Final Report
Emotional Wellbeing Project
(Wellbeing Plus Course)

Professor Nick Titov
Dr Blake Dear
Dr Luke Johnston
Dr Lauren Staples
Dr Vincent Fogliati

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1. MAIN MESSAGES

“You’re not alone. There are thousands of people in the same boat. It’s really helpful for people on the pension or those struggling financially as it’s a free service.”

1. Australia’s ageing population will place unprecedented demands on health care services, including mental health services. Innovative treatment solutions are required to reduce barriers to treatment for older adults with anxiety and depression.

2. Internet-delivered mental health services offer a unique opportunity for improving access to evidence-based mental health services across all ages.

3. The results of this research project clearly indicate that older adults can obtain large and clinically significant benefits from internet-delivered cognitive behavioural therapy (iCBT). This challenges beliefs that low mood and worry are a normal part of aging, and challenges beliefs that older adults cannot benefit from psychological treatment.

4. The iCBT interventions evaluated in this project are highly cost-effective relative to existing face to face delivered services. The interventions are highly acceptable to older adults. Most participants completed the interventions and >95% reported they would recommend the treatment to a friend.

5. The results from the Wellbeing Plus Course were replicated in a national online mental health service, the MindSpot Clinic, delivered as part of routine care. The Wellbeing Plus Course will continue to be successfully disseminated at the MindSpot Clinic.

6. iCBT for older adults with anxiety and depression represents an important opportunity for reducing the burden experienced by this vulnerable sector of society. Such services allow older adults to improve their quality of life and continue to participate and contribute as active members of society.
2. EXECUTIVE SUMMARY

“The lessons were easy going yet thought provoking; the therapist was in touch every week. My own mood improved very quickly. I shall continue to refer to the Do It Yourself notes long into the future.”

Australia’s ageing population is expected to place unprecedented demands on health care services, including mental health services. Unfortunately, many older adults with anxiety and depression already experience significant barriers to accessing evidence-based care, including barriers associated with stigma, mobility limitations, treatment costs, stoicism, and limited knowledge about mental health. As a consequence, many older adults live with disabling symptoms of anxiety and depression. These symptoms not only affect their quality of life, but compound comorbid physical health problems, leading to further disability.

The Emotional Wellbeing Project aimed to improve access to evidence-based treatment for older Australian adults with anxiety and depression. The Project, which began in 2010, developed, evaluated, and delivered innovative internet-based cognitive behavioural therapy (iCBT) interventions over three stages of research. In total, five clinical trials were completed. These included two open trials, two randomised controlled trials (RCTs) comparing treatment vs. waitlist control groups, and a third large-scale RCT comparing guided vs. self-guided modes of delivering the iCBT intervention. Excellent clinical outcomes were obtained in all trials. Consistent with this, feedback and comments from the trial participants were overwhelmingly positive and enthusiastic. Subsequently, the final version of these iCBT interventions, the Wellbeing Plus Course, was successfully deployed at the MindSpot Clinic, which provides free online assessment and treatment to Australian adults with anxiety and depression.
The magnitude of observed clinical improvement was statistically reliable and large across all trials ($d > 0.8$), with results sustained at three month follow-up. Symptoms of anxiety and depression were significantly and consistently reduced in therapist-guided treatment groups, compared to waitlist control groups. This level of clinical improvement is comparable to the level of improvement observed in good face-to-face treatment, yet the amount of therapist time required was considerably less. Significant improvements were also seen in other domains of health, including reductions in disability.

The results of the large RCT replicated and extended the previous findings to reveal that a self-guided version was also highly effective, as well as highly acceptable to participants. These findings have important implications for dissemination and suggest several iCBT models of care can be clinically and cost-effective.

Finally, when the Wellbeing Plus Course was implemented at the MindSpot Clinic in routine clinical care, the results from the clinical trials were replicated. Large improvements were observed in patients across symptoms of anxiety, depression, and disability $^{10}$. Importantly, patients reported the Course was highly engaging and the majority (>95%) reported they would recommend the Wellbeing Plus Course to a friend.

