Investigating the Effectiveness and Nature of Change in Low-Intensity CBT:
Guided Self-Help for Individuals with Low Mood in New Zealand.

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ABSTRACT

Cognitive Behavioural Therapy (CBT) is an effective treatment for depression, however many people have limited access to this for a variety of reasons including reduced resources, limited access to practitioners, and lack of finances. Low-intensity psychological interventions based on CBT, such as guided self-help, offer a potential solution to this problem. While such interventions are surfacing in New Zealand, there is no current research conducted in a New Zealand sample. Furthermore, many research studies aggregate group outcomes, overlooking the rich information gained from individual time course data, and assume gradual and linear change, which is not always the case across psychotherapy. Early rapid response is a pattern of change that has been identified in traditional CBT studies and more recently in low-intensity CBT and has been associated with better treatment outcomes. The primary aim of this study was to investigate the effectiveness of a guided self-help intervention in a New Zealand sample, using Chris William’s *Overcoming Depression and Low Mood* self-help book with guidance provided by a practitioner either face-to-face or over the telephone. This study also aimed to identify whether participants in this low-intensity intervention demonstrated early rapid response. Nineteen adults experiencing low mood initiated the programme, with 13 completing the six-week programme, which included four support sessions. Low mood was measured by the nine-item Patient Health Questionnaire (PHQ-9), and secondary measures of psychological distress and quality of life were measured by the ten-item Clinical Outcome Routine Evaluation (CORE-10) and the short form Quality of Life and Enjoyment Questionnaire (QLES-SF), respectively. Results were analysed in terms of statistical analyses, visual analysis of individual trajectories across time, and reliable and clinically significant change analyses. In terms of depression, statistical analyses indicated significant changes in outcomes measures over the duration of the programme, yet these were not maintained at follow-up. In contrast, reliable and clinically significant change was demonstrated by the 54 percent of the participants by termination of the programme and by 77 percent at 12 weeks follow-up. Early rapid response was demonstrated by 44 percent of participants as measured by the PHQ-9, and these participants maintained reliable and clinically significant change at termination and follow-up intervals. Secondary measures also demonstrated similarly positive results. The intervention was evaluated positively by the New Zealand sample. Implications for future research and clinical practice are discussed.
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For Leo, Ari and Johnny,

And for Jenny, Rick, Lucy and Nick.
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INTRODUCTION

Depression is an internationally widespread and debilitating mental condition. The World Health Organisation (WHO, 2013) predicts the prevalence of depression will continue to increase, becoming the second largest disease-causing burden by the year 2020. Depression can have a major impact on the affected individual’s health and quality of life (Barge-Schaapveld, Nicolson, Berkhof, & deVries, 1999) and furthermore, the direct and indirect healthcare costs of an individual having depression afflict not only the individual, but their friends, family and the wider society (Klerman & Weissman, 1992). Cognitive behavioural therapy (CBT) is widely recognised as a preferred treatment for depression (Hollon & Beck, 2004) and its efficacy is well established in the literature (see Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012).

In spite of its effectiveness, however, CBT is unavailable and inaccessible to many due to reduced resources, limited access to practitioners, and costs associated with therapy (Lovell & Richards, 2000). As a result, there has been a drive to increase the accessibility of CBT by developing briefer, more cost-effective psychological treatments (Bennett-Levy, Richards, & Farrand, 2010). This has led to the development of so-called low-intensity interventions, with the term low-intensity bought to the fore through its use by the Improving Access to Psychological Therapies (IAPT) programme in England (Clark, Layard, & Smithies, 2007). Low-intensity interventions involve low usage of specialist therapist time or usage in a cost-effective way, such as group therapies (Bower & Gilbody, 2005). The main purpose of low-intensity CBT (LICBT) interventions is to increase access to evidence-based psychological therapies, usually at the minimal level of intervention necessary to achieve the maximum gain (Bennett-Levy et al., 2010).

