated a preference against treating such patients via the Internet.

Recent research has also illustrated the importance of considering providers' insights when preparing to disseminate and implement ICBT programs. Fleming and Merry (2012) examined attitudes of youth service providers towards ICBT (referred to as computerized CBT by the authors) for adolescents. Results indicated that providers were generally interested in ICBT, especially those with a mental health orientation and those who had observed ICBT programs being implemented first hand. Providers saw themselves utilizing these programs in a range of ways, but indicated that additional training and resources would be required for them to use ICBT (Fleming & Merry, 2013).

### 6.2 Purpose and Objectives

The purpose of Study 2 was two-fold. First, the study was designed to obtain information that would help further improve *Wellbeing After Cancer*. Second, feedback that would help implement the program with community clinicians in the future was
obtained. To accomplish this, qualitative research methods in the form of individual semi-structured interviews with clinicians were utilized.

7. Method

7.1 Participants

Clinicians eligible to participate in the study were identified through prior meetings and telephone conversations with NA and her research supervisor. Through the use of convenience sampling, clinicians working in cancer centres throughout Saskatchewan were contacted by telephone and email by NA and provided with information about Study 2. Those who expressed interest in participating provided their e-mail address and were e-mailed a link to the study. In total, 26 clinicians were invited to participate in Study 2. Ten clinicians currently working in cancer care volunteered to participate. Participant recruitment concluded at this point, as it was determined that data saturation had been reached (Glaser & Strauss, 1967). This sample size was also considered appropriate given that the focus of Study 2 was to examine clinician perceptions of the program rather than examine frequency of responses. Moreover, similar research examining client and clinician perspectives via individual interviews (e.g., Herschell, Kogan, Celedonia, Gavin, & Stein, 2009) have utilized similar sample sizes.

The sample had a mean age of 46.30 (SD = 8.41) and all participants were female (100%). Seven of 10 participants (70%) worked at Community Oncology Program of Saskatchewan (COPS) centres located throughout the province, and 3/10 participants (30%) worked at a major cancer treatment facility. All participants (100%) held Bachelor’s of Social Work degrees, and 2/10 participants (20%) reported receiving prior
training in CBT. On average, participants reported 8.90 years ($SD = 6.0$) of experience working within cancer care. Eight of 10 participants (80%) reported they had heard about *Wellbeing After Cancer* prior to being asked to participate in the study. Four of 10 participants (40%) reported directly referring patients to the program, with an average referral rate of four patients ($SD = 1.41$).

### 7.2 Procedure

Individuals who indicated interest in Study 2 were e-mailed a link to the study which was hosted on the *FluidSurveys* survey website. After providing informed consent, clinicians viewed a video outlining *Wellbeing After Cancer* and the results of Study 1. The video presented a brief overview of the program which included an explanation of CBT and therapist-guided ICBT, the basic design of the program (e.g., five lessons covered over 8 weeks), and the Lesson content. Next, the video provided information on the results of Study 1, including sample characteristics (e.g., average participant age, mental health history, cancer diagnoses), results on the primary outcome measures of anxiety and depression, clinical significance of the findings, treatment satisfaction, and patient feedback on the program. Clinicians were able to pause and replay the video as they felt necessary. A screen shot of the video as it appeared within the survey can be found in Appendix Q. After viewing the video, clinicians completed a set of background questions as well as questions designed to assess initial perceptions of ICBT and its potential use within cancer care (See Appendix R).

After completing the brief online survey and viewing the Study 1 video, clinicians were invited to take part in a semi-unstructured interview. The telephone interview script and questions can be found in Appendix S. The interview schedule was generated by the
principal researcher and her supervisor, with input from the doctoral dissertation committee. Similar to Study 1, the same interview guide was used for each clinician. However, each individual interview was unique due to the open-ended nature of the questions and the follow-up questions asked given the clinician’s previous responses.

The interviews were conducted by NA, who is a Doctoral Candidate in Clinical Psychology at the University of Regina. The interviewer has also acted as a research assistant and Internet therapist with the Online Therapy Unit for Service, Education, and Research. As such, she has received training in ICBT and has experience utilizing ICBT to treat anxiety disorders and depression. Including the participants in Study 1, she had provided ICBT to 34 clients at the time of the current study. Through recruitment and collaboration involved in Study 1, the interviewer had previously spoken to some of the clinicians. She did not hold prior relationships with any of the clinicians. To enhance transparency, the interviewer kept an electronic field journal to record thoughts, feelings, concerns, and ideas throughout the research process.

Similar to Study 1, the interviewer’s previous experiences and roles as both the principal investigator and therapist put her in a unique position with both benefits and drawbacks. In terms of benefits, she could speak in depth about the program, easily answer clinicians’ questions, and provide additional education on the program and ICBT. Given the interviewers’ knowledge of psycho-oncology, she was also able to provide relevant context for the use of ICBT in oncology settings and she could ask further follow-up questions in relation to this topic. However, because the interviewer held multiple roles and may have held biases, she made a conscious effort to follow-up and ask clinicians to elaborate on their responses when discussing what they disliked about
the program or what they would suggest improving. She welcomed divergent opinions, and often engaged clinicians in thoughtful discussions regarding the use of ICBT while providing relevant information when appropriate. Overall, the clinicians’ responses were considered candid and open given that both positive and negative feedback was elicited. The likelihood that candid feedback was received is further increased by the fact that the interviewer had no connection to the clinicians' places of employment and there was no preexisting relationship between the clinicians and the interviewer. Thus there was very minimal risk of negative consequences to the clinicians should they provide less favorable responses. Like Study 1, to enhance transparency, the interviewer kept an electronic field journal to record thoughts, feelings, concerns, and ideas throughout the interview process.

All the interviews were conducted over the telephone and while the participant was at their place of work. No one other than the interviewer was present during the interviews. On average, interviews were approximately 30 minutes long. Interviews were audio-recorded and transcribed verbatim. Clinicians were sent a copy of their transcribed interview and were able to suggest exclusions or additions to the transcript. Three clinicians made amendments to their interview, all of which included excluding small pieces of information.

Prior to proceeding with the study, ethics approval was received from the University of Regina REB and the University of Saskatchewan REB (See Appendix T).

**7.3 Data Analysis**

Responses to the online survey questions assessing clinician perceptions were analyzed through examining response frequencies. Clinician feedback provided during
the interviews was examined using thematic content analysis (Hsieh & Shannon, 2005). Thematic content analysis was used to allow for important themes to surface regarding clinicians’ perceptions of *Wellbeing After Cancer* and its potential implementation. The qualitative software NVivo was used to manage the data and sort the transcript text into content areas based on the interview questions. All of the qualitative data were coded by the NA and the independent research assistant (NF) who also assisted with the coding in Study 1. As previously mentioned, NF is an Honours student in Psychology, with training in qualitative research. She has limited knowledge in the subject manner and was able to provide an (objective) analysis of the material. The coding process was similar to that of Study 1 and consistent with guidelines suggested by Auerbach and Silverstein (2003).

Each researcher (i.e., NA and NF) independently completed the coding process, and then met to compare and contrast common themes derived from the interviews, and to generate a summary of common themes.

After the initial coding and review by the research supervisor, it was determined that a significant amount of overlap existed in major and minor themes emerging from the interview questions. As such, themes were re-coded and categorized into more meaningful and succinct content areas. The revised content areas were generated by NA and approved by the research supervisor as well as the second coder NF. The areas included: (a) perceived program strengths, (b) perceived program weaknesses and areas to improve, (c) perceptions of training, program delivery, and implementation of *Wellbeing After Cancer*. Similar to Study 1, major themes are indented and presented in bolded and italicized text below. When present, minor themes are italicized within the discussion of major themes.
8. Results

8.1 Program and ICBT Acceptance

Participants reported a high level of acceptance towards the effectiveness of ICBT, with 3/10 (30%) reporting they strongly agree that ICBT can effectively treat mental health difficulties in patients following cancer treatment, 4/10 (40%) reporting they agree, and 3/10 (30%) reporting they agree somewhat. A high level of acceptance was also shown in regard to the use of ICBT within cancer care more generally, with 3/10 (30%) participants reporting they strongly agree that developments in the provision of ICBT are a positive step for the field of psycho-oncology, 6/10 (60%) reporting they agree, and 1/10 (10%) reporting they agree somewhat. Similarly, 8/10 (80%) participants reported they strongly agreed or agreed that ICBT should be offered regularly following the completion of cancer treatment if additional mental health services are clinically indicated, while 2/10 participants agreed somewhat that it should be offered in these situations. The majority of participants indicated they would refer clients to ICBT in the future if it was available, with 8/10 (80%) strongly agreeing or agreeing they would refer clients and 2/10 (20%) agreeing somewhat that they would refer clients.

Participants reported varying perceptions regarding training in ICBT, with 5/10 (50%) reporting they either strongly agreed or agreed that clinicians in cancer care will seek out training in ICBT if they know it is available, 2/10 agreeing somewhat, and 3/10 (30%) neither agreeing or disagreeing that clinicians will seek out training. Mixed perceptions regarding acting as a therapist in the program were also found, with 1/10 (10%) strongly agreeing they would be interested in delivering the program as a
therapist, 2/10 (20%) agreeing, 3/10 (30%) agreeing somewhat, and 4/10 (40%) neither agreeing or disagreeing they would be interested in delivering the program.

8.2 Clinician Feedback

Program strengths.

Accessibility. Analysis of interviews indicated that many of the clinicians liked the accessible nature of the program. In discussing its accessibility, several clinicians indicated that they liked how the program was especially accessible to individuals in rural areas, as it could overcome barriers to services often present in these areas, such as less access to support groups and distance from providers. For example, one clinician stated:

Well, definitely the availability of it to anybody, no matter where you live. I know we work with a lot of rural people and after they’re done here, they don’t want to travel for more therapy or whatever, so something that they can do at home, I think, was the best (Interviewee 1).

Clinicians also liked how clients could work on the program on their own time and how the program could reduce clients’ visits to the clinic, noting that this might be particularly helpful for individuals with physical constraints or who have difficulty attending appointments in general (e.g., due to lack of car or license). Several clinicians also discussed how the private nature of the program could help reduce the stigma around accessing mental health services. For example, one clinician stated that “Just like the stigma too they don’t like coming to an office, especially a mental health office or help with coping with whatever they’re struggling with” (Interviewee 6).
**Program features.** Clinicians liked several specific features of the program. First, many clinicians liked the *strategies* and *CBT approach*. One clinician noted that “As far as different strategies, deep breathing and different things like that it sounded like it was-, there’s a lot of practical aspects that were being shared with the participants.” Some clinicians indicated that they particularly liked the *name of the program*, as it is focused on wellbeing rather than anxiety and depression. One clinician stated that “Just having that title, *Wellbeing After Cancer*, is very blatant, it’s on the cards and if that’s the first thing I see when I look at it then it’s more of a hopeful interaction than, ‘Do you need support?’” (Interviewee 2). Some clinicians also indicated that they liked the overall *organization* of the program content and the fact that patients could access *support and feedback from a therapist* if needed. The latter point was illustrated in the following quote:

I did appreciate that there was the check-in by the therapist. They had some autonomy with it as far as being able to access the lessons when they were able to, yet they still had some support through a therapist to check in and just see if they had any questions or concerns with the material that was being shared with them (Interviewee 10).

**Support after treatment.** In discussing what they liked about the program, several clinicians described observing challenges faced by survivors after cancer treatment and thus perceiving a need for services during this period. Clinicians described challenges such as decreased support and an increase in negative feelings such as anxiety, depression, and guilt. In discussing potential benefits of using the program in their work, several clinicians indicated that the program could assist with patients’ transition from
active cancer treatments to recovery. For example, one clinician stated, “I thought that it, from what I could see, it looked like it was practical, functional, good information for individuals to deal with this transition” (Interviewee 10). Some clinicians went on to indicate that, through offering support to survivors, the program could help fill a “gap in services:”

So unless somebody contacts me, I don’t know that anyone’s out there that needs help, but if you have that online program, you would get that contact. You know, if they chose to try that program, we would know they’re there and we could connect with them, so it’s just another way of connecting with people (Interviewee 9).

Finally, clinicians indicated that the program appears to be a good fit for cancer survivors, such that it validates and normalizes patients’ experiences after treatment completion, helps patients feel less alone, and offers support tailored to the needs and concerns of survivors.

Utility in current work. There was a consensus among all clinicians that the program would be useful in their current work with survivors. As one clinician stated, “Whether it’s me or whether it’s somebody else providing the training or providing the program to participants, I definitely see it as beneficial in the work that I do with my clients” (Interviewee 4).

Program weaknesses and areas to improve.