In conclusion, the Emotional Wellbeing Project has been enormously successful. This Project has resulted in an evidence-based intervention, the Wellbeing Plus Course, which is now available for free, to older adults across Australia. The popularity of the Wellbeing Plus Course is expected to continue to grow, and it is anticipated the current and subsequent versions will be used by thousands of Australians into the future.
3. MAIN REPORT
The Emotional Wellbeing Program

3.1 Context
Planning for the Emotional Wellbeing Program began in 2010. Impetus for its development came from planning sessions which identified several key contextual issues:

- Community and epidemiological studies indicated that one in six older adults experienced a mental health issue, commonly anxiety and/or depression \(^1\),\(^{11}\).
- Rates of treatment-seeking in older adults (65 years of age or older) with anxiety and depression were low \(^1\).
- Multiple barriers to accessing treatment in older adults had been identified, including stigma, mobility limitations, treatment costs, stoicism, and limited knowledge about mental health \(^1\).
- Life expectancy and the proportion of older adults were increasing. At the same time, untreated depression and anxiety were having serious consequences in older adults - compounding the effects of physical co-morbidities, increasing the risk of self-harm, and reducing quality of life \(^12\),\(^{13}\),\(^{14}\),\(^{15}\).
- Use of the internet was growing in the older adult age group, and evidence suggested that this age group (and others) was using the internet as a proxy social community \(^16\).
- There was an emerging body of evidence demonstrating the efficacy of internet-delivered cognitive behavioural therapy (iCBT) for treating anxiety and depression in younger adults, and preliminary reports indicated that similar methodologies could work with older adults \(^17\),\(^{18}\).
- There was, however, uncertainty about whether older adults with anxiety and depression would benefit from psychological interventions \(^19\).
Are anxiety and low mood a normal part of aging?

Although aging is a part of life, clinically significant levels of anxiety or depression are not normal parts of the aging process. Many older adults are able to live fulfilling lives despite challenges they may face. The good news is that people can learn key skills that help them manage symptoms of worry or low mood.

(From the Wellbeing Plus Course)

In brief, these data indicated that anxiety and depression were common in older adults, but were often left untreated, and that multiple barriers conspired against treatment-seeking in this population. There were also outstanding questions about whether older adults could benefit from psychological treatments for anxiety and depression. Preliminary overseas research indicated that iCBT was potentially clinically effective with adults over 50 years of age with subclinical depression, but no studies had explored the efficacy of iCBT in older adults with a range of clinical and subclinical symptoms. The key questions, therefore, were whether older adults could benefit from psychological treatment, and whether effective iCBT interventions could be developed to treat anxiety and depression in older adults. An additional, but still important question was whether such interventions could be broadly disseminated to the Australian public.

The Emotional Wellbeing Project initially aimed to develop and implement two iCBT interventions for older Australian adults. These interventions were to be designed for people with both clinical and subclinical levels of anxiety (the Managing Stress and Anxiety Program) or depression (the Managing Your Mood Program), and were to be made freely available to the public.

The interventions were designed to specifically:

- Provide education about the symptoms of anxiety or depression.
- Teach strategies for improving emotional wellbeing.
3.2 Implications

Important implications from the results of the Emotional Wellbeing Program include the following messages:

- Older adults can benefit from psychological treatments. This challenges assumptions that low mood or worry are a normal part of aging, or that older adults cannot recover from anxiety and depression.
- Psychological treatments for older adults that are delivered via the internet are clinically effective.
- These interventions can significantly reduce symptoms of anxiety and depression, and can also reduce disability.
- Older adults engage strongly with iCBT and find iCBT acceptable.
- Significant results are obtained for iCBT administered in either therapist-guided or self-guided formats (provided people receive assessment and monitoring during treatment, and feedback at post-treatment).
- Such interventions can be successfully deployed as part of routine clinical care. They can be successfully deployed and disseminated to the broader public in a cost-effective way.

The key messages arising from the Wellbeing Plus Project are that iCBT interventions for older adults can be clinically significant, cost-effective, and highly acceptable to consumers. In addition, these interventions can be successfully deployed as part of routine care.
3.3 Approach

Target Population. The Wellbeing Plus program was designed to treat clinical and subclinical levels of anxiety and depression. The interventions targeted English-speaking Australian adults 60–75 years of age; however it was expected that people younger and older would also benefit. Given the medium and nature of the materials, people with moderate to severe cognitive impairment were not targeted. Also, people who were acutely suicidal were not treated, but were instead supported to access crisis services. To address reversible causes of psychological distress, all patients were advised to visit their GP for a physical review, including a review of medications.