The evidence base for low-intensity interventions based on CBT has steadily accumulated since their development. For example, there are now numerous meta-analyses and reviews examining the effectiveness of CBT self-help (Cuijpers, Donker, van Straten, Li, & Andersson, 2010; Gellatly, Bower, Hennessy, Richards, Gilbody, & Lovell, 2007; Lewis, Pearce, & Bisson, 2012). Moreover self-help is now recommended as a first step of care for mild to moderate depression in the National Institute for Health and Care Excellence guidelines (NICE, 2009). Although CBT self-help has been demonstrated to be effective “unguided” or with the provision of materials alone, a key
review by Gellatly et al. (2007) identified that the addition of a support person significantly improves outcomes. The delivery of CBT self-help interventions is rapidly changing, with innovations adopted that have the potential to enhance the accessibility, availability and cost-effectiveness of mental health services. As an example, the telephone has been utilised as a way to deliver guidance in low-intensity interventions due to its ability to overcome many of the social, physical and economic barriers that prevent access to mental health services (Bee, Bower, Lovell, Gilbody, Richards, Gask, & Roach, 2008).

The majority of psychotherapy research studies employ a design in which change is determined by pre-treatment versus post-treatment scores. This type of analysis is important as it provides information on whether a treatment works, and to some extent for whom the treatment works. However, in such studies change is assumed to be linear, which is not always the case (Hayes, Laurenceau, Feldman, Strauss, & Cardaciotto, 2007). Analysing the nature of change across a treatment programme (i.e., by taking measures of symptoms at regular intervals across the programme) can reveal whether change is indeed gradual and linear, or perhaps non-linear and discontinuous and punctuated by substantial shifts in symptoms (Hayes, Laurenceau, et al., 2007).

In the traditional CBT for depression literature, certain discontinuous patterns of change have been regularly documented. These are known as sudden gains, a depression spike and early rapid response patterns (Hayes, Beevers, Feldman, Laurenceau, & Perlman, 2005; Ilardi & Craighead, 1999; Tang & DeRubeis, 1999b) and other patterns have also been identified (Stulz, Lutz, Leach, Lucock, & Barkham, 2007). The pattern of early rapid responding has been shown to be associated with treatment outcome; for example clients who show an early response to treatment demonstrate more positive final outcomes (Fennell & Teasdale, 1987). There is less research on this phenomenon in low-intensity interventions, however. As well as the importance of early identification of those responding well to treatment, investigating the process of change allows for early identification of clients at risk of poor outcomes. This is particularly important in low-intensity interventions implemented through a stepped care delivery model, where it can highlight the need to switch to a more intensive modality.

**Overview of the thesis**

The primary aim of the research reported in this thesis was to investigate the effectiveness of a guided CBT self-help programme for adults experiencing depression
and low mood in New Zealand. Chapter 1 provides a brief overview of depression, including epidemiology and prevalence particularly in New Zealand, and introduces CBT as one of the preferred choices of psychological treatment. However, despite the demonstrated effectiveness of CBT, large gaps in treatment access remain. In Chapter 2, low-intensity psychological interventions are presented as supplementary treatment approaches to fill this gap. The evolution of these interventions is discussed, and the model of service delivery employed in health services for the implementation of such interventions is described. Chapter 3 introduces self-help, a form of low-intensity intervention. Empirical literature supporting the use of both unguided and guided self-help is presented, as well as the disadvantages of such interventions. This chapter also describes the various ways in which guidance or support in low-intensity interventions can be offered, focusing on use of the telephone.

A secondary aim of this research was to investigate the nature of change across the LICBT programme; that is, to explore whether the pattern of early rapid responding was evident, and if so, how this influenced treatment outcomes. Chapter 4 considers the importance of investigating the nature of change across psychological treatments in order to understand not just if a treatment works, but how change occurs across treatment. This chapter also discusses the different patterns of change that have been demonstrated in high-intensity interventions, and highlights the paucity of research on these patterns in low-intensity interventions.