Increase program promotion and awareness. Some clinicians indicated that the program could be promoted more in order to increase survivors’ awareness of it:
Like you had brought out the flyers and things like that and of course I did see people were taking the tabs and things like that, maybe more promotion of the program can make it more visible to people, aware that sort of thing (Interviewee 5).

**Concerns around program fit.** In response to being asked what they did not like about the program or would improve, some clinicians expressed concerns around the fit of the program for specific client groups. For example, some clinicians indicated that individuals who are less comfortable with the Internet, either due to age or others factors, may not utilize the program. Some clinicians also reported concerns around patient motivation and energy:

I also was concerned about, depending on the level of depression or anxiety that they’re dealing with, whether they’re going to have the… whether it be energy or be self-starting enough to do it and follow through with it, because a lot of the times when you’re dealing with depression or anxiety, we’ve got the avoidance or just not the energy to bother or just giving up. And changing your thoughts, it’s not easy (Interviewee 9).

Some clinicians inquired as to how increases in symptoms such as negative thoughts and emotions would be managed within the program. One clinician asked, “If you had someone who, all of a sudden, was suicidal. I mean, with an online program, how do you put the safety checks in there for those kinds of things?” (Interviewee 8). This question led to a discussion around the procedures for such a situation as well as how risk is assessed prior to the start of the program and throughout.
Still barriers to access for some groups. Some clinicians noted that although the program does help overcome some barriers to accessing mental health services, there are still patients who will not be able to engage in the program as they do not have access to a computer or the Internet. One clinician stated, “Well, the only thing… Like, a lot of the… A majority of the folks I deal with…are northern clients that don’t have access to a computer. That would be one drawback” (Interviewee 7).

No dislikes or changes. When asked about their dislikes, several clinicians reported that they could not identify anything they disliked about the program or that they would change.

Perceptions of training, program delivery, and implementation.

Use as a referral. When asked about how they would run the program in their work, most clinicians expressed interest in primarily referring clients to the program. In illustration of this point, one clinician indicated that “I wouldn’t be one of the providers of the service. I would certainly refer to it. That’s how I would view it at this point” (Interviewee 8). Some clinicians did express interest in acting as a therapist. For example, one clinician stated that “I could go either way, but I have to admit I was intrigued. Hmm, yeah, I wouldn’t mind learning that” (Interviewee 3).

Additional resources needed. Clinicians identified several types of resources that would likely be needed in order for training and delivery to occur. For example, several clinicians indicated they would require training in CBT prior to becoming a therapist with the program. As one clinician reported, “I haven’t had a lot of training in the CBT, so that would be definitely what I would need to start with so I would feel comfortable” (Interviewee 1). Some clinicians also saw funding and personnel as both a potential
facilitator and barrier to training and delivery of the program. One clinician indicated that these resources may be required in order to offset the time spent away from typical work duties:

Well, they [management] probably need funding because that would take me away from some of the work I’m doing and so they’d have to see can the department take a person out, somebody else has to do the rest of that work. So it might mean hiring somebody (Interviewee 3).

**Time.** Several clinicians also identified time as an important factor that would likely influence training, delivery, and implementation. Most clinicians indicated they would require time off regular work duties in order to obtain training, and that they would also require additional time during work hours in order to deliver the program. Some clinicians further noted that, given their duties as social workers within hospital settings, their schedules are less structured and often unpredictable – thus making it more difficult to secure times for appointments and meetings. Time was also identified as a potential barrier to implementation. In relation to this point, one clinician discussed considerations that would need to be made regarding clinician caseloads and program capacity:

But the other issue I guess would be as you’re doing this, one how many people you’re going to be following? Because we all have limits as to how many on a caseload you can do properly. And when you open something up like, you know, a web-based thing where they could be doing it at any point in time, you didn’t have that many this time around. But the whole idea is, you know, if it catches on, we’ll have a lot more. Okay, all of a sudden we have a lot more but we still have only the same
number of hours. And we’re not going to get more people hired. They are not going to hire more people (Interviewee 9).

_Approval and “buy-in” from above._ Many clinicians indicated that receiving approval from unit managers/supervisors and health region directors would be essential in determining whether they received training. As such, approval from these individuals was described as both a potential facilitator and barrier to training and program delivery. In discussing approval, one clinician stated:

> It’s something that we would have to kind of run through with our supervisor. Our supervisor is really good in supporting us that way so I wouldn’t likely suspect if we decided, yeah, we want to do this and she’d approve it, we’d be able to get time or we’d be able to have, you know, a vehicle to travel. We’d be able to get those things (Interviewee 9).

In discussing factors that might influence implementation, several clinicians indicated that approval and “buy-in” from managers and directors could both facilitate implementation efforts if present but also hinder such efforts if approval did not exist.

_Not a lot of training barriers._ Some clinicians indicated that they did not foresee a lot of barriers to receiving training in ICBT and the program. For example, one clinician indicated that “There might not be a lot of barriers. I think it’s recognized, you know, that need” (Interviewee 3).

_Program promotion._ Several clinicians indicated that better promotion of the program to potential patients and groups (e.g., non-government organizations) would likely facilitate its implementation into cancer care within Saskatchewan. For one
clinician, this meant regularly connecting patients to information about the program early on in their cancer journey:

To get it concretely implemented would just be having more information out there that this program is available, when people come to the cancer clinic and even after their treatments. During their treatments we provide them with packages, you know every cancer patient is given a package of supports and things like that. You know it needs to be almost like part of the package (Interviewee 5).

**Clinician education.** In discussing implementation efforts, several clinicians reported that further education on the program for clinicians and other health professionals (e.g., physicians, nurses) would likely facilitate implementation:

Well I think increased education for people like me. Like the supportive team through COPS and through your cancer clinics. If they have a good understanding of what this program offers, what it does, I think there would be an increased confidence in making those referrals (Interviewee 10).

The notion of increased confidence in the program through education, and experiential learning in particular, was further reflected upon by another clinician:

I can’t speak for everyone else here, but if I had the opportunity to kind of take, say you were going to run kind of a mock three week session of it, I would totally sign up for that, so then I could experience it, so then I can say to my patient, ‘You know what, this is where you go, it’s really user
friendly, the interface is really user friendly.’ I’d be able to help support them participating in it better (Interviewee 2).

**Professional attitudes.** Some clinicians indicated that particular attitudes held by professionals may hinder wider program implementation. More specifically, some clinicians described observing hesitancy in others and in themselves towards Internet-based interventions. In regard to this notion, one clinician stated that “There are going to be professionals that are going to be very uncomfortable with the idea of this and that they should be referred and going to see somebody rather than receiving support over the computer” (Interviewee 10). Another clinician indicated that although she was in support of the program, she still had some reservations about Internet-based interventions:

> It’s kind of hard nowadays anywhere you call to talk to an actual person and I find that disillusioning. Part of me still thinks I would prefer face-to-face contact with a therapist if I was that person, so that’s the flipside of that. That face-to-face coming for a therapy session or a group session with other people. Losing that element. And maybe those are unfounded in your research. Maybe that’s not a concern for people, but I know I have felt that way when I phone into any government agency and you can’t speak to a person (Interviewee 3).

**9. Discussion**

There were two primary aims of Study 2. First, the study was designed to obtain information that would help further improve *Wellbeing After Cancer*. Second, feedback that would influence program implementation was obtained. Clinical interventions have often remained underutilized despite proven benefits to cancer patients (Hack et al.,
2011). Past research has indicated that failure to involve clinicians throughout the research process could impede implementation efforts (Hack et al., 2011). Gaining clinician feedback on the program and its potential implementation was essential to transferring knowledge gained from Study 1 to clinicians, thereby assisting with overall knowledge translation (Canadian Institutes of Health Research, 2004). Moreover, to our knowledge, no studies have examined clinician attitudes towards the use of ICBT with cancer survivors.

9.1 Program and ICBT Acceptance

Given that this is the first study to examine clinician perspectives of the use of ICBT with cancer survivors, comparison of results to other studies is not possible. Nonetheless, the growing body of literature around clinician attitudes towards ICBT and Internet-based interventions more generally can provide a useful comparison. Findings in Study 2 indicated that acceptance of the use of ICBT was high with 70% of clinicians reporting they either agreed or strongly agreed that ICBT can effectively treat mental health difficulties in patients following cancer treatment. No clinicians disagreed with this statement. Views on the effectiveness of ICBT appear to be more positive in Study 2 in comparison to previous research, where clinicians have indicated that they do not feel Internet-based interventions would improve treatment outcomes (Becker & Jensen-Doss, 2013), or would result in poorer outcomes than face-to-face therapy (Stallard, Richardson, & Velleman, 2010). This difference in findings between studies could be due to several factors. Previous research utilized survey data derived from considerably larger samples, and clinicians may have felt more anonymous and thus more comfortable in sharing negative attitudes towards ICBT in these studies. Although a small survey in
addition to the telephone interviewers, was used to assess clinicians’ attitudes in Study 2, the inclusion of a post-survey interview with NA may have influenced clinicians’ openness and comfort.

In addition, 80% of clinicians in Study 2 reported they strongly agreed or agreed that ICBT should be offered regularly following the completion of cancer treatment if mental health services are clinically indicated. All clinicians agreed that they would refer clients to ICBT in the future if it were available, with 80% strongly agreeing or agreeing and 20% somewhat agreeing. This finding is consistent with a study of youth work service providers’ attitudes towards the use of computerized CBT for adolescents, where all clinicians indicated it would be useful to use this service in their work (Fleming & Merry, 2013). However, positive perceptions in this area have not been universal. In another study of clinician attitudes, only 29% indicated they would definitely use Internet-based interventions if these were available (Stallard et al., 2010).

9.2 Clinician Feedback

Program strengths. Feedback from clinicians provided insight into perceived strengths of the program. Many positive comments were made in regards to the accessible nature of the program. Specifically, clinicians liked that it could be easily accessed by individuals in rural areas, which is consistent with previous research showing that rural clinicians’ viewed Internet-based interventions as providing a good opportunity for rural clients to access mental health information and services (Sinclair, Holloway, Riley, & Auret, 2013). Clinicians in Study 2 also viewed ICBT as reducing patients' visits back to the cancer clinic. This finding represents a unique advantage of ICBT when considered in the context of cancer care.
Consistent with previous research examining clinician attitudes towards the use of Internet interventions with children and adolescents (Stallard et al., 2010), clinicians in Study 2 viewed the accessible nature of the program as assisting with reducing stigma. Indeed, stigma attached to psychosocial concerns is viewed as still largely present within routine cancer care, thus preventing many patients from accessing services (Holland, Kelly, & Weinberger, 2010).

Clinicians identified several features of the program they liked including the strategies utilized and the CBT approach, the overall program organization, and the name of the program. In addition, some clinicians appreciated the inclusion of support and feedback from a therapist. This finding is consistent with previous research indicating that very few clinicians feel ICBT should be offered without professional support (Stallard et al., 2010).

In discussing the strengths of the program, clinicians perceived a need for services to assist with the transition from active cancer treatment to survivorship, given the challenges they have seen patients face during this period (e.g., negative emotions, decreased support). Moreover, some clinicians perceived Wellbeing After Cancer as potentially assisting with filling what they saw as a current gap in services. These observations lend further support to previous research identifying several challenges during the post-treatment survivorship period such as increased anxiety, fear of cancer recurrence, low mood, and reduced social support (Boyes et al., 2009; Ganz & Stanton, 2012). Furthermore, all clinicians viewed the program as being useful in their current work with cancer survivors. This finding, taken with clinicians' perceptions of survivors' needs, is consistent with studies of health providers and therapists in Australia, the UK.
(Stallard et al., 2010) and New Zealand (Fleming & Merry, 2013). Here providers who were most positive about ICBT were those who more actively considered the mental health needs of their clients. These findings are important, as providers' perceptions of their clients' needs have previously been identified as a significant factor in determining whether evidence-based interventions are implemented (Mitchell, 2011).

**Program weaknesses and ways to improve.** Some clinicians expressed concerns in relation to the fit of the program for patients experiencing difficulties with motivation, avoidance, and energy, which are commonly observed with more severe levels of anxiety and depression. Similarly, previous research has found that clinicians viewed Internet-based interventions as less suitable for clients with severe symptoms, and for clients who may lack motivation or attention to read information online (Sinclair, Holloway, Riley, & Auret, 2013). Among health professionals surveyed in Australia, Internet-based interventions were also viewed as inappropriate for the treatment of severe symptoms of anxiety and depression (Gun et al., 2011). The concerns expressed by some clinicians in Study 2 about increases in symptoms and client safety are also similar to concerns expressed in surveys of therapists and health providers (Gun et al., 2011; Stallard et al., 2010).

