

Space in Breast Cancer from Depression & Anxiety

The Space in Breast Cancer from Depression & Anxiety programme has been designed to support the mental health of individuals who are currently undergoing breast cancer treatment, or individuals who have survived breast cancer.

The programme aims to:

- *educate survivors about breast cancer and its psychological impact, providing evidence-based strategies for users to develop and use, along with effective coping skills to deal with low mood and worries.*
- *promote a sense of personal agency and control, thereby improving the adjustment to life during and after treatment.*

The Target Audience

Survivors of breast cancer and individuals currently receiving treatment for breast cancer, who are also experiencing low mood and worries.

Background Literature

Breast cancer is the most common cancer among women globally (Abrahams et al., 2015). Breast cancer is a chronic and life-threatening disease that makes individuals vulnerable to psychological distress during diagnosis and treatment, as well as in the period following treatment completion (McKiernan, Steggles, Guerin, & Carr, 2010).

Individuals who are left untreated tend to experience poorer physical health, have more pain and fatigue, engage in more substance use, have a poorer quality of life, and demonstrate less acceptance and compliance with adjuvant treatments. They also tend to be at risk for a higher prevalence of metastasis, relapse and mortality. (Chida, Hamer, Wardle, & Steptoe, 2008). Therefore, providing easily accessible, evidence-based treatments is crucial in helping people who are currently experiencing, or have survived, breast cancer, to deal with symptoms of depression and anxiety.

iCBT is an approach that can be used to provide information and support to those experiencing and those who have survived breast cancer. It can help them to manage unhelpful thinking and behaviours, normalise feelings, and thereby relieve distress (Johansson et al., 2019). Research shows that iCBT interventions are highly effective in the treatment of major depression (Andersson and Cuijpers, 2009), subthreshold depression (Spek et al., 2007), anxiety (Richards and Richardson, 2012), and comorbid depression and anxiety (Newby et al., 2013), in the general population. Similarly, previous literature has shown that breast cancer survivors in the iCBT group had a greater decrease in their depression and anxiety symptoms over time than the treatment-as-usual (TAU) group. Furthermore, the iCBT group reported lower general distress, fear of recurrence, and better quality of life at post-treatment compared to the TAU group.

Specific Content

Space in Breast Cancer from Depression & Anxiety draws on Cognitive Behavioural Therapy (Beck, 2011) as its primary approach. Each module is structured with quizzes, videos, informational content with examples and personal stories, interactive activities, tools and summaries. This is in keeping with the guiding principles of Cognitive Behavior Therapy (CBT) which endorse a structured outline and a goal orientated focus (Maerov, 2006).

The programme is accessible 24/7, allowing users to access the programme at a time that suits them and in the comfort of their own home, revisiting it when needed. It can be accessed using any device and it can be tailored to suit the needs of the individual.

The 6 modules include the following specific therapeutic components:

Elements of the programme:

Psychoeducation - Guided internet-delivered treatment for depression and the provision of psychoeducational information. This includes, information explaining CBT, the TFB cycle, the importance of behavioural activation, learning about emotions, learning about core beliefs, thinking styles, negative thoughts, and the relationship between behaviours, thoughts, and emotions).

Behavioural Techniques - Behavioural techniques in the programme aim to help survivors regain a sense of control with the use of self-help techniques. The behavioural techniques in the current intervention mainly focus on behavioural activation and include activity scheduling, distraction, and planning for the future. The goal of behavioural activation is to increase individuals' overt behaviours that are likely to generate reinforcing environmental contingencies, which will improve their thoughts, mood and life quality (Hopko et al., 2011). The Boosting Behaviour module encourages individuals to increase their activity levels by planning both achievement and pleasurable activities and emphasizes the idea that action is the first step, rather than motivation. It also makes them aware of challenges they may face, such as cancer related fatigue or tiredness, which may then lead to avoidance. Users are then encouraged to tackle these challenges in different ways, for example by planning activities to reduce the fatigue. Scheduling activities can provide survivors with a structure for the day or the week, and these events can give them something to look forward to (Moorey & Greer, 2012), which may lead to improvements in their thoughts and mood.

Relaxation & Mindfulness Exercises - Relaxation and mindfulness exercises are also added as additional techniques for survivors to use, as they are simple and effective tools for gaining rapid control over anxiety (Moorey & Greer, 2012). Relaxation techniques are based on the premise that a state of muscle relaxation alleviates tension and anxiety. When one practices them regularly, rapid relaxation will be achieved more easily in anxiety-provoking situations (Padesky, 2020).

Progressive muscle relaxation aims to help people recognise physical tension and practice relaxation, by systematically tightening and then relaxing various muscles in their body. *Staying in the present* or *mindfulness* exercises aim to help survivors become aware of how they feel when they are anxious and help them live more fully in the present moment by practicing focusing on their breathing. Mindfulness predicts

increased self-regulated behaviour and a positive emotional state (Brown & Ryan, 2003).