Stage 1. Development of the internet-delivered content. A total of five interventions were developed and evaluated. Each intervention followed a similar structure comprising: online lessons (modules) containing the core content; homework material, which summarised the lesson content and provided activities to help the patient master the relevant skills; additional information sheets, which described strategies for managing common problems associated with anxiety and depression; and automated emails which reinforced progress and provided reminders to complete key tasks. The materials included combinations of didactic text and age appropriate case examples of real older people recovering from anxiety and depression.

The initial two iCBT interventions, Managing Your Mood (MYM) and Managing Stress and Anxiety (MSAA), were presented in the form of cartoon based slides. However, these programs were no longer available to the research team after they moved from St Vincent’s Hospital to the eCentreClinic at Macquarie University, and entirely new programs were subsequently developed. Examples of intervention content are shown in Figure 1.
As in the previous interventions, the new interventions were based on the principles of CBT and included:

- Education and information to explain the cycles of symptoms.
- Cognitive skills for managing unhelpful thoughts and beliefs.
- Behavioural skills to assist in increasing the frequency of reinforcing events.
- Exposure skills for overcoming avoidance behaviour.
- Skills to assist in managing the physical symptoms of anxiety and depression.
- Problem solving skills for managing everyday difficulties.
- Relapse prevention skills to assist with maintaining gains.
During the term of the program, evidence from the eCentreClinic research unit at Macquarie University indicated that transdiagnostic iCBT interventions were clinically effective, acceptable to consumers, and easier to implement and disseminate in health services compared to disorder-specific interventions \(^{20,21}\). Based on this, and after receiving approval from beyondblue, work began on combining key elements of the MYM and MSAA interventions to create the transdiagnostic Wellbeing Plus Course, which would treat symptoms of both anxiety and depression in one course. The content of the Wellbeing Plus Course is summarised in Table 1, below.

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Primary Content (lessons, summaries, and participant stories)</th>
<th>Secondary Content (additional resources)</th>
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| 1      | Information about the prevalence, symptoms and treatment of depression and anxiety. Introduction to Cognitive Behaviour Therapy and an explanation of the relationship between cognitive, physical and behavioural symptoms. Instructions for identifying symptoms. | - Sleep management guide  
- What to do in a mental health emergency |
| 2      | Introduction to the cognitive symptoms of anxiety and depression, and the importance of managing thoughts. Instructions for thought monitoring and thought challenging. | - Structured problem solving  
- Worry time  
- Challenging beliefs  
- Attention management |
| 3      | Introduction to the physical symptoms of anxiety and depression (hyper-arousal and hypo-arousal). Instructions for controlled breathing and pleasant activity scheduling. | - Communication skills  
- List of 100 pleasant things to do  
- Managing panic attacks |
| 4      | Introduction to the behavioural symptoms of anxiety and depression, including low activity levels and avoidance behaviours. Instructions for behavioural activation and graded exposure. | - Assertive communication  
- How to act “as if”  |
| 5      | Information about relapse prevention and managing long-term wellbeing, including how to construct a relapse prevention plan. | - Managing chronic health conditions |

Table 1: Summary of content of the Wellbeing Plus Course.
Stage 2. Clinical trials. Two open trials and three Randomized Controlled Trials (RCTs) were conducted to evaluate the five interventions that were developed as part of the Emotional Wellbeing Project:

- Two single-group feasibility open trials (n = 42) of the MYM and MSAA Programs examined the acceptability and preliminary efficacy of these treatment courses for older adults. Follow-ups were conducted at 3 months post-treatment to determine the medium term benefits of the interventions.

- Two RCTs (n = 126) examined the clinical efficacy and cost-effectiveness of the new versions of the MYM and MSAA Courses. Each study compared treatment vs. waitlist control conditions. Follow-ups were conducted at 12 months post-treatment to determine the longer term benefits and cost-effectiveness of these interventions.

- The final trial was a large-scale RCT (n = 434) of the transdiagnostic intervention, the Wellbeing Plus Course. Three modes of implementation were compared: (1) brief weekly contact with a clinician, (2) a preparatory interview prior to starting treatment but no weekly clinician contact, and (3) no interview or contact with a clinician before or during the course. Follow-up was conducted at 3 months post-treatment.