Clinicians felt that a strength of the program was how it could be accessed by individuals living in rural areas. However, some clinicians also pointed out that people in more northern and remote areas will likely still experience difficulties accessing the program as they often do not have access to a computer or reliable Internet. This finding is consistent with views expressed by some rural clinicians in Australia, where it was suggested that lack of services and Internet access in some rural areas could contribute to
residents being unable to access online programs, thus potentially leading to further marginalization of people living in remote areas (Sinclair et al., 2013). Finally, several clinicians in Study 2 indicated that they could not identify anything they disliked about the program or anything that they would change. This finding provides further evidence of the acceptability of the program among clinicians in Study 2.

**Perceptions of training, program delivery, and implementation.** Currently, the majority of clinicians expressed interest in primarily referring patients to the program rather than acting as a provider or therapist themselves. In line with these findings, clinicians' responses to the initial survey questions indicated mixed perceptions around receiving training in ICBT. Previous research has also found relatively low interest in training among some clinicians. For example, in Gunn and colleagues' (2011) study of health professional attitudes, only 30% of professionals indicated they would like further training in how to use Internet-based programs. Although the reasons for this apparent lack of interest in delivering ICBT are unclear, it is possible that scepticism towards ICBT may be a contributing factor. Indeed, research investigating the adoption of evidence based practice has found that clinician attitudes tend to be more negative towards highly structured protocols, as they are perceived as less flexible and more difficult to tailor to individual needs (e.g., Godley, White, Diamond, Passetti, & Titus, 2001). Given some clinicians' concerns around the fit of the program for particular client needs, it is possible that similar views may be held towards the adoption and delivery of ICBT. It is also possible that the training and experience of the clinicians in Study 2 may have influenced their level of comfort in delivering ICBT themselves, as only 20% reported having received training in CBT. Clinicians in Study 2 may view their
competencies as lying in areas of psycho-social support outside of CBT, thus contributing to less interest in delivering ICBT.

Clinicians in the present study also identified additional resources they would need if they were to deliver the program such as training in CBT, funding, and potentially additional personnel. Furthermore, time was identified as an important factor that would likely influence training, delivery, and implementation. Several clinicians felt that whether they received training in ICBT would be influenced by the amount of time available in their schedules to complete training. In regard to delivery and implementation, it was suggested that available time in relation to clinicians' current patient caseloads would further influence how many patients they could support in the program. Although adding new roles and responsibilities to any clinicians' workload will likely require additional time, it is possible that clinicians working within a hospital-based setting perceive their time as particularly limited due to the nature of this setting. For example, some clinicians in Study 2 explicitly noted that their schedules tend to be less predictable than clinicians working in mental health outpatient settings, where appointments are typically scheduled. Several clinicians also informally commented about the difficulties of finding time to complete the online study survey and schedule a time for the interview - with some mentioning that they may need to stop the interview should they be paged by hospital staff. Taken together, these initial findings suggest that clinical social workers who are based within medical settings may find it especially hard to carve out extra time to deliver ICBT.

Clinicians also indicated that approval and support from individuals within their organization such as unit managers and supervisors would be needed in order to receive
training and for successful delivery and implementation to occur. Several clinicians did not feel many barriers to training existed. These findings are promising as clinicians' perceptions of the extent to which a practice or innovation is supported by management, or the 'climate' of management support, is associated with increased adoption and implementation of evidence based practices (Mitchell, 2011).

Clinicians felt that better promotion of the program to both patients and groups (e.g., non-government organizations) would facilitate implementation. This finding is consistent with a recent examination of clinician and patient perceptions of Internet-based psychological treatments using Diffusion of Innovations Theory. In both groups, perceptions of observability, that is hearing or seeing about the treatment in use, were rated the lowest (Carper et al. 2013). Consistent with clinician feedback in Study 2, the authors suggest that perceptions of observability are critical to future adoption and implementation of Internet-based interventions. For example, targeted dissemination and marketing efforts may be one way to increase the number of patients and providers introduced to Wellbeing After Cancer.

In relation to program promotion, several clinicians identified education as an important facilitator of implementation. Some clinicians specifically suggested that direct observation of the program in action (i.e., via experiential learning) would assist with gathering further knowledge about Wellbeing After Cancer and ICBT. Importantly, clinicians identified education as increasing their confidence in the program and thus in referring patients. This finding is consistent with previous research indicating clinicians prefer to have familiarity with an Internet-based intervention prior to recommending the program to patients (Fleming & Merry, 2013; Sinclair et al., 2013).
Although there was a high level of program and ICBT acceptability in Study 2, some clinicians expressed hesitancy towards Internet-based interventions or described observing hesitancy in other clinicians. Negative and neutral attitudes towards Internet-based interventions have been observed in several studies conducted with mental health professionals (Becker & Jensen-Doss, 2013; Carper, McHugh, & Barlow, 2013; Wangberg et al., 2007). Importantly, research has indicated that clinicians' hesitancy can be addressed through education and practical experience (Hadjistavropoulos, Thompson, Klein, & Austin, 2012), thus lending further value to clinician education in program implementation.

9.3 Limitations

The findings of the present study are limited by the small sample size. It is unclear whether the participants are representative of the wider population of clinicians who provide supportive care within oncology settings. It should be noted that 80% of clinicians in the present study had no experience with CBT and thus their attitudes may be different from those who have experience with this approach. It should be noted, however, that a smaller sample size was utilized given the mixed methods approach to data analysis. Inclusion of quantitative and qualitative components allowed for a more in-depth examination of clinician perceptions than would have been obtained through only survey responses. Given that this is the first study to examine clinician perceptions specifically in relation to the use of ICBT with cancer survivors, a smaller sample was also deemed as acceptable in order to provide an initial glimpse into this area.

Study 2 is also limited in that clinicians’ knowledge of *Wellbeing After Cancer* and ICBT more generally was based on what was shared in the online video. It is possible
that the use of more in depth educational tools (e.g., a live workshop) may have led to different perceptions among clinicians. Another limiting factor of Study 2 was that interviews were not conducted with mental health administrators (e.g., health authority directors), who will also likely play a large role in program implementation. However, the inclusion of solely clinician input was seen as appropriate for this stage of research.

Similar to Study 1, an additional limitation of Study 2 is the potential bias present due to NA conducting the study interviews. Like Study 1, this bias was minimized by involving a second data coder with no prior connection to the clinicians, the treatment trial, or the principal investigator. NA also reflected on her prior experiences in an ICBT research and service unit (i.e., Online Therapy USER), her own roles in the program, personal investment in the project, and her expectations when conducting the interviews, coding, and interpreting the data. She was careful to include clinicians who supported the program as well as clinicians who expressed hesitancy and reported less support. In reflecting on her own potential biases, she made sure to explore negative opinions about the program and ICBT.

9.4 Conclusions

This is the first study to examine clinicians’ attitudes to the use of ICBT with cancer survivors. The findings add to and extend previous work examining clinician attitudes towards ICBT with mental health populations. Results provide preliminary evidence for the acceptability of ICBT among clinicians in oncology settings. This finding is in contrast to the negative and neutral attitudes towards Internet-based interventions which have been identified in previous research with therapists and health professionals. Clinician feedback revealed several strengths of the program and potential
areas for improvement. Factors perceived as likely to influence training, delivery, and implementation were also identified.

10. General Discussion

Although most cancer survivors adjust to having a cancer diagnosis over time (Zucca, Boyes, Linden, & Girgis, 2012), research has shown that a subset of individuals experience clinical levels of anxiety and depression that require intervention (Boyes, Girgis, Zucca, & Lecathelinais, 2009). Yet, a large proportion of patients and survivors do not seek treatment for these problems (Kadan-Lottick et al., 2005). CBT has been shown to be an efficacious form of psychological treatment for depression and anxiety among cancer patients and survivors (Linden & Girgis, 2012; Osborn et al., 2006). Research has recently begun to focus on examining innovative methods for delivering psychological treatment, including ICBT. ICBT has been used to effectively treat anxiety and depression (e.g., Andrews, Cuijpers, Craske, McEvoy, & Titov, 2010) as well as medical conditions such as chronic pain (Macea et al., 2010) and IBS (Ljótsson et al., 2011). To date, no studies have investigated the use of ICBT for treating depression and anxiety among recent cancer survivors. Furthermore, little research has examined clinician attitudes towards the use of ICBT, and no known studies have examined clinician attitudes towards the use of ICBT in cancer care. The study of clinician perceptions towards ICBT is an area of fruitful research. Given recent findings in implementation science (Chaudoir, Dugan, & Barr, 2013; Mitchell, 2011), it is likely that such attitudes are one of multiple factors that will influence the implementation of ICBT programs.
10.1 Main Findings

**Study 1.** Results of Study 1 showed a large within-group effect size on the GAD-7 and a medium within-group effect size on the PHQ-9. Similar results were found with respect to clinically significant change. Using the PHQ-9 and GAD-7, 54.5% to 72.7% were classified as in remission (i.e., scored below clinical cut-off score of 8) at post-treatment and 54.5% to 63.6% were classified as recovered (i.e., post-treatment score at least 50% less than pre-treatment score). These findings suggest that the current transdiagnostic ICBT protocol was beneficial and that it can be used to reduce symptoms of anxiety and depression among cancer survivors in the re-entry phase. Nevertheless, close to half of the participants did not reach remission or recovery in their depressive symptoms, while approximately 30 to 40% did not reach remission or recovery with respect to their symptoms of anxiety. This suggests that although the program was beneficial for many patients, it was not effective for all who participated. As previously mentioned, the findings of Study 1 are also viewed as applicable within the current clinical context of DSM-5. Although the PHQ-9 and GAD-7 are based on DSM-IV diagnostic criteria, they continue to be considered reliable and valid measures of depression and anxiety among medical populations, since the inception of DSM-5 (e.g., Quon et al., 2014; Randall, Voth, Burnett, Bazhenova, & Bardwell, 2013).

Treatment satisfaction was also found to be high among participants. In regard to specific feedback, participants identified several aspects of the program they liked including the structure, length, and pace, the therapist support, as well as the private and convenient nature of the program. Participants further identified areas for improvement such as adding more information on common side effects following cancer treatment and...
potentially breaking down some lessons into smaller chunks given difficulties with concentration and fatigue, which some patients identified as barriers to completing the program. These findings provide an interesting addition to the body of ICBT literature, as they suggest that frequently cited benefits of ICBT such as increased privacy and convenience, may be particularly beneficial and attractive to recent cancer survivors. More specifically, it appears that many would prefer to work on a program from their home as this reduces the need to travel back to the cancer clinic yet again. This convenient aspect of the program also allows patients to access help and resources even when they are experiencing side effects such as pain and fatigue – both of which may keep them from attending a mental health appointment in person.

**Study 2.** Acceptance of the program was also found to be high among clinicians. All clinicians agreed that the program was effective and all agreed that they would refer clients to ICBT in the future. Clinician feedback on the program identified several program strengths. Similar to feedback received from patients, clinicians liked the accessible and private nature of the program as well as strategies utilized, the CBT approach, and the inclusion of therapist support. Importantly, several clinicians described observing a need for services in the period following cancer treatment, and saw the program as assisting with meeting this need. This is a promising finding, as perceiving a need for services and the program as potentially filling this need would likely increase the chances of future implementation (Mitchell, 2011).

In regard to weaknesses and areas for improvement, some clinicians expressed concerns around the fit of the program for clients with more severe levels of anxiety and depression. This finding suggests that further education around ICBT as well as how it
can meet the needs of clients with more severe symptoms would likely be beneficial and may assist with increasing clinicians’ comfort with the intervention.

Clinicians identified resources that would be needed if they were to receive training in ICBT and deliver the program themselves, such as training in CBT, funding, and additional personnel. Many clinicians indicated that additional time as well as approval from managers and directors would be needed in order for training and implementation to occur. Feedback revealed that most clinicians would currently prefer to refer patients to the program rather than act as a therapist themselves. This finding was somewhat surprising given clinicians' survey and interview responses suggesting interest and acceptance of the program. This finding highlights the need for considering the influence of multiple factors on program implementation, as favorable views towards a program may not necessarily lead to use of the program.

10.2 Implications for Practice

The findings from both studies hold implications that are relevant to several stakeholders. These stakeholders include managers of psycho-social services within cancer clinics, health authority directors, cancer survivors, clinicians providing supportive services to cancer survivors, the general public, policy makers and future researchers who wish to improve the provision of mental health support for cancer survivors.