The current study is introduced in Chapter 5, which summarises the rationale for the study and details the main aims of the study and the specific hypotheses to be tested. The methodology adopted for this research is outlined in Chapter 6. Chapter 7 presents the results of the study, including statistical analyses, visual analyses, and the reliable and clinically significant changes in the main outcome measures, before concluding with three individual case studies of participants in the programme. Finally, Chapter 8 presents a summary of the findings, comparisons with previous literature, and possible explanations for the study’s results. This chapter closes with a discussion of the limitations of the study; recommendations for future investigations in this area of research; and a discussion of practical implications for clinicians.
CHAPTER 1
DEPRESSION AND COGNITIVE BEHAVIOUR THERAPY

Overview
This chapter provides an introduction to depression and cognitive behavioural therapy for depression. It begins by describing the growing problem of depression in terms of increasing prevalence and the personal, social and economical impact of depression. The prevalence of depression in New Zealand is subsequently reported. Cognitive therapy or cognitive behavioural therapy (CBT) is introduced as an effective treatment option for depression. However, due to a number of factors, demand for CBT has exceeded supply and this chapter concludes by highlighting the shortfalls of CBT.

Depression: A growing concern
Depression is a widespread and debilitating condition. By 2020, it is estimated that depression will be the second highest disease-causing burden in the world, second only to ischaemic heart disease (World Health Organisation, 2007). Depression affects approximately 350 million people globally, and transcends cultural, gender, age and social barriers. Its impact on afflicted individuals, families, communities and economies is profound (Wang, Simon, & Kessler, 2003; WHO, 2013). Personal costs of depression include significant clinical morbidity, increased mortality, particularly from suicide, diminished functioning, and decreased quality of life (e.g., Barge-Schaapveld et al., 1999; Hay, Wells, Sherbourne, Rogers, & Spritzer, 1995; Klerman, & Weissman, 1992; Ustün, 1999). Depression can lead to a number of direct and indirect costs that impose a significant economic burden, including medical resources and professional expertise expended in treatment, loss of earnings, and reduced productivity due to work absenteeism (Berto, D’Ilario, Ruffo, Di Virgilio, & Rizzo, 2000; Lupp, Heinrich, Angermeyer, König, & Riedel-Heller, 2007).

As well as being prevalent in Western countries, depression is an increasingly major cause of disability and poverty in developing countries (Baingana, Kostermans, & Patel, 2003). In New Zealand, depression is experienced by as many as 20 percent of women and 10 percent of men during their lifetime, with an overall lifetime prevalence rate of 16 percent (Oakley Browne, Wells, Scott, & McGee, 2006). The proportion of Māori presenting with depression is substantially larger than that of New Zealand
Europeans, with nearly one in three (29.8%) experiencing a major depressive disorder (MDD) at some point in their lives (Baxter, Kokaua, Wells, McGee & Oakley Browne, 2006). The risk of an individual developing depression increases with the existence of a major non-mood disorder, chronic or disabling medical conditions, and prevalent illnesses such as diabetes, morbid obesity and cardiovascular disease (American Psychiatric Association [APA], 2013).

**Epidemiology of depression**

Depression can be seen to exist on a continuum and the majority of people will feel slightly depressed at various points during their lifetime. According to the 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; APA, 2013), a diagnosis of MDD is warranted when an individual is experiencing symptoms such as depressed mood, inability to derive pleasure from life, sleep and weight changes, feelings of worthlessness and hopelessness, and, for some, suicidal ideation, over a period of at least two weeks. These symptoms significantly affect the individual’s thoughts, emotions, behaviours and physical wellbeing and cause clinically significant impairment in important areas of functioning, including work, family and interpersonal relationships, and general daily functioning (APA, 2013). Features that distinguish major depression from general sadness include the duration of the symptoms, lack of symptom fluctuation (occurring most days, for most of the time), and symptom intensity (significantly impacting on the individual’s ability to function, or requires markedly increased effort) (APA, 2013).