Cognitive Techniques - A variety of cognitive coping techniques are introduced, such as thought monitoring, identifying unhelpful thinking patterns, and searching for alternatives. The TFB cycle is used as a thought record tool, in which survivors are asked to identify their thoughts connected to a strong emotion and then to look within that specific situation for evidence that supports their thought and evidence that does not support it. They are then asked to generate an alternative/balanced thought, considering all the evidence they have gathered and then to see if this new perspective leads to any changes in their feelings. Distraction techniques are introduced in the *Coping with Difficult Situations* section, where the program explores how some negative thoughts may have a realistic basis, (e.g. possibility of treatment failure or death) but may still be unhelpful.

Table: Programme Modules, Therapeutic Goals, Objectives, Content and Tools

Module name	Topics	Goals	Activities
Getting Started	<ul style="list-style-type: none"> • Breast cancer & wellbeing • Mood & behaviours: symptoms • TFB • Personal stories • Understanding my situation • Staying in the present 	<ul style="list-style-type: none"> • Provide users with psychoeducation on breast cancer and TFB cycle • Raise users' awareness of their own anxiety and depression symptoms in breast cancer • Engage users in mood monitoring to gather information on how different factors affect them 	<ul style="list-style-type: none"> • Breast cancer myths & facts quiz • Reflection • Mood monitor • Listening relaxation
Understanding Feelings	<ul style="list-style-type: none"> • Understanding emotions 	<ul style="list-style-type: none"> • Support users to understand how thoughts/emotions 	<ul style="list-style-type: none"> • Emotions & your body quiz

	<ul style="list-style-type: none"> • Physical body reactions • Expressing emotions • Lifestyle choices • Personal stories 	<p>and behaviours affect each other</p> <ul style="list-style-type: none"> • Teach users how physical body sensations can act as clues to our emotions • Teach users how to constructively express feelings and to listen effectively • Raise users' awareness about how lifestyle choices can positively impact our life • Prompt users to be able to identify new triggers for their mental health • Engage users to identify supporting evidence for their thoughts 	<ul style="list-style-type: none"> • TFB cycle: hot thought and evidence record • Mood monitor • 3-minute breathing relaxation exercise
Boosting Behaviour	<ul style="list-style-type: none"> • Beating behaviour traps • Activities and interests • Rumination • Managing cancer-related fatigue or tiredness • Personal stories 	<ul style="list-style-type: none"> • Illustrate to users that behaviour can have a significant impact on how you feel • Teach users to begin to do things even if they do not feel like it • Increase users' knowledge about activity (i.e., feel better, more energy, sense of achievement) • Provide and teach users the concept of SMART goals and planning • Engage users in identifying enjoyable/achieveme 	<ul style="list-style-type: none"> • Mood & Behaviour Quiz • Motivation tip/activity list • Activity scheduling tool • Staying in the Present: A Listening Exercise

		<p>nt activities and be able to use activity scheduling</p> <ul style="list-style-type: none"> • Support users to Identify physical activities in order to improve mood 	
Spotting Thoughts	<ul style="list-style-type: none"> • Focus on thoughts • Negative thinking & mood • Thinking traps • Personal stories 	<ul style="list-style-type: none"> • Illustrate to users about negative automatic thoughts and the characteristics of negative thoughts • Engage users in identifying how they can catch their thoughts and learn about thinking traps that can occur 	<ul style="list-style-type: none"> • Me & my thoughts quiz • Thoughts, feelings & behaviour cycles: hot thought & evidence record • Compassionate companion: Listening Exercise
Challenging Thoughts	<ul style="list-style-type: none"> • Talking back • Hot thoughts • Challenging your thoughts • Tackling thinking traps • Coping with difficult situations • Personal stories 	<ul style="list-style-type: none"> • Provide users information on how to alter perspective about a situation and “talking back” to themselves with alternative thoughts that are more rational, realistic, and helpful • Prompt users to identify their hot thoughts and concurrent moods • Support users to find alternative thoughts • Teach users about techniques to change their thinking traps and how to cope with difficult situations 	<ul style="list-style-type: none"> • What’s your thinking style quiz • Reflection • Thoughts, feelings & behaviour cycles: hot thought & evidence record • Soothing Presence: Listening Exercise
Managing Worry	<ul style="list-style-type: none"> • Worry & anxiety in breast cancer 	<ul style="list-style-type: none"> • Illustrate to users how worry is related to anxiety 	<ul style="list-style-type: none"> • Anxious thoughts & worry quiz