Implications for service providers and policy makers. The results of Study 1 contribute important knowledge to the study of ICBT and the use of psychological interventions with cancer survivors. The results show that a clinician guided Internet treatment protocol for anxiety and depression is effective and acceptable among cancer survivors in the re-entry phase. These findings are relevant to both patients and health
care providers, as they show that emotional distress can be reduced via a simple, private, and easy to access program. The importance of such findings is enhanced by recent findings linking emotional distress, such as clinical levels of depression, to elevated mortality among patients (Pinquart & Duberstein, 2010). Moreover, the findings illustrate the significant potential of Internet-based interventions in improving access to evidence-based care for cancer survivors struggling with emotional distress after treatment completion. Improved access to effective services is highly relevant to policy makers, as emotional distress in cancer patients has been associated with increased physician time, more frequent hospital and primary care visits, and thus higher costs to the overall healthcare system (Carlson & Bultz, 2004; Hewitt & Rowland, 2002). The provision of ICBT to cancer survivors could therefore result in reduced costs in time, funds, and other healthcare resources.

The inclusion of survivors with various types of cancer and the significant improvements observed reflect a strength of the treatment protocol. This finding suggests that minimal tailoring of transdiagnostic treatment protocols is needed in order for such protocols to be effective, as only minor adjustments were made to the original Wellbeing Course content and two cancer-specific resources were added. This finding is particularly relevant to providers and policy makers as it illustrates the scalability of Wellbeing After Cancer as a mental health intervention. Survivors with varying types of cancer diagnoses can benefit from the program, rather than the program being limited to one specific patient group (e.g., women with breast cancer).

Given the gap between empirical evidence and clinical practice present in psycho-oncology, it was essential that the findings from Study 1 be shared with clinicians and
factors potentially influencing implementation discussed. Gaining further feedback on the program allowed for an assessment of its acceptability among clinicians, which is consistent with the objectives of a Phase II trial in intervention research (Campbell et al., 2000). The findings of Study 2 are promising and in contrast to negative or neutral attitudes previously expressed by clinicians (e.g., Becker & Jensen-Doss, 2013; Wangberg et al., 2007).

It is still uncertain whether clinician acceptance will translate into utilization of Wellbeing After Cancer in cancer care. Research has indicated that new interventions are rarely adopted on the basis of evidence (Aarons, Wells, Zagursky, Fettes, & Palinkas, 2009) or even positive attitudes (MacLeod, Martinez, & Williams, 2009) alone. Instead, there appears to be multiple factors that influence adoption of an intervention and its eventual implementation. In an effort to organize and describe such factors, a five factor framework was recently developed (Chaudoir et al., 2013). Based on a review of the literature, it was proposed that structural (e.g., public policy, political or social climate), organizational (e.g., culture or climate, leadership effectiveness), provider (e.g., attitudes towards evidence-based practice), patient (e.g., degree to which an innovation is appropriate and feasible with the patient population of interest), and innovation (e.g., advantage of utilizing innovation above existing practices) level constructs predict whether evidence-based health innovations will translate into clinical care (Chaudoir et al., 2013). Given that clinicians in Study 2 generally liked the approach of the program and saw it as filling a current gap in services, these provider level factors may increase the likelihood that the intervention would be adopted. On the organizational level, clinicians also identified several resources that would be needed before they could deliver
the program themselves, thus indicating that additional changes would likely need to occur before successful implementation. On the patient level, the findings of Study 1 suggest that the program is viewed as feasible and acceptable among cancer survivors in the re-entry phase, which is also in favor of implementation.

In terms of utilizing the program, most clinicians indicated they would prefer to refer patients to the program rather than act as a therapist. Clinicians’ interest in the use of the program as an adjunct to face-to-face services suggests that ICBT could be developed as a key part of a stepped care approach, where it is presented as one step in a stepped care process (Bower & Gilbody, 2005; Haaga, 2000). Such an approach would in turn benefit clinicians within oncology settings who have limited time and availability. Indeed, the ability to refer patients to evidence-based online interventions has been purported as a valuable adjunct to clinical care within psycho-oncology (Leykin et al., 2011).

Clinicians’ willingness to refer clients to the program is encouraging. In a recent review and commentary on Internet-based interventions, Andersson and Titov (2014) suggest that the dissemination of these interventions into primary care is highly dependent on practitioners’ willingness to refer clients to Internet interventions. Consistent with clinician feedback, further education on ICBT and observation of the program in action is likely to increase clinician confidence in this approach and thus in referring clients to ICBT. Clinicians described some concerns around the fit of the program for individuals with more severe symptoms of anxiety and depression and the program's ability to manage client risk. Thus, education on these points would likely
decrease misconceptions around ICBT (e.g., program cannot be used effectively with high symptom levels) while increasing clinician comfort with the program protocols.

10.3 Implications for Future Researchers

The findings of Study 1, while encouraging, can only be considered preliminary and tentative. Wellbeing After Cancer should be examined in an RCT with a larger sample. Specifically, it is proposed that such an RCT compare the program to a waiting-list control group. Based on the feedback provided by patients and clinicians, minor adjustments should also be made to the program before an RCT is conducted. For example, information regarding the physical side effects of cancer treatment and strategies for managing these could be added. Alternatively, direction on how and where to access this information could be provided within the program (e.g., family physician, other free online resources). Changes to the lesson lengths and breakdowns should also be considered given patient feedback on this area. Finally, the cancer-specific resources (i.e., Survivor Stories, resource focused on fear of cancer returning) should remain in the program, as patients considered these to be particularly helpful.

Although benefits were derived from the program despite only minor modifications to the Wellbeing Course content, it should also be noted that more modifications and tailoring of the content to cancer survivors’ needs and concerns may have resulted in better clinical outcomes than observed in Study 1. Moreover, the eCentre Clinic has recently developed and tested a program similar to the Wellbeing Course, entitled the Pain Course, which is designed to treat anxiety, depression, and pain (Dear, Titov, et al., 2013). Given the prevalence of pain among cancer survivors, it is possible that modification and delivery of the Pain Course may have resulted in better outcomes.
in Study 1. Potential avenues for future research could therefore involve comparing the effectiveness of *Wellbeing After Cancer* in comparison to a program based on the *Pain Course*, or a program that is highly tailored to recent cancer survivors’ concerns and needs.

The findings of Study 1 suggest clinician-guided ICBT can result in good clinical outcomes. However, the design of the study did not provide data on whether therapist contact is beneficial for all patients or on the actual contribution of the therapist to clinical outcomes. Future research examining the function and contribution of therapists to clinical outcomes will provide important data to inform the broader implementation of ICBT for anxiety and depression among cancer survivors.

Due to the small sample size in Study 2, the findings may not be representative of all clinicians working within cancer care. The delivery of psycho-social services also differs across provinces and countries, thus, clinician attitudes towards ICBT and views of implementation may differ depending on the type of setting they are working within. It is also likely that mental health administrators (e.g., health authority directors) and decision and policy makers’ attitudes towards ICBT would impact the implementation of *Wellbeing After Cancer*. As such, further research examining both clinician and administrator attitudes towards the use of ICBT with cancer survivors will be integral to informing future implementation efforts across oncology settings and health care systems.

Despite the small sample size in Study 2, involving providers early on in the evaluation of *Wellbeing After Cancer* should nonetheless be viewed as beneficial, as implementation research suggests that involving clinicians in an advisory capacity
throughout the research process increases the likelihood of implementation (Hack et al., 2011). Future research efforts focused on the implementation of ICBT in primary care settings should aim to utilize clinicians and other stakeholders throughout the evaluation of ICBT program. Doing so will likely increase support for the research process and increase the likelihood that individuals will act on the results and recommendations generated.

Finally, it should be emphasized that attitudes of providers are only one piece of the implementation puzzle. As previously mentioned, in addition to provider factors, implementation science has identified structural, organizational, patient, and innovation factors as predictive of implementation outcomes for health innovations (Chaudoir et al., 2013). It is clear that studies examining the influence of these factors on the implementation of ICBT in oncology settings are needed. However, it should also be noted that research focused solely on describing implementation factors is unlikely to lead to successful implementation. A recent review of evidence-practice gaps in cancer care revealed that 94% of data-based publications in this area were descriptive studies (i.e., studies that described the evidence-practice gap or barriers to addressing the gap), while only 6% were intervention studies (i.e., studies that used an experimental design to test strategies to reduce the evidence-practice gap; Bryant et al., 2014). Implementation research focused on testing strategies to reduce evidence-practice gaps is therefore also required if implementation efforts are to succeed.

10.4 Conclusion

This dissertation has contributed to the literature in the following ways. First, it has provided evidence for the effectiveness and acceptability of a transdiagnostic ICBT
protocol in treating anxiety and depression among recent cancer survivors. Second, it has described survivors’ experiences engaging in an ICBT program, which has in turn identified benefits as well as potential drawbacks in the use of ICBT for recent cancer survivors. Third, it has identified clinicians’ perspectives of the program and ICBT, including potential barriers and facilitators to program training, delivery, and implementation. Moreover, the findings of both studies make unique contributions to both the ICBT and psycho-oncology literature, as no previous studies have examined the effectiveness and acceptability of a transdiagnostic ICBT protocol among cancer survivors in the re-entry phase. In addition, no previous studies have examined clinician perceptions towards the use of ICBT to treat anxiety and depression among cancer survivors.

Taken together, the results of this dissertation indicate that transdiagnostic ICBT is a potentially efficacious treatment approach for recent cancer survivors with symptoms of anxiety and depression and possibly for other groups of patients (e.g., patients in cancer treatment, long-term survivors). Should a future RCT produce results consistent with those reported in this dissertation, the next challenge will be to identify and engage in strategies for promoting implementation of the program into cancer care. In doing so, it is hoped that the burden of psychological distress can be reduced in cancer survivors and their loved ones in order to help them achieve and maintain optimal wellbeing.
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Appendix A. Research Ethics Boards Approval

DATE: November 6, 2012

TO: Nicole Alberts  
Psychology

FROM: Dr. Larena Hoeber  
Chair, Research Ethics Board

Re: Transdiagnostic Internet Cognitive-Behaviour Therapy for Cancer Survivors: A Feasibility Trial (File # 122S1213213)

Please be advised that the University of Regina Research Ethics Board has reviewed your proposal and found it to be:

☐ 1. APPROVED AS SUBMITTED. Only applicants with this designation have ethical approval to proceed with their research as described in their applications. For research lasting more than one year (Section 1F), ETHICAL APPROVAL MUST BE RENEWED BY SUBMITTING A BRIEF STATUS REPORT EVERY TWELVE MONTHS. Approval will be revoked unless a satisfactory status report is received. Any substantive changes in methodology or instrumentation must also be approved prior to their implementation.

☐ 2. ACCEPTABLE SUBJECT TO MINOR CHANGES AND PRECAUTIONS (SEE ATTACHED). Changes must be submitted to the REB and approved prior to beginning research. Please submit a supplementary memo addressing the concerns to the Chair of the REB. "Do not submit a new application." Once changes are deemed acceptable, ethical approval will be granted.

☐ 3. ACCEPTABLE SUBJECT TO CHANGES AND PRECAUTIONS (SEE ATTACHED). Changes must be submitted to the REB and approved prior to beginning research. Please submit a supplementary memo addressing the concerns to the Chair of the REB. "Do not submit a new application." Once changes are deemed acceptable, ethical approval will be granted.

☐ 4. UNACCEPTABLE AS SUBMITTED. The proposal requires substantial additions or redesign. Please contact the Chair of the REB for advice on how the project proposal might be revised.

Dr. Larena Hoeber

cc: Dr. Heather Hadjistavropoulos - Psychology

** supplementary memo should be forwarded to the Chair of the Research Ethics Board at the Office for Research, Innovation and Partnership (Research and Innovation Centre, Room 109) or by e-mail to research.ethics@uregina.ca

Phone: (306) 585-4775  
Fax: (306) 585-4693  
www.uregina.ca/research
Heather Hadjistavropoulos Ph.D.
Department of Psychology
University of Regina

January 22, 2013

RE: Transdiagnostic Internet Cognitive-Behaviour Therapy for Cancer Survivors: A Feasibility Trial
P.I.: Heather Hadjistavropoulos.
Student: Nicole Alberts
U of R File #: 1228123213
U of S File #: BEH 13-23

Your application for research ethics approval has undergone a harmonized review by the University of Regina and the University of Saskatchewan. The University of Saskatchewan REB acknowledges that it has had the opportunity to participate in the review of your application. A Certificate of Approval has been issued by the University of Regina.

In accordance with the Research Ethics Review Reciprocity Agreement signed by the University of Saskatchewan, University of Regina, and Regina Qu’Appelle Health Region dated June 1, 2012, the University of Saskatchewan REB accepts the Certificate of Approval issued by the REB of the University of Regina. This letter acknowledging acceptance of a reciprocal research ethics review is issued to you in lieu of a Certificate of Approval by the University of Saskatchewan REB. This letter permits you to conduct research activities as approved by University of Regina REB, provided that you maintain a valid and up-to-date Certificate of Approval.