Individuals may experience depressive symptoms with significant functional impairment even if their symptoms do not meet the criteria for clinical depression (Broadhead, 1990; Johnson, Weissman & Klerman, 1992). Such symptoms have been described as “subthreshold”, and definitions and operationalisations of subthreshold depression include scoring below a cut-off score on a self-rating depression scale, having a depressed mood with one or more additional symptoms of a mood disorder, or meeting criteria for minor depression (listed in the appendix of the DSM-IV) (Cuijpers & Smit, 2004). The 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10; WHO, 1992) incorporates “mild depressive episode” as a diagnostic category, where the individual is usually distressed by the symptoms, but will probably be able to continue with most activities. Whether in treatment or in the community, individuals experiencing subthreshold depression have
an elevated risk of subsequent MDD (Angst & Hochstrasser, 1994; Horwath, Johnson, Klerman, & Weissman, 1992; Sherbourne et al., 1994; Wells, Burnam, Rogers, Hays, & Camp, 1992) and quality of life is affected considerably (Cuijpers, de Graaf, & van Dorsselaer, 2004). Subthreshold depression is therefore considered a significant risk indicator of MDD and has been regarded as a component of the prodromal phase of MDD (Eaton, Badawi, & Melton, 1995). Of note, however, is that the majority of people who develop MDD will have initially experienced subthreshold depression but not all people with subthreshold depression will develop MDD. It is therefore important to consider subthreshold depression as a target for preventative intervention and treatment (Kessler, Zhao, Blazer, & Swartz, 1997).

Prevalence of depression in New Zealand

As mentioned above, in New Zealand depression afflicts approximately 16 percent of people during their lifetime (Oakley Browne et al., 2006). The 12-month prevalence of major depression is approximately 5.7 percent, with a clear discrepancy existing between females (7%) and males (4%). In addition to gender, variation also exists in terms of the prevalence across age groups. The highest risk for depression occurs for those aged between 16 and 24 years, who have a prevalence rate of 8.7 percent; prevalence rates decline with increasing age (Oakley Browne et al., 2006). However, although the elderly population are reported to have lower prevalence rates for depression, this may be due to under-reporting or misdiagnosis (Fiske, Wetherell, & Gatz, 2009). For Māori, the 12-month prevalence rate is 6.9 percent, comparable to the New Zealand national average; while for Pacific populations the proportion of diagnoses is well below what is expected given their share of the population (4%), possibly due to under-diagnosis. In terms of the rest of the world, results from other World Mental Health Survey Initiative countries are directly comparable to New Zealand findings due to similar interview and diagnostic criteria (Oakley Browne et al., 2006).

For mood disorders, only three countries (United States, Ukraine and France) reported higher rates than New Zealand (Demyttenaere et al., 2004). Prevalence statistics are also available for the United States (Kessler, Chiu, Demler, Merikangas, & Walters, 2005) and for the six European sites in the European Study of the Epidemiology of Mental Disorders (ESEMeD; Alonso et al., 2004). Although on average New Zealanders show a higher prevalence for depression, this comparison is
difficult to interpret due to the variation that exists across each of the European sites and the variability in response rates (Alonso et al., 2004). Nevertheless, the New Zealand prevalence data combined with the aforementioned personal, societal and economic costs of depression accentuate the need and provision of effective evidence-based therapies for depression and low mood. Despite its prevalence, severity and breadth of its implications, depression is treatable and there are many successful evidence-based interventions for this mental illness, including medication, psychosocial interventions, and various psychological therapies such as CBT (Beck, 1963, 1964; Beck, Rush, Shaw & Emery, 1979).

**Cognitive models of depression**

Cognitive models of depression emphasise the role that cognitive appraisals and evaluations play on the development, maintenance and amelioration of depression (Segal & Dodson, 1992). A variety of models have been developed which explore the connection between the way in which individuals interpret their environment and the nature of their emotional response to these events. Among the most prominent formulations are Beck's (1967) model emphasising the role of depressogenic information processing, Seligman’s (1975) model emphasising the role of causal explanations for events and its reformulation in the hopelessness model (Abramson, Metalsky, & Alloy, 1989), and Rehm's (1977) self-control model.