Stage 3. Implementation. In late 2012 the Wellbeing Plus Course was implemented at the MindSpot Clinic (www.mindspot.org.au) - a national online assessment and treatment service for Australian adults with anxiety and depression. More than 330 patients from around Australia enrolled in the course between December 2012 and December 2014. The Wellbeing Plus Course is available to the public via the MindSpot Clinic following a free online or telephone screening assessment and the course is available online or in printed format. The course is administered using a therapist-guided model, where the therapist contacts each patient at least weekly to facilitate progress and to monitor safety.
3.4 Results

*Open Trials for MYM and MSAA Programs (initial versions).* The results of the two open trials were very encouraging. Completion rates for the MYM Program were high, with 16/20 participants completing the five lessons within the 8 weeks. Post-treatment and 3 month follow-up data were collected from 17/20 participants. Participants improved significantly on the two measures of depressive symptoms - the Patient Health Questionnaire–9 Item (PHQ-9) and the Geriatric Depression Scale, with large within-group effect sizes (Cohen’s $d$) at follow-up of 1.41 and 2.04, respectively. The clinician spent a mean time of 73.75 minutes (SD = 36.10 minutes) per participant contacting participants during the trial. The MYM program was rated as highly acceptable.

Completion rates for the MSAA Program were also high, with all 22 participants completing the five lessons within the allotted eight weeks. Three month follow-up data were collected from 95% of participants. Clinically significant reductions in symptoms of anxiety and stress were observed, and large within-group effect sizes (Cohen’s $d$) were found on the Generalized Anxiety Disorder–7 Item (GAD-7) ($d = 1.03$) and the Depression, Anxiety and Stress Scales–21 Item Scales ($d = 0.98$) at follow-up. Participants reported high levels of satisfaction with the program.

Together, these two studies revealed high levels of acceptability and overall large reductions in symptoms (Cohen’s $d > 1.0$) of anxiety and depression. The results provided initial evidence for the feasibility of online treatment for older adults with anxiety or depression. The results of these trials have been published in two separate papers (Dear et al., 2013; Zou et al., 2012). The encouraging outcomes justified the progression to the RCTs.
RCTs for the MYM and MSAA Programs (new versions). The results of the two RCTs comparing therapist-guided treatment vs. waitlist control groups were also positive. In both RCTs, significant improvements on measures of depression (PHQ-9) and anxiety (GAD-7) were observed in the treatment groups ($F_s > 12$, $p_s < .001$). The results were sustained at 3 month and 12 month follow-ups. The improvements corresponded to large between-group and within-group effect sizes (e.g., Cohen’s $d > 1.0$) and were obtained with less than 60 minutes clinician contact per participant during treatment. The results of these RCTs have been published (Titov et al., 2014a; Dear et al., 2014b).

Figure 1: For the MYM Course, patients in the treatment group showed significant improvement in PHQ-9 scores at post-treatment, compared to the waitlist control group. These improvements were sustained at 3 month and 12 month follow-ups.

Figure 2: For the MSAA Course (lower panel), patients in the treatment group showed significant improvement in GAD-7 scores at post-treatment compared to the waitlist control group. These improvements were sustained at 3 month and 12 month follow-ups.
The treatment groups in each RCT also had slightly higher Quality Adjusted Life Years (QALYs) than the control groups at post-treatment. The cost-effectiveness acceptability curve shows that each intervention had > 95% probability of being cost-effective at commonly used willingness-to-pay thresholds in Australia (Figures 2 and 3). The cost-effectiveness analyses also revealed an average cost for treatments of less than $100 per participant. As with the open trials, participants reported high levels of satisfaction with the interventions.

After all groups completed post-treatment, the controls were treated using a self-guided methodology. Significant clinical improvements were found on measures of depression (PHQ-9) and anxiety (GAD-7), which corresponded to large effect sizes (Cohen’s d > 0.8), although these were slightly smaller than for the therapist-guided groups. These results have been published \textsuperscript{9}. 

\textbf{Figure 2:} MYM Program Cost-Effectiveness Plane and Acceptability Curve for Cost per QALY Analysis.