All continuing ethics review will be conducted by the University of Regina REB. The University of Regina is authorized to share all communications pertaining to this file with the University of Saskatchewan REB at their discretion. The University of Saskatchewan REB may provide input into continuing ethical review activities, as agreed upon by both REBs.

The University of Saskatchewan REB reserves the right to revoke the privileges described in this letter at any time in order to conduct their own independent research ethics review of your project. Such a decision would be communicated to you and the University of Regina REB in writing.

Best wishes for your continuing research endeavours.

Sincerely,

Beth Bilson, Chair
Behavioural Research Ethics Board
University of Saskatchewan
Appendix B. Telephone Screening Script and Questions

Client’s Name: _____________________________________________

Client’s Telephone Number: _________________________________

Date of Telephone Screening: _________________________________

Thanks for your interest in the Online Therapy USER program for cancer survivors. Before we begin, Is this a good time to talk? Great, can I ask how you heard about us?

☐ Referral from physician, social worker, nurse, other provider (not currently an eTherapist)
☐ Referral from health care provider who is currently an eTherapist
☐ Referral from another client
☐ Online advertisement: Which one? ____________________________
☐ Newsletter: Which one? ________________________________
☐ Newspaper: Which one? _____________________________
☐ Poster/brochure advertisement in community: Whereabouts?

☐ Found Online Therapy USER website one own
☐ Other; Please describe below:

______________________________________________________________

Describe the Wellbeing After Cancer program to the client, including the nature of the research study. Does this type of therapy sound like something you would be interested in?

☐ Yes  ☐ No

Inclusion and Exclusion Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Appropriate</th>
<th>Not Appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are you a Saskatchewan resident?</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>2. How old are you? _________ years</td>
<td>☐ Over 18</td>
<td>☐ Under 18</td>
</tr>
<tr>
<td>3. Have you ever been diagnosed with cancer?</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
<tr>
<td>4. When was your last cancer treatment (i.e., chemotherapy, radiation)?</td>
<td>☐ Over 1 month ago</td>
<td>☐ Less than 1 month ago</td>
</tr>
<tr>
<td>5. Has more than 18 months (1.5 years) passed since your last cancer treatment?</td>
<td>☐ No</td>
<td>☐ Yes</td>
</tr>
<tr>
<td>6. Are you currently considered to be in remission?</td>
<td>☐ Yes</td>
<td>☐ No</td>
</tr>
</tbody>
</table>
7. Is your main concern for contacting the Online Therapy Unit for depression and/or anxiety related-problems?

☐ Yes  ☐ No

Give the GAD-7 and PHQ-9 to client. If symptoms are minimal to none, refer to a non-therapist-assisted online program and suggest contacting the unit if symptoms increase in severity.

8. What is the client’s GAD-7 score?

☐ ≥ 8  ☐ <8

9. Is the PHQ-9 score in severe range or is person suicidal?

☐ ≥ 23  ☐ Symptoms too severe or suicidal

☐ < 2 item 9

10. Do you feel comfortable using the Internet?

☐ Yes  ☐ No

11. Do you feel comfortable writing e-mails?

☐ Yes  ☐ No

12. Would you be willing to have your physician, a medical clinic, or an emergency hospital be notified of your participation in this program?

☐ Yes  ☐ No

13. Are you currently receiving any other psychological services?

☐ No  ☐ Yes (not appropriate unless minimal services, i.e. visit psychiatrist once/month, or finishing up services, i.e., have one appointment left)

14. Do you have any thoughts about suicide? Do you have a suicide plan (how, when, where)? Do you have any intention to commit suicide?

☐ No  ☐ Yes (go to B. Suicidality module to see severity. If client meets exclusion criteria, refer for in-person services)

15. Have you ever experienced Manic or Hypomanic symptoms?

☐ No  ☐ Yes (go to C. Manic and Hypomanic Episodes module.)
16. Are you dependant on alcohol or drugs? Do you abuse alcohol or drugs? □ No

17. Have you ever experienced psychotic symptoms, such as delusions or hallucinations? □ No

18. In the last month did you start a new psychological medication, or have you had a change in dosage? □ No

Based on the client’s responses, indicate whether they are likely to be eligible for Wellbeing After Cancer. Schedule M.I.N.I. Assessment at the client’s convenience.

Are you interested in participating in the screening interview to see if you are eligible to participate in this program? □ Yes □ No
### Appendix C. Patient Health Questionnaire 9-Item (PHQ-9)

Over the *last 2 weeks*, how often have you been bothered by any of the following problems?  

<table>
<thead>
<tr>
<th></th>
<th>Not at all (0)</th>
<th>Several days (1)</th>
<th>More than half the days (2)</th>
<th>Nearly every day (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Little interest or pleasure in doing things.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>2. Feeling down, depressed, or hopeless.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>3. Trouble falling, or staying asleep, or sleeping too much.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>4. Feeling tired or having little energy.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>5. Poor appetite or overeating.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>6. Feeling bad about yourself, or that you are a failure, or have let yourself or your family down.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>7. Trouble concentrating on things, such as reading the newspaper or watching TV.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>8. Moving or speaking so slowly that other people could have noticed? Or the opposite - being so fidgety or restless that you have been moving around more than usual.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>9. Thoughts that you would be better off dead or of hurting yourself in some way.</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
Appendix D. Generalized Anxiety Disorder 7-Item (GAD-7)

<table>
<thead>
<tr>
<th>Over the last 2 weeks, how often have you been bothered by the following problems?</th>
<th>Not at all (0)</th>
<th>Several days (1)</th>
<th>More than half the days (2)</th>
<th>Nearly every day (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Feeling nervous, anxious or on edge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Not being able to stop or control worrying</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Worrying too much about different things</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Trouble relaxing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Being so restless that it is hard to sit still</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Becoming easily annoyed or irritable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Feeling afraid as if something awful might happen.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix E. Pre-M.I.N.I. Questions

#### Demographic Data

<table>
<thead>
<tr>
<th><strong>Client Name:</strong></th>
<th><strong>DOB:</strong> (DD/MM/YYYY)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Address:</strong></th>
<th><strong>Appt #:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>City:</strong></th>
<th><strong>Postal Code:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Phone No.: (home)</strong></th>
<th><strong>Sex:</strong></th>
<th><strong>Can we contact you by:</strong> (Y or N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(cell)</td>
<td></td>
<td>Phone _______</td>
</tr>
<tr>
<td>(other)</td>
<td>Male</td>
<td>Letter_______</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>Leave Message______</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Email______</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Phone No. during the day:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Health Card No.:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>E-mail address:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Family physician to contact in the event of an emergency:**

<table>
<thead>
<tr>
<th><strong>Doctor’s Name:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Medical Clinic:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Telephone Number:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Next of Kin:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 3. What is your ethnicity?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Caucasian</td>
</tr>
<tr>
<td></td>
<td>Black/African</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
</tr>
<tr>
<td></td>
<td>Aboriginal/First Nations</td>
</tr>
<tr>
<td></td>
<td>Other, please specify _____________</td>
</tr>
</tbody>
</table>

#### 4. What is your current employment status?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Employed Full-time</td>
</tr>
<tr>
<td></td>
<td>Employed Part-time</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
</tr>
<tr>
<td></td>
<td>Receiving disability</td>
</tr>
<tr>
<td></td>
<td>Other, please specify _____________</td>
</tr>
</tbody>
</table>

#### 5. How many years of education have you completed?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>_____________ years</td>
</tr>
</tbody>
</table>
6. Do you have children? If yes, how old are they?

7. What is your marital status?
   - Married/living with partner
   - Divorced/separated
   - Widowed
   - Never married

8. When were you first diagnosed with cancer?
   - Month: _________________
   - Year: _________________

9. Have you been diagnosed with more than one type of cancer? (e.g., *did you have childhood cancer and then now again as adult, did you have cancer as an adult 5 years ago and now this is a new cancer or the cancer has metastasized?*)

10. What type of cancer were you diagnosed with?

11. Are you considered to be in remission? *(partial remission = some but not all signs and symptoms have disappeared; complete remission = all signs and symptoms have disappeared, although cancer may still be in the body)*

12. What stage was the cancer at diagnosis?
   - Stage 0
   - Stage I
   - Stage II
   - Stage III
   - Stage IV
   - Unknown

13. a. What type(s) of cancer treatment did you receive?
   - Chemotherapy
   - Radiation therapy
   - Surgery
   - Bone Marrow Transplantation
   - Hormone Therapy
   - Other, please specify _______________
b. Ask patient to describe the timeline of their treatments (e.g., surgery, then chemo, then radiation) as well as additional details that may be important to know (e.g., lumpectomy vs. mastectomy vs. radical mastectomy; surgery more than once?)

<table>
<thead>
<tr>
<th>Description of treatment and details:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ No chance that it will return (0%)</td>
</tr>
<tr>
<td>□ Some chance (25%)</td>
</tr>
<tr>
<td>□ Moderate chance (50/50)</td>
</tr>
<tr>
<td>□ Very good chance (75%)</td>
</tr>
<tr>
<td>□ It will definitely return (100%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14. In your view, how likely do you think it is that your cancer will return?</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes</td>
</tr>
<tr>
<td>□ No</td>
</tr>
</tbody>
</table>

If yes

| No chance that it will return (0%) |
| Some chance (25%) |
| Moderate chance (50/50) |
| Very good chance (75%) |
| It will definitely return (100%) |

<table>
<thead>
<tr>
<th>15. Have your doctor’s told you how likely it is that your cancer will return?</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes</td>
</tr>
<tr>
<td>□ No</td>
</tr>
</tbody>
</table>

If yes

| No chance that it will return (0%) |
| Some chance (25%) |
| Moderate chance (50/50) |
| Very good chance (75%) |
| It will definitely return (100%) |

<table>
<thead>
<tr>
<th>16. Have you ever received prior treatment for any mental health concerns? If yes, nature of treatment? I.e., type, length, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes</td>
</tr>
<tr>
<td>□ No</td>
</tr>
</tbody>
</table>

If yes

| Problem: |
| Type of treatment: |
| Length of treatment: |

<table>
<thead>
<tr>
<th>17. Do you have any chronic health conditions or health problems?</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Physical Health Problems:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ None</td>
</tr>
<tr>
<td>□ Cardiovascular</td>
</tr>
<tr>
<td>□ Cancer</td>
</tr>
<tr>
<td>□ Digestive/Stomach</td>
</tr>
<tr>
<td>□ Pain</td>
</tr>
<tr>
<td>□ Neurological</td>
</tr>
<tr>
<td>□ Arthritis</td>
</tr>
<tr>
<td>□ Diabetes</td>
</tr>
<tr>
<td>□ Gallbladder</td>
</tr>
<tr>
<td>□ Kidney</td>
</tr>
<tr>
<td>□ Respiratory</td>
</tr>
<tr>
<td>□ Sleep Apnea</td>
</tr>
<tr>
<td>□ Endocrine Disorder</td>
</tr>
<tr>
<td>□ Autoimmune</td>
</tr>
<tr>
<td>□ Other</td>
</tr>
<tr>
<td>□ Multiple Sclerosis</td>
</tr>
<tr>
<td>□ Reproductive Problem</td>
</tr>
</tbody>
</table>

Describe:
Appendix F. Mini International Neuropsychiatric Interview (M.I.N.I.)

The M.I.N.I. Suite is available for purchase to students for a one-time fee of $19.95 from Medical Outcome Systems, Inc. This product is Copywritten and will not be included in this Appendix.
Appendix G. Post-M.I.N.I. Questions

We’re near the end of the interview and now I have a few additional questions for you.

Are you currently on any medication for any of the problems that I asked you about today?

☐ Yes (List medications)
____________________________________________________
________________________________________________________________________
____________________________________________

☐ No

If ‘YES’: For how long have you been taking the medication?
______________________________________________

When did you last have a change in the dosage?
____________________________________________
(Should be less than 1 month as this is asked in screening phase. If less than 1 month: inform the person that we will need to wait until the medication has been stabilized for 1 month)

Will you inform us if your medication changes or if you begin a new medication? ☐ Yes ☐ No

Will you tell us if you begin psychological treatment for any of the problems that I asked you about today? ☐ Yes ☐ No

Have you previously been in treatment for any of the problems that I asked about today? ☐ Yes ☐ No

If ‘Yes’, when?
______________________________________________

What kind of therapy was it?
______________________________________________

Do you have any illnesses or medical conditions? (List below)
______________________________________________

____
Is there a possibility that this/these could interfere with your ability to participate in this Online Therapy USER program?  □ Yes  □ No

In order to provide some background information to your therapist, can I ask you a few personal questions?

**Personal History:**

Employment status/Occupation:

How long have you done this type of work?

________________________________________________________months/ys

Marital Status:

Spouse/Partner:

Significant Other:

Length of relationship?

Spouse Age/Occupation:

Problems:

Will your partner know that you are participating?  □ Yes  □ No

Children: (names and ages) ________________________________

________________________________________________________

Problems:

Family Psychiatric/Medical History (e.g. Depression, Addictions etc.)

Abuse Within/Outside the Family (e.g. Sexual, Physical, Verbal, Emotional)

Who do you turn to for support?

________________________________________________________

Living Arrangement:  □ Alone  □ With Family  □ With Friends  □ Other:
Are you facing any current legal difficulties right now?:
__________________________________________________________

Medical History:

Prescription Drugs other than Psychiatric:

___________________________________________________________

___________________________________________________________

Non-Prescription Drugs:

___________________________________________________________

Thank-you for answering these questions. That takes us to the end of the interview. Do you have any questions for me?
Appendix H. Information Page and Consent

Information Page

Please take the time to carefully read the following information. This information includes a description of the Online Therapy USER program, the associated research project, as well as the terms and conditions of participation. If any of the presented information is unclear, please e-mail the Principal Researcher, Nicole Alberts, at Nicole.Alberts@uregina.ca, for clarification. Nicole is conducting this project as part of her dissertation research. You may also phone her at (306) 585-4203. If you understand and accept the terms and conditions of the Online Therapy USER program, your informed consent will be required before you can participate. The consent form is located at the end of this document.

The Principal Researcher will e-mail you a copy of this information page and the consent form for your records.

Version Date: December 10, 2012

Project Title: Transdiagnostic Internet Cognitive-Behaviour Therapy for Cancer Survivors: A Feasibility Trial

Principal Investigator: Nicole Alberts, M. A., Doctoral Graduate Student (Department of Psychology, University of Regina)

Research & Clinical Supervisor: Dr. Heather Hadjistavropoulos, R. D. Psych (Department of Psychology, University of Regina).

Phone: (306) 585-5133; e-mail: heather.hadjistavropoulos@uregina.ca

Background of Study: Previous research has shown that therapist-guided Internet Cognitive Behaviour Therapy (ICBT) can be used to effectively treat depression and anxiety. Such services have not been consistently available in Canada to date. The Online Therapy Unit has since adapted ICBT programs that were developed and tested by a team in Australia for use in Saskatchewan, and are now accepting cancer patients who have recently completed primary cancer treatment to receive ICBT treatment for depression and anxiety.

Because this service has not yet been offered in Saskatchewan, the Online Therapy Unit will be examining the overall effectiveness of ICBT for cancer patients. The therapist in this study will be Nicole Alberts, who will be under the supervision of Dr. Heather Hadjistavropoulos.

As you complete treatment, information will be collected from you for a research project aimed at understanding how effective our ICBT program is at relieving symptoms of depression and anxiety in the short and long-term, patients’
satisfaction with the program, and patients’ experiences with the program (e.g., features that were more and less helpful).

**Assessment Results:** Based on your responses to the telephone screening assessment, you have elevated levels of depression and/or anxiety, and you are, therefore, eligible to take part in *Wellbeing After Cancer*. Despite meeting these eligibility criteria, you should be aware that the telephone assessment is not meant to take the place of best-practice, traditional, and clinically based assessments. If the information you were provided in the assessment was upsetting, or if you disagree with this information, you can call us to discuss these concerns and are also advised to contact your closest health or mental health care professional, such as your family doctor.

**Procedure:** After you read this Information Page, you will be asked to provide your informed consent to participate in *Wellbeing After Cancer* and complete questionnaires.

1. **ICBT:** *Wellbeing After Cancer* is composed of **5 lessons**. Lessons consist of CBT materials that are accessed and read online and print-able materials that help you apply the skills you are learning in daily life. This is a **short-term support program**, and you should be able to complete the therapy in **8 weeks**. Online therapy is not intended for long-term support.

   This ICBT program is **therapist-assisted**. When you received your login information to this website, you were also assigned a therapist. Your therapist is Nicole Alberts, M.A., who is a Doctoral student in Clinical Psychology. She will be working under the clinical supervision of Dr. Heather Hadjistavropoulos, who is a registered psychologist. Using the message system that exists on this website, you may message your therapist to receive guidance and assistance with the lessons and exercises. You are free to contact your therapist when it is convenient for you, and your therapist will respond to your messages **once a week** on a predetermined day.

2. **Questionnaires:** At the beginning of each lesson, you will complete two questionnaires about your depressive and anxiety symptoms to help track changes in your symptoms from week to week. Your therapist will receive a summary of the results of these questionnaires.

   To evaluate whether this program is effective, you will be asked to complete additional questionnaires about your symptoms, quality of life, level of pain, and fatigue. These questionnaires will be completed at the start and end of treatment. You will also answer questions regarding your relationship with your therapist, your satisfaction with the service, and the program components that you found most helpful at the end of treatment.
Because one of these questionnaires pertains directly to your therapist, they will not have access to your responses, but instead will be reviewed by researchers.

To help us evaluate the long-term effectiveness of Wellbeing after Cancer you will also be contacted by e-mail 3 months after you complete the program. In this e-mail you will receive a link to the online questionnaires, which take approximately 15-30 minutes to complete.

**Telephone Follow-Up**
In addition to monitoring your progress with the ICBT program, understanding your experiences with the program is important to us. This will help us improve the program for future patients. At a time which is convenient for you, you will be contacted by a researcher via telephone and asked open-ended questions concerning your experiences with the program such as any areas you feel could be improved or changed. This interview will take approximately 30 minutes and will be digitally recorded.

Your responses to the open-ended questions and the online questionnaires, along with the responses of other participants, will be examined by researchers to help us understand the effectiveness of this program, patient satisfaction with the program, and patients’ experiences using the program. When the researchers look at the responses they will be looking at all responses together and will not be linked to you personally.

You are not obliged to answer any question which you find objectionable or which makes you uncomfortable. In the event you are uncomfortable answering a question please contact Nicole Alberts at (306) 585-4203.

To summarize, you will be asked to complete online questionnaires on 4 occasions:
- Once when the study begins
- Each time you begin a new Lesson (2 brief questionnaires)
- Immediately after you complete the program
- Three months after you complete the program

Based on the phone screening that you completed, you will receive the following ICBT program:
**Wellbeing After Cancer:**

**Lesson 1:** Introduction to the purpose and content of the program; education about the anxiety, low mood and depression; learn about the 3 primary symptoms and the cycle of symptoms. *(Week 1)*

**Lesson 2:** Education about unhelpful thoughts and practical strategies to learn to manage them. *(Week 2 & 3)*

**Lesson 3:** Education about the physical symptoms associated with anxiety and depression and skills for managing them. *(Week 4)*

**Lesson 4:** Education about problematic behaviours associated with anxiety and depression and practical skills for overcoming these *(Week 5 & 6)*

**Lesson 5:** Summary of the key messages, preparation to end the program, planning for after treatment, and relapse prevention. *(Week 7 & 8)*

**Possible Benefits & Challenges:** There are potential benefits and challenges associated with therapy delivered online.

<table>
<thead>
<tr>
<th>Potential Benefits</th>
<th>Potential Challenges</th>
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<tr>
<td>- You do not need to schedule an appointment with ICBT</td>
<td>- ICBT may require more self-motivation than other forms of therapy</td>
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<tr>
<td>- You do not need to make a doctor’s appointment or visit a doctor’s office/hospital</td>
<td>- Without non-verbal cues, there is a greater potential for misinterpretation of e-mail messages between you and your therapist</td>
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<td>- You can have more control over when and where you work on activities to help you improve</td>
<td>- There is a risk for breaches of confidentiality (see below)</td>
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<td>- You can access the online material from the location of your choice at your convenience. If you would like to continue referencing materials after the course, you can print off the pages.</td>
<td>- There is potential for technology failures that may result in messages not being received by either you or your therapist</td>
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<tr>
<td>- You can e-mail your therapist through our secure website</td>
<td>- ICBT is a newer form of treatment, so there has been less research conducted as compared to older forms of treatment</td>
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<td>- You may feel more comfortable disclosing personal information online than in person</td>
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<tr>
<td>- This service is provided free of charge</td>
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Limitations of ICBT: There is growing evidence that ICBT is an effective and beneficial form of treatment for a range of mental health concerns. However, ICBT programs are still in the early developmental phases, and as a result, there is currently less research available on its effectiveness when compared to more established treatments, such as face-to-face cognitive-behaviour therapy. It is acknowledged that there are limitations to the services provided on the Online Therapy USER website, and this form of therapy is not intended to replace face-to-face therapy. This form of therapy is also not intended for emergency services or as a form of long-term support. If, during the course of therapy, you feel that the Online Therapy USER website does not meet or address your needs, or brings about other health concerns — you are advised to consult with your closest health or mental health professional.

Alternatives to ICBT: Before consenting to this type of treatment, you should consider the alternatives to ICBT, including in-person treatment, confiding in friends or family, taking part in community programs that may be available to you, written self-help resources, visiting a family physician, or not seeking treatment at all. It is also possible that during the course of ICBT, the therapist may determine that in-person therapy would be more suitable for you. Situations where online therapy is not appropriate include if you were to become involved in a crisis situation, if there are risks to personal safety present, if you require specialized medical treatment, and if you need support that is more long-term, interactive, or intensive. Online therapy may also not be suitable for you if you are unable to keep up with the suggested timeline of one to two weeks per Lesson. If in-person therapy is more suitable for you, your therapist will assist you in finding appropriate in-person services in your area, with your consent.

Pace of Treatment: The program is made up of 5 lessons. It is recommended that you spend 1 week on lessons 1 and 3 but 2 weeks for lesson 2, 4, and 5. If you require more than the recommended time, your therapist may speak with you about alternatives to online therapy. If you do not log onto the website for over a week, your therapist will contact you by phone to check in with you. You will have 8 weeks to complete the course. Following the eight weeks your account will be deactivated and you will no longer have access to the online course content.

Throughout the course of treatment, you will also receive periodic notification emails to the email address you provided during your screening interview. These emails provide brief but important reminders from the unit. In order to facilitate the delivery of these emails to your off system email, it is necessary to store your email address on our secure server.

Therapist Contact: Your therapist will be logging into the website at least once a week. When your therapist logs in she/he will be able to review your progress, the pages you have viewed, and any messages you have sent them over the last seven days. By reviewing this information, your therapist is able to provide you with feedback and support as well as answer any questions you may have. If
your therapist notices that there has been a large increase in your depressive symptoms and/or you are having frequent thoughts about death or hurting yourself, then they will contact you by telephone to gain more information and to provide support.

**Voluntary Participation & Ability to Withdraw:** Participation in online therapy is voluntary. Should you choose to not participate, or if you wish to withdraw from the study at any time after starting, you may do so without any consequences to your present or future health care. If you do decide to discontinue online therapy, please inform your therapist. If you do not communicate your withdrawal to your therapist, they are required to contact you weekly until the end of the eight week treatment period.

**Limits of Confidentiality:** Although these circumstances are rare, there are certain limits to confidentiality that every participant must be aware of:

- If you pose an immediate threat to your life, or another individual’s life, confidentiality may be broken in order to prevent harm.
- If you disclose information suggesting that any child is at risk of abuse, the Ministry of Social Services will have to be notified.
- If you become involved in a legal case, the judge has the right to subpoena any information relevant to the legal problem.
- If you are concerned about your therapist’s professional conduct (or his/her supervisor’s), it may be necessary to release information from your file to evaluate and address this concern.
- If you request that information be released to another provider or your insurer, this request will be carried through.

**Supervision:** As your therapist is under supervision, she will need to discuss patients’ cases with her supervisor. By using the *Wellbeing After Cancer* program, it is necessary for you to accept and consent to the disclosures about your case that occur between the therapist and supervisor. In addition, your emails may be downloaded and printed by the therapist for these purposes. Any document used for these purposes will mask your identifying data and will be shredded when no longer needed.

**Storage of Clinical Information:** When you seek services from the Online Therapy Unit, we create a file for you. This consists of both a paper file and an online file. The paper file consists of information collected from you in the screening interview (e.g., personal information, questions about depression and anxiety) and is retained by the Online Therapy Unit. The online file consists of the e-mails you exchange with your Therapist, notes your Therapist takes related to your case, forms and questionnaires you complete online, and the email address that you provided to the unit in the screening interview.
If you request access to your client file, you will be able to review the paper file and any therapy notes made on the website, as well as the emails that were exchanged between yourself and your therapist.

All information (whether paper or online) is kept securely for a period of seven years, which is consistent with standards of professional practice for psychologists in the province of Saskatchewan.