Of all the models, Beck’s cognitive model is the most recognised and well researched (Garratt, Ingram, Rand, & Sawalani, 2007). Beck’s model describes how people’s perceptions of, or spontaneous thoughts about situations influence their emotional, behavioural (and often physiological) reactions (Beck, 2011). As well as focusing on client’s superficial level of thinking (automatic thoughts), this formulation also focuses on deeper-level cognitions (underlying assumptions and core beliefs) and patterns of dysfunctional behaviour. That is, when individuals are distressed, their perceptions can be distorted and dysfunctional. Individuals may also have distorted beliefs about themselves, their worlds, and other people, which can influence their processing of information, and give rise to their distorted thoughts. Thus, the cognitive model explains individuals’ emotional, physiological, and behavioural responses as mediated by their perceptions of experience, which are influenced by their beliefs and by their characteristic ways of interacting with the world, as well as by the experiences themselves. Depression can then be maintained by negative thinking and reduced
activity, which impacts physical wellbeing and emotional response, as well as subsequent thinking and behaviour (Beck, 2011). It is important to note that this model was not purported to be a causal model, and that other factors, such as genetics (Hankin & Abramson, 2001) and environmental factors (Nabeshima & Kim, 2013) are also involved in the development of depression.

**CBT**

CBT is based on the cognitive theory of psychopathology. The goal of CBT is to achieve a reduction in symptoms and to improve quality of life by replacing the individual’s presumed distorted appraisals of life events with more realistic and adaptive appraisals, and to prevent relapse of the disorder (Craske, 2010). The common features of CBT across various disorders include psychoeducation and development of an individualised cognitive case conceptualisation, as well as the identification and modification of distorted thinking and behaviours related to the difficulties experienced (Westbrook, Kennerley, & Kirk, 2011). A brief review of the principles of CBT will be provided before mentioning the efficacy of CBT.

**Key features of CBT**

CBT can be distinguished in terms of its core principles that remain constant across the range of behavioural and cognitive therapies available (Westbrook et al., 2011). Certainly, therapy is tailored to the individual, however the following fundamental premises underlie therapy for all clients. Firstly, CBT is fundamentally a collaborative undertaking between therapist and client. Both the therapist and client are active participants and both bring essential information to the session: the therapist has the knowledge and skills required for effective ways to solve problems and the client is the expert in their own experiences of the problem. Secondly, CBT focuses on what is happening in the present, and is concerned with the processes that are currently maintaining the problem, with the aim of helping the client to focus on present issues and how these may be effectively managed (Mansell & Taylor, 2012). Thirdly, CBT utilises the principle of empiricism with regard to effectiveness. The therapist monitors outcomes of individual clients and treatments are founded on sound, well-established theories that are tested against evidence in research studies (Mansell & Taylor, 2012). Fourthly, the CBT approach assumes that different kinds of symptoms interact with each other. For example, during treatment for depression, the therapist will socialise the
client to the “five part model” (Greenberger & Padesky, 1995) which allows the client to understand how their problems are interconnected in terms of thoughts, moods, behaviours, and physical reactions in the context of the environment or a specific situation. The five-part model postulates that any change in any of the areas mentioned will cause a shift in the other components. In CBT, there is a focus on cognitions and learning the effects that thoughts have on the other components. For example, for panic disorder, treatment is based on helping the client to understand that it is their own interpretations of their bodily sensations (e.g., thoughts that increased heart rate implies a heart attack) that are driving panic attack symptoms (increased heart rate, sweating, dizziness). Finally, CBT is structured and time-limited. Clients are offered a set number of sessions dependent on the difficulties they are currently experiencing. The use of homework tasks between sessions aims to maximise learning and enables the client to be aware of their symptoms and the factors that affect these (Papworth, Marrinan, Martin, Keegan, & Chaddock, 2013).

**Efficacy of CBT**

CBT is one of the most widely implemented and extensively researched forms of psychotherapy (Hollon & Beck, 2004). CBT has been shown to be consistently effective in the treatment of a wide range of clinical presentations (e.g., Butler, Chapman, Forman, & Beck, 2006; Hofmann et al., 2012). Empirical support has also been found for the use of CBT in children and adolescents (Compton et al., 2004; James, Soler, & Weatherall, 1996), older adults (Edinger, Hoelscher, Marsh, Lipper, & Ionescu-Pioggia, 1992; Stanley, Beck, & Glassco, 1996) and in relapse prevention for the treatment of depression in adults (Fava, Rafanelli, Grandi, & Belluardo, 1998; Hollon, 2003; Paykel et al., 2005; Teasdale et al., 2000). In regard to depression in particular, CBT continues to perform well in tightly controlled studies when compared with waitlist controls, antidepressant medication, and other therapies (Butler et al., 2006). Furthermore, research comparing CBT and antidepressant medication suggests that CBT has an enduring effect that is not found with medication (DeRubeis, Siegle, & Hollon, 2008).