	<ul style="list-style-type: none"> • Practical vs. hypothetical Worries • How to manage our worries • Personal stories 	<ul style="list-style-type: none"> • Teach users about the worry cycle • Engage users to breakdown worries using the worry tree 	<ul style="list-style-type: none"> • Working with my worries tool • Worry Tree • Progressive muscle relaxation
Bringing it All Together	<ul style="list-style-type: none"> • New ideas in action • Finishing up • Staying well - warning signs • Social Support • Moving forward • Personal stories 	<ul style="list-style-type: none"> • Highlight to users the skills and ideas they have gathered throughout the program, and to continue to make healthy changes in their life • Emphasise to users that the skills they have learned are works-in-progress • Engage users to reflect on their social support network and see who they can call on, or who is important in helping them to stay well • Illustrate to users how to embrace every emotion and become realistic and resilient over time • Prompt users to identify goals and reflect 	<ul style="list-style-type: none"> • Staying well cycle • My goals list/daily practice • Taking stock reflection • Safe place listening exercise

References

- Aaronson, N. K., Ahmedzai, S., Bergman, B., Bullinger, M., Cull, A., Duez, N. J., ... & Takeda, F. (1993). The European Organization for Research and Treatment of Cancer QLQ-C30: a quality-of-life instrument for use in international clinical trials in oncology. *JNCI: Journal of the National Cancer Institute*, *85*(5), 365-376.
- Arjadi, R., Nauta, M. H., & Bockting, C. L. (2018). Acceptability of internet-based interventions for depression in Indonesia. *Internet Interventions*, *13*, 8-15.
- Carver, C. S. (1997). You want to measure coping but your protocol too long: Consider the brief cope. *International journal of behavioral medicine*, *4*(1), 92-100.
- Hopko, D. R., Armento, M. E., Robertson, S., Ryba, M. M., Carvalho, J. P., Colman, L. K., ... & Lejuez, C. W. (2011). Brief behavioral activation and problem-solving therapy for depressed breast cancer patients: randomized trial. *Journal of consulting and clinical psychology*, *79*(6), 834.
- Johansson, B. B. K., Hauffman, A., Bill-Axelsson, A., Alfonsson, S., von Essen, L., Nygren, H. P., & Igelström, H. (2019). Internet-based stepped care for individuals with cancer and concurrent anxiety or depression symptoms: Results from a randomized controlled trial. *Annals of Oncology*, *30*, v667-v668.
- Kroenke, K., Spitzer, R. L., Williams, J. B., Monahan, P. O., & Löwe, B. (2007). Anxiety disorders in primary care: prevalence, impairment, comorbidity, and detection. *Annals of internal medicine*, *146*(5), 317-325.
- Lerman, C., Trock, B., Rimer, B. K., Jepson, C., Brody, D., & Boyce, A. (1991). Psychological side effects of breast cancer screening. *Health psychology*, *10*(4), 259.
- Maerov, P. J. (2006). Demystifying CBT: Effective, easy-to-use treatment for depression and anxiety. *Current Psychiatry*, *5*(8), 26.

- Manea, L., Gilbody, S., & McMillan, D. (2015). A diagnostic meta-analysis of the Patient Health Questionnaire-9 (PHQ-9) algorithm scoring method as a screen for depression. *General hospital psychiatry*, 37(1), 67-75.
- McKiernan, A., Steggle, S., Guerin, S., & Carr, A. (2010). A controlled trial of group cognitive behavior therapy for Irish breast cancer patients. *Journal of Psychosocial Oncology*, 28(2), 143-156.
- Moorey, S., & Greer, S. (2012). *Oxford guide to CBT for people with cancer*. OUP Oxford.
- National Institute for Health and Care. (2009). *Depression in adults: recognition and management*. England, UK. Retrieved from <https://www.nice.org.uk/guidance/cg90/resources/depression-inadults-recognition-and-management-975742636741>
- Newby, J. M., Mackenzie, A., Williams, A. D., McIntyre, K., Watts, S., Wong, N., & Andrews, G. (2013). Internet cognitive behavioural therapy for mixed anxiety and depression: a randomized controlled trial and evidence of effectiveness in primary care. *Psychological Medicine*, 43(12), 2635-2648.
- Padesky, C. A. (2020). *The Clinician's Guide to CBT Using Mind Over Mood*. Guilford Publications.
- Richardson, T., & Richards, D. (2012). Computer-based psychological interventions for depression treatment: a systematic review and meta-analysis. *Clinical psychology review*, 32(4), 329-342.
- Richards, D., Dowling, M., O'Brien, E., Vignano, N., & Timulak, L. (2018a). Significant events in an Internet-delivered (Space from Depression) intervention for depression. *Counselling and Psychotherapy Research*, 18(1), 35-48.
- Spek, V., Cuijpers, P. I. M., Nyklíček, I., Riper, H., Keyzer, J., & Pop, V. (2007). Internet-based cognitive behaviour therapy for symptoms of depression and anxiety: a meta-analysis. *Psychological medicine*, 37(3), 319-328.
- Zigmond, A. S., & Snaith, R. P. (1983). The hospital anxiety and depression scale. *Acta psychiatrica scandinavica*, 67(6), 361-370.