**Access to Client Files:** You have the right to access your client file. You may request to review or obtain your file either through verbal or written form.

Verbal requests may only be made by those who are currently obtaining Online Therapy Unit services, and you will be asked to view these records in-person. Written requests may be made by clients who are, and who are no longer, receiving services. These written communications are to be directed to Nicole Alberts (with her contact information being included at the end of this consent form).

When you view your file, the Online Therapy Unit Coordinator will be with you in order to assist with psychological terminology and abbreviations, as well as to ensure that your record is not altered in any way. If the Coordinator is not able to answer questions, then your therapist will be contacted to provide clarification.

If you disagree with information in the file, you can make a request in writing to add a note to your file.

**Storage of Research Information:** For the purpose of evaluating the program, your responses to questionnaires will be taken from your clinical file and stored in a separate computer file. This file will not contain any identifying information. This file will be available to the research team, however, individual information is confidential.

- For research purposes, scores from any questionnaires you respond to will be summarized across all participants, so that individual responses will not be linked to a specific person in any publication of our results. Therefore, you as an individual will not be identifiable.
- Any details that could potentially reveal your identity will be excluded from discussions, study reports, and presentations.
- All information collected for this study will be kept in a locked office at the University of Regina and held for 5 years.

**Therapist Communications:** As a client, you agree not to share your therapist’s communications with anyone else unless your therapist’s written and informed consent is first obtained. You also agree not to give advice based on the therapist’s communications, or show therapist communications to others, out of context.
Possible Risks for Breaches of Confidentiality: As an internet-based study/treatment, there are unique risks that may compromise your privacy that exist with any internet-based service. A description of these risks follows:

a) When submitting information to your therapist through the internet, including questionnaire answers and e-mail messages, there is a possibility your information will be intercepted by unauthorized third parties using sophisticated tools. It should be noted that this rarely occurs, although it is a risk about which you should be advised. In order to limit this risk, the Online Therapy USER system utilizes encryption in the form of HTTPS to transmit the data both to and from yourself and your therapist. The data that is stored within the Online Therapy system, such as messages to your therapist and responses to questionnaires, are encrypted with AES encryption. Furthermore, the system itself uses strict access controls whereby users of this system are only able to access their own information.

b) Any computer connected to the Internet will store information about visited websites on the Internet in the browser’s history list and the browser’s cache. The responses to the questionnaires are only temporarily stored on your computer until you close down your browser window. In other words, after you complete and submit your responses, your computer will discard this information. Although, some this information may remain in your browser’s cache. You may also delete this information, as well as information about visiting the Online Therapy USER website, by clearing your history list and browser’s cache.

c) Your messages are stored in the database, and on the server, that hosts the Online Therapy USER website. This server is located in secure facilities at the University of Regina. The content of the messages are encrypted using AES encryption with 256bit key length (double industry standard). The Online Therapy system enforces strict access controls, and only your therapist (and their supervisor) can contact you and see your progress throughout therapy.

d) After your questionnaires are completed, the information you provide will be sent directly to the survey software website over a secure connection. The information will then be encrypted and securely stored in the database at which point it is only accessible by your therapist and researchers. However, your therapist will not have access to any
questionnaires related to how you rate your therapist and the therapeutic process. All responses will be periodically retrieved for research purposes. This data will be kept in a secure location by the researchers until completion of the study. The results will be stored on a secure file, and the information will not be linked to your Internet address.

**Methods Used to Protect Your Information**

In order to protect the privacy of your information while you are a user of *Wellbeing After Cancer*, we have several precautions in place. However, you should be aware that it is not possible to safeguard against every possible risk. The precautions we use are as follows:

1. Your personal identifying information is not collected over the Internet (e.g., name, birthdate, address), and this information is not linked to your participation in the online program.

2. To make certain features of the web application possible you have been asked to provide the unit with a personal email which will be associated with your therapeutic account for the purposes of email notifications from the system. This address is not released to any third parties.

3. Your login user name and password are specific to you.

4. Messages exchanged within the Online Therapy program are encrypted. This reduces the likelihood of unauthorized access to your communications.

5. The University of Regina, which hosts the Online Therapy USER website, has firewall protection to protect from external threats.

6. The access to the Online Therapy server is strictly controlled, and the server is housed in a secure environment within the University of Regina. This means that limits are in place for who has access to the server. The only people with access are the primary project developers, the server administrators, and the service administrator.

There are also various things that you can do to protect your information:

1. Use your home computer instead of a computer in a shared space, such as a library or office.

2. Make sure the computer you are sending emails from is secure.

3. Do not share your login information with anyone, and do not use a password that is easily guessed by others. The online therapy USER staff will never ask you for your password. In the event you were contacted and asked for your password please contact the unit directly to report it.

4. When you leave your computer or are done working with the web application ensure you have logged out.
5. Since your internet browser stores information in its memory, or disk cache, you can clean the cache after you use the computer. Certain browsers have "Privacy" modes that can be enabled. Once in this mode, the user's interactions are not saved to browser history and no data is stored in browser cache. Once the browser is closed or this mode is exited, there are no browser records of any of the interactions that occurred while in the "Privacy" mode. Firefox has this feature, and is, therefore, highly recommended for use with Online Therapy USER system. Browsers that do not have this mode, or users that do not use this feature, must manually purge their browser history and cache to prevent others from seeing their web interactions.

6. Enable either the firewall software that came with your operating system (e.g. Windows firewall), or install a reputable 3rd party software, such as ZoneAlarm. Firewalls protect your computer and information from network attacks and threats.

7. Use anti-virus software to both prevent and recover from virus programs. While most anti-virus software is for purchase, there are free software options available to download. However, one must be cautious in order to avoid downloading and installing malicious software that appears to be legitimate.

8. Malware-detection software (such as Spybot: Search and Destroy, Microsoft Security Essentials) can be used to scan your computer for software and files that may be leaking your personal information to 3rd parties.

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**For Your Safety**

1. We send a Physician Notification Form to your family physician or medical clinic so that your physician is aware of your participation in the Online Therapy USER program.

2. In event of suicide risk, we will contact your family physician or medical clinic whose information you provided to us in the telephone screening interview.

3. Please inform us of any changes in your physical or mental health status that may have an impact on your ability to participate in the Online Therapy USER program.

**Emergency Situations:** In the event that your Therapist suspects you are at risk to harming yourself or others, they will contact you either by e-mail or telephone. The telephone call will be used to gain additional information about your situation. If the Therapist determines that you are at high risk, then confidentiality will need to be broken. The therapist will have to contact either: your family physician, a family member, or 911 depending on the situation.

**Multiple Therapist Roles:** It is the responsibility of the Therapist to avoid holding multiple roles with clients (e.g., friend, business partner). This means that the Therapist is expected to establish and maintain a primarily professional
relationship with their client. Likewise, the client is expected to respect this obligation, as well as the Therapist’s ethical and professional boundaries. Due to the therapist’s limited amount of time, you may not receive an immediate e-mail response, or a response to every e-mail that you send. The Therapist will also be unable to meet requests through social networking websites (e.g., Facebook).

It should also be noted that the principal investigator of the present study, Nicole Alberts, will also serve as your Therapist. Nicole will manage these multiple roles by conducting her activities as both a therapist and a researcher in accordance with the Canadian Psychological Association Code of Ethics. In addition, she will engage in continual self-monitoring of her therapeutic activities. Her supervisor, Dr. Heather Hadjistavropoulos, will also monitor all therapeutic activities with specific attention paid to management of these two roles.

**Potential Therapist Unavailability:** In the event that your Therapist is unable to access their e-mail messages due to unforeseeable circumstances (e.g., sickness, injury), then Nicole Alberts or the Online Therapy USER coordinator will advise you of the situation and you will then be given options for how you would like to continue with online therapy. For example, depending upon circumstances, your Therapist’s supervisor, or a replacement Therapist, may be assigned to you. If your Therapist has a planned temporary absence (e.g., holiday or work-related absence), you will be informed in advance by your Therapist and provided with options for how you would like to proceed during this time.

**Termination of Therapy:** You may withdraw from participation in the treatment at any time. Otherwise, therapy will be complete when you have completed 5 lessons within the 8 week treatment period. If you would like to refer to the lessons after treatment, you may do so by printing off the desired materials prior to your account being deactivated.

**Ethics Approval:** This research project has been approved on ethical grounds by the Research Ethics Boards (REBs) of the University of Regina. Any questions regarding your rights as a participant may be addressed to that committee through the University of Regina Ethics Board at (306) 585-4775 or email: research.ethics@uregina.ca. Out of town participants may call collect.

**Access to Study Results:** A summary of this study’s results will be posted on this website ([www.onlinetherapyuser.ca](http://www.onlinetherapyuser.ca)) once all data have been collected and analyzed. This will likely take over a year. If you have any further questions about the research findings, please feel free to contact the Online Therapy Unit using the information listed below:

**Online Therapy Unit for Service, Education and Research**
**Department of Psychology**
University of Regina
Technical Questions: If you have any technical difficulties with the Online Therapy USER program, contact the Online Therapy USER coordinator, Marcie Nugent, at (306) 337-3331 who will then direct your call. You can also email her at Marcie.Nugent@uregina.ca.
## Appendix I. Hospital Anxiety and Depression Scale (HADS)

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<td><strong>1. I feel tense or wound up:</strong></td>
<td>a. Most of the time</td>
<td>b. A lot of the time</td>
<td>c. From time to time, occasionally</td>
<td>d. Not at all</td>
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<td><strong>2. I still enjoy the things I used to enjoy:</strong></td>
<td>a. Definitely as much</td>
<td>b. Not quite so much</td>
<td>c. Only a little</td>
<td>d. Hardly at all</td>
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<td><strong>3. I get a sort of frightened feeling as if something awful is about to happen:</strong></td>
<td>a. Very definitely and quite badly</td>
<td>b. Yes, but not too badly</td>
<td>c. A little, but it doesn’t worry me</td>
<td>d. Not at all</td>
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<td><strong>4. I can laugh and see the funny side of things:</strong></td>
<td>a. As much as I always could</td>
<td>b. Not quite so much now</td>
<td>c. Definitely not so much now</td>
<td>d. Not at all</td>
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<td><strong>5. Worrying thoughts go through my mind:</strong></td>
<td>a. A great deal of the time</td>
<td>b. A lot of the time</td>
<td>c. From time to time, but not too often</td>
<td>d. Only occasionally</td>
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<td><strong>6. I feel cheerful:</strong></td>
<td>a. Not at all</td>
<td>b. Not often</td>
<td>c. Sometimes</td>
<td>d. Most of the time</td>
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<td><strong>7. I can sit at ease and feel relaxed:</strong></td>
<td>a. Definitely</td>
<td>b. Usually</td>
<td>c. Not often</td>
<td>d. Not at all</td>
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<td><strong>8. I feel as if I am slowed down:</strong></td>
<td>a. Nearly all the time</td>
<td>b. Very often</td>
<td>c. Sometimes</td>
<td>d. Not at all</td>
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<td><strong>9. I get a sort of frightened feeling like ‘butterflies’ in the stomach:</strong></td>
<td>a. Not at all</td>
<td>b. Occasionally</td>
<td>c. Quite often</td>
<td>d. Very often</td>
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<td><strong>10. I have lost interest in my appearance:</strong></td>
<td>a. Definitely</td>
<td>b. I don’t take so much care as I should</td>
<td>c. I may not take quite as much care</td>
<td>d. I take just as much care as ever</td>
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<td><strong>11. I feel restless as if I have to be on the move:</strong></td>
<td>a. Very much indeed</td>
<td>b. Quite a lot</td>
<td>c. Not very much</td>
<td>d. Not at all</td>
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12. I look forward with enjoyment to things:
   a. As much as ever I did
   b. Rather less than I used to
   c. Definitely less than I used to
   d. Hardly at all

13. I get sudden feelings of panic:
   a. Very often indeed
   b. Quite often
   c. Not very often
   d. Not at all

14. I can enjoy a good book or TV programme:
   a. Often
   b. Sometimes
   c. Not often
   d. Very seldom
Appendix J. Medical Outcomes Study Short Form (SF-12)

The SF-12 is available for licensure by students from Quality Metric. This product is Copywritten and will not be included in this Appendix.
Appendix K. Brief Pain Inventory (BPI)

The BPI is available free of use to students from the University of Texas MD Anderson Cancer Center. This measure is Copywritten and will not be included in this Appendix.
Appendix L. The Fatigue Symptom Inventory (FSI)

For each of the following, circle the one number that best indicates how that item applies to you.

1. Rate your level of fatigue on the day you felt most fatigued during the past week

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<td>As fatigued as I could be</td>
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<td>Not at all fatigued</td>
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2. Rate your level of fatigue on the day you felt least fatigued during the past week

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3. Rate your level of fatigue on average during the past week

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4. Rate your level of fatigue right now

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5. Rate your much, in the past week, fatigue interfered with your general level of activity

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6. Rate your much, in the past week, fatigue interfered with your ability to bathe and dress yourself

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7. Rate your much, in the past week, fatigue interfered with your normal work activity (includes both work outside the home and housework)

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8. Rate how much, in the past week, fatigue interfered with your **ability to concentrate**

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|   | Not interference | Extreme interference |

9. Rate how much, in the past week, fatigue interfered with your **relations with other people**

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10. Rate how much, in the past week, fatigue interfered with your **enjoyment of life**

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11. Rate how much, in the past week, fatigue interfered with your **mood**

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12. Indicate **how many days**, in the past week, you felt fatigued for any part of the day

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13. Rate **how much of day**, on average you felt fatigued in the past week

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14. Indicate which of the following best describes the **daily pattern** of your fatigue in the past week

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<td></td>
<td>Not at all fatigued</td>
<td>Worse in the morning</td>
<td>Worse in the afternoon</td>
<td>Worse in the evening</td>
<td>No consistent daily pattern of fatigue</td>
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Appendix M. Treatment Satisfaction Questionnaire

Thanks again for assisting with this important clinical research. We would be very grateful if you would help us to improve our program by answering the following questions.

1. Overall, how satisfied were you with treatment?
   1. Very dissatisfied
   2. Dissatisfied
   3. Neutral
   4. Satisfied
   5. Very satisfied

2. How satisfied were you with the quality of the Modules and Guides?
   1. Very dissatisfied
   2. Dissatisfied
   3. Neutral
   4. Satisfied
   5. Very satisfied

3. Would you feel confident recommending this treatment to a friend?
   1. Yes
   2. No

4. Was it worth your time doing Wellbeing After Cancer?
   1. Yes
   2. No

5. How has participating in Wellbeing After Cancer affected your confidence that you can learn to manage your symptoms?
   1. Greatly reduced
   2. Reduced
   3. No change
   4. Increased
   5. Greatly increased

6. How has participating in this Course affected your motivation to seek more treatment if you need it in the future?
   1. Greatly reduced
   2. Reduced
   3. No change
   4. Increased
   5. Greatly increased
Appendix N. Post-Treatment Program Check-List

Please use the rating scale below to indicate how helpful specific components of *Wellbeing After Cancer* were for you.

1. Learning about anxiety and depression

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2. Learning about unhelpful thoughts and how to manage them

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3. Learning strategies to manage under arousal (physical symptoms associated with depression)

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4. Learning strategies to manage over arousal (physical symptoms associated with anxiety)

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5. Learning about unhelpful behaviours (avoidance, safety behaviours)

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6. Learning about and practicing graded exposure (gradually facing the things you fear)

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7. Learning about symptom lapses and ways to stay well

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8. Access to additional resources (assertive communication, 100 pleasant things to do, good sleep guide, chronic medical conditions and panic attacks, problem solving and worry time, fear of cancer recurrence)

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9. Access to DIY guides

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10. Reading about survivors’ stories

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11. Completing homework activities on my own following each lesson

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12. Writing about my experiences

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13. Sharing my experiences with someone who cares

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14. Having a therapist who is responsive to my needs

| Not at all helpful | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Extremely helpful |

15. Being contacted by e-mail

| Not at all helpful | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Extremely helpful |

16. Expressing my feelings

| Not at all helpful | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Extremely helpful |

17. Writing about survivorship issues to my therapist

| Not at all helpful | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Extremely helpful |
Appendix O. Working Alliance Inventory-Client® - Short Form

Instructions:
On the following page there are sentences that describe some of the different ways you might think or feel about your counselor.

Please answer each statement using this seven point scale:

1. My therapist and I agree about the things I will need to do in counseling to help improve my situation.
2. What I am doing in counseling gives me new ways of looking at my problem.
3. I believe my therapist likes me.
4. My therapist does not understand what I am trying to accomplish in counseling.
5. I am confident in my therapist's ability to help me.
6. My therapist and I are working towards mutually agreed upon goals.
7. I feel that my therapist appreciates me.
8. We agree on what is important for me to work on.
9. My therapist and I trust one another.
10. My therapist and I have different ideas on what my problems are.
11. We have established a good understanding of the kind of changes that would be good for me.
12. I believe the way we are working with my problem is correct.
Appendix P. Follow-Up Questions

1. What did you like about the program? What should we do to improve it? (e.g., comments about the modules, DIY Guides, Stories, or Resources)

2. What did you not like about the program? What should we do to improve it? (e.g., comments about the modules, DIY Guides, Stories, or Resources)

3. What were some barriers to completing the Wellbeing After Cancer Program?

4. Do you think that a similar program would be useful for patients currently receiving cancer treatment? Why?

5. If you were able to offer any advice to someone about to start this program about how to get the most out of it, what would you suggest? Or, what would you like to have known before starting this program?
Appendix Q. Screen Shot of Wellbeing After Cancer Video
Appendix R. Clinician Demographic and Attitudes Questionnaire

Section 1.

Please enter your name. __________________

Please enter your e-mail address. __________________

Please enter the phone number you would like the researcher to contact you at. This could be a work or home/cell number. __________________

What is your age? ____________

What is your sex?
□ Male    □ Female

Please specify the type of post-secondary education you have received.
□ Bachelor’s of Social Work
□ Bachelor’s of Nursing
□ Other, please specify ____________

Have you received prior training in cognitive behavioural therapy (CBT)?
□ Yes
If yes, please describe the type of training you have received.
________________________________________________________________________

□ No

Where do you currently work?
□ Allan Blair Cancer Centre
□ Saskatoon Cancer Centre
□ Provincial COPS Centre

In total, how many years have you worked within cancer care? ____________ years.

Prior to being asked to participate in this study, had you heard about Wellbeing After Cancer?
□ Yes
□ No

Have you referred patients to Wellbeing After Cancer?
□ Yes
If yes, approximately how many? ____________
□ No
Section 2. Thoughts on Internet-Delivered Treatment

Please use the rating scales below to indicate how much you agree or disagree with each statement.

I-CBT (Internet Cognitive Behavioural Therapy) can effectively treat mental health difficulties in patients following cancer treatment.

1 Strongly Disagree Disagree Neither Agree/Disagree Somewhat Agree
2 Strongly Disagree Somewhat Agree/Disagree Agree
3 Strongly Disagree Agree
4 Strongly Disagree
5 Strongly Agree
6 Strongly Agree
7 Strongly Agree

Developments in the provision of I-CBT are a positive step for the field of psycho-oncology.

1 Strongly Disagree Disagree Neither Agree/Disagree Somewhat Agree
2 Strongly Disagree Somewhat Agree/Disagree Agree
3 Strongly Disagree Agree
4 Strongly Disagree
5 Strongly Agree
6 Strongly Agree
7 Strongly Agree

Clinicians working within cancer care will seek out training in I-CBT if they know it is available.

1 Strongly Disagree Disagree Neither Agree/Disagree Somewhat Agree
2 Strongly Disagree Somewhat Agree/Disagree Agree
3 Strongly Disagree Agree
4 Strongly Disagree
5 Strongly Agree
6 Strongly Agree
7 Strongly Agree

I-CBT should be offered regularly following the completion of cancer treatment if additional mental health services are clinically indicated.

1 Strongly Disagree Disagree Neither Agree/Disagree Somewhat Agree
2 Strongly Disagree Somewhat Agree/Disagree Agree
3 Strongly Disagree Agree
4 Strongly Disagree
5 Strongly Agree
6 Strongly Agree
7 Strongly Agree

I will refer clients to I-CBT if it is available.

1 Strongly Disagree Disagree Neither Agree/Disagree Somewhat Agree
2 Strongly Disagree Somewhat Agree/Disagree Agree
3 Strongly Disagree Agree
4 Strongly Disagree
5 Strongly Agree
6 Strongly Agree
7 Strongly Agree

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I would be interested in delivering Wellbeing After Cancer as a therapist.

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Appendix S. Clinician Telephone Interview Script and Questions

Thank-you for taking the time to participate in this interview. The interview should take about 45 minutes. If you have any questions throughout or after the interview please let me know.

Before we begin the interview, I would like to briefly remind you about some of the key points outlined in the consent form you complete prior to the video and survey.

- First, the purpose of this research is to obtain information that will assist with improving an Internet-based CBT program called Wellbeing After Cancer. We are interested on receiving clinician feedback on this program and ICBT more generally in an effort to inform future implementation of the program.

- Second, there are no known risks associated with taking part in this study. Benefits of participating include having the opportunity to express your viewpoint on the Wellbeing After Cancer program and the potential implementation of ICBT more generally within cancer care. By providing feedback on the program, you will also be directly involved with efforts to enhance mental health care for cancer patients in Saskatchewan. Finally, your participation will assist with helping researchers translate research evidence into clinical practice.

- In regards to confidentiality, no names will be on the surveys and no names will be attached to the interviews. Instead, a participant number will be assigned to your survey data and interview. All reports and publications resulting from this study will be distributed without revealing your identity.
  - Identifying information such as your name or the name of specific cancer clinics will not be linked to your specific responses.

- Finally, your participation in this study is completely voluntary and you may answer only those questions that you feel comfortable with. You can also choose to withdraw from the study at any time, and you may do so without any negative consequences.

I also would like to inform you that the interview will be recorded in order for data collection purposes. Do you consent to the recording of this interview?

☐ Participant consents to recording of telephone interview

Before we start, did you have any questions about the presentation or information shared?
1. Based on the presentation you viewed, what did you like about the program? What did you dislike?

2. Do you think it might be useful to be able to use this program in the work that you do with cancer survivors?
   a. If yes, what do you see as potential benefits/advantages and risks/disadvantages?

3. If you were to use this program in your work, how would you want to run it? What would you need?

4. If you were to receive training in ICBT and this program, what factors do you see as facilitating your training? What factors would be barriers to your training?

5. What factors do you see as facilitating the implementation of this program into current cancer care within Saskatchewan? What factors would be barriers to implementation?

6. Are there any other thoughts you would like to share regarding I-CBT more generally?

That brings us to the end of the interview. Thank you for your participation in this important clinical research, it is very much appreciated. Do you have any questions for me? If you have any additional questions, concerns, or if you would like to obtain information on the results of the study, please do not hesitate to contact me. I can be reached by email at Nicole.alberts@uregina.ca and by phone at 306-585-4203.

I will also be sending you the transcript and transcript release form once this is ready. Please let me know if there are any changes you would like made to the transcript. Once you have approved it, you can sign the transcript release form and send it to me via email, fax, or regular mail.

Thank you again for your time.
February 12, 2014

Dr. Heather Hadjistavropoulos
University of Regina
AH 325
3737 Wascana Parkway
Regina, SK S4S 0A2

Dear Dr. Hadjistavropoulos,

RE: REB-13-122, U of R 5651314; U of S Bth 13-409
Title: Transdiagnostic Internet Cognitive-Behaviour Therapy for Cancer Survivors: An Examination of Clinician Perspectives

Your application for research ethics review has undergone a harmonized review by the University of Regina, University of Saskatchewan, and Regina Qu’Appelle Health Region Research Ethics Boards (REBs). In accordance with the Research Ethics Review Reciprocity Agreement signed by the University of Regina, University of Saskatchewan, and Regina Qu’Appelle Health Region, the RQHR REB accepts the Certificate of Approval issued by the University of Regina REB. This letter is issued to you in lieu of a Certificate of Approval by the RQHR REB. This letter permits you to conduct research activities as approved by the U of R REB, provided that you maintain a valid and up-to-date Certificate of Approval.

All continuing ethics review will be conducted by the University of Regina REB. The U of R REB is authorized to share all communications pertaining to this file with the RQHR REB at their discretion. The RQHR REB may provide input into continuing ethical review activities, as agreed upon by both REBs.

The RQHR REB reserves the right to revoke the privileges described in this letter at any time in order to conduct their own independent research ethics review of your project. Such a decision would be communicated to you and the U of R REB in writing.

This letter also serves to acknowledge that you have obtained all necessary operational approvals within the RQHR and are permitted to proceed with this research on operational grounds. If at any time you will require resources, participants, or data from any additional departments, you must provide the RQHR REB with the required signatures before proceeding.

Best wishes for your continuing research endeavours.

Sincerely,

[Signature]
Dr. Michelle McCarron, Chair
Research Ethics Board
Regina Qu’Appelle Health Region

cc. University of Regina Research Ethics Board
University of Saskatchewan Behavioural Research Ethics Board