Professional and governmental organisations recognise the value of CBT and it is strongly advocated in National Guidelines in the United Kingdom, the United States and Australia (APA, 2009; Ellis, Hickie, & Smith, 2003; NICE, 2009). The United Kingdom’s National Institute for Health and Care Excellence (NICE) recommends the
use of CBT in the treatment of disorders such as depression, anxiety disorders including generalised anxiety and panic, post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), and body dysmorphic disorder (NICE, 2005a, 2005b, 2009, 2011). The New Zealand guidelines for identification of common mental disorders and management of depression in primary care (New Zealand Guidelines Group, 2008b) recommend that brief evidence-based psychological approaches are used to treat adults with moderate depression. Although they do not recommend certain therapies, they do provide CBT, interpersonal psychotherapy and structured problem-solving as examples of therapies that could be used.

**CBT shortfalls**

Despite the robust research into its efficacy for a range of disorders, it is estimated that fewer than half of those affected by depression actually receive the help they need (WHO, 2013). This is likely the result of a number of factors including barriers to dissemination, demand of CBT exceeding supply, and individual factors regarding help-seeking behaviours. The dissemination of CBT is impeded by a combination of factors, in particular, commonly held beliefs by clinicians about the limited relevance of research trials to clinical practice (based on the nature of the participants treated in clinical trials e.g., levels of severity and comorbidity), and the generalisability of research findings to routine settings (Shafran et al., 2009).

There are a number of arguments about the differences between experimental and clinical practice. It has been suggested that the sample of participants assessed in research trials (e.g., randomised controlled trials; RCTs) may not be representative of the wider community. That is, due to the strict criteria of such trials many people are who are included are unlike that those seen in the community, who may have more complex and chronic problems (Kazdin, 2008b). The treatments in RCTs are delivered to enhance internal validity, and this may be at a cost such that it is not flexible and does not adjust to a client’s needs, and ignores the issue of comorbidity (Franklin, DeRubeis, & Westen, 2006). Furthermore, therapy conducted in the real-world tends to be shorter in duration and subject to a higher attrition rate (Hansen, Lambert, & Forman, 2002; Wierzbicki & Pekarik, 1993). Finally, clinical practice uses a broad focus that addresses not only symptom change, but also life functioning, coping with stressors and quality of life. As these variables are more vague and difficult to measure they are often ignored in RCTs (Kazdin, 2008a).
On the other hand, Shafran et al. (2009) argue that the gap between clinical and research trials may not be as wide as many perceive. They highlight literature in contrast to these beliefs, such as evidence that more recent trials allow most comorbidity (e.g., DeRubeis et al., 2005), and findings from research studies can and do generalise to routine clinical settings (e.g., Weisz, Robin, & Henggeler, 2005; Wilson, 2007). See Shafran et al., (2009) for a more in-depth discussion on these points.

Due to the rise in awareness of the benefits of CBT, in many countries demand began to exceed supply. As an example, in the year 2000 in the United Kingdom, several hundred thousand people were suffering from major clinical disorders (Lovell & Richards, 2000). When morbidity levels were compared to the (estimated) number of available therapists, there was a major shortfall in the provision of CBT therapists, and consequently the number of clients treated (Lovell & Richards, 2000). Moreover many services have lengthy waitlists, and in the National Health Service (NHS) waiting for six to 12 months for treatment was not unusual (Lovell & Richards, 2000). However, this is only the beginning of the problem, as many waitlists actually serve as proxies for restricting access to the service because other mental health professionals are increasingly reluctant to refer clients to such services.

In response to this situation, mental health services began tightening the selection criteria for CBT and emphasising factors such as chronicity and severity, so that only the most complex and chronic cases would receive treatment (Williams & Chellingsworth, 2010). There was, and still is, a huge unmet need in primary care for individuals suffering subthreshold depression and anxiety; many who would benefit from CBT are not referred to services due to their not meeting the selection criteria (Lovell & Richards, 2000). This leads to a paradox in that those who could benefit the most from CBT