\textbf{Figure 3:} MSAA Program Cost-Effectiveness Plane and Acceptability Curve for Cost per QALY Analysis.
Randomised Controlled Trial of the Wellbeing-Plus Course. The results of the large-scale Wellbeing Plus RCT were consistent with the results of preceding trials, although the magnitude of improvements were even greater. Large reductions in symptoms of depression, anxiety, and disability were found in all groups (Cohen’s $d > 1.2$), with no clear differences between the three different treatment models. The improvements were maintained at 3 month follow-up (Figure 4). These results are currently being prepared for publication.

**Figure 4:** Reductions in symptoms of depression (PHQ-9), anxiety (GAD-7) and disability (SDS) at post-treatment and 3 month follow-up, for all three treatment models.
Implementation at the MindSpot Clinic. The Wellbeing Plus Course is now provided as part of routine clinical care at the MindSpot Clinic, and the results have been highly encouraging. Based on an evaluation conducted throughout the 2013 calendar year (n = 175), the Wellbeing Plus Course was associated with large clinical benefits, comparable to those obtained in the preceding clinical research trials. The 2013 evaluation showed that the course reduced symptoms of both anxiety and depression (Cohen's $d > 1.2$), with high levels of acceptability and course completion. Symptom reductions were maintained at 3 month follow-up.

\[\text{Figure 5:}\] Patients enrolled in the Wellbeing Plus Course through the MindSpot Clinic in 2013 showed symptom reductions on measures of depression (PHQ-9, upper panel), anxiety (GAD-7, middle panel), and psychological distress (K-10, lower panel).

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4. Conclusions

“This course is excellent. It provided me with a few basic skills to control my anxiety and low moods and helped me to refocus my energy. I wish I had learned these skills earlier in life. It may have helped me through the difficult periods I have had. I recommend it to anyone who wants to find new ways of dealing with life's problems. Many thanks.”

Our key conclusions are that online treatments can be clinically effective, cost-effective, and acceptable to older adults with anxiety and depression. It should be noted that these conclusions are limited to the courses and methodologies employed here, which have been developed over several years by experienced clinical researchers. It should also be noted that these results relate to the characteristics of the patients in the samples, who were all sufficiently familiar with computers to be able to independently complete an online assessment and participate in a course of online treatment. This latter point is likely to become less relevant as use of computers and the internet becomes increasingly widespread.

Notwithstanding these limitations, the Emotional Wellbeing Project, and the primary output, the Wellbeing Plus Course, has considerable potential to improve the emotional wellbeing of older adults across Australia.
5. Were the Project Aims and Objectives met?

“Thanks so much for your help. I know I will continue to use the wonderful materials and have told several people about your program.”

We are pleased to report that Project Aims and Objectives were met. We believe the Emotional Wellbeing Project has been enormously successful and we look forward to the widespread use of the Wellbeing Plus Course as a tool for improving the emotional wellbeing of older adults.
6. Project Materials

“As a retired person, I found the case studies great and it is so good to know I am not completely on my own.”

Five iCBT interventions were developed during the Emotional Wellbeing Project. Each intervention comprised five online lessons, five homework assignments, and additional resources to target other common symptoms. The five interventions are listed below:

1. Managing Your Mood Program (Version 1)
2. Managing Stress and Anxiety Program (Version 1)
3. Managing Your Mood Course (Version 2)
4. Managing Stress and Anxiety (Version 2)
5. Wellbeing Plus Course

Published or in-preparation results of activities during the Wellbeing Project include:

7. Next Steps

“This was the best resource I have found in my life-long struggle with anxiety and depression. It has helped me to understand the disorders and to understand that I can have some control over managing them. Thank you so much for this service!”

The Project Team recommend that several activities occur with respect to the future directions of the Project. These activities have been discussed with beyondblue, and are subject to further planning and co-ordination, and include:

a. Ongoing dissemination and evaluation of the Wellbeing Plus Course at the MindSpot Clinic.

b. Promotional activities via the beyondblue telephone line.

c. Promotional activities via other media.

d. Modifying the case studies in the Wellbeing Plus Course to include an older (75+ year old) adult.

Such activities will help ensure the potential of the Wellbeing Plus Course is realised and will allow more older adults with anxiety and depression to have access to evidence-based treatment. In turn, this will reduce avertable burden in the community and will help older adults improve the quality of their lives.
8. References


10. Titov N, Dear BF, Staples LG, et al. (Submitted). MindSpot Clinic: an accessible, efficient and effective online treatment service for anxiety and depression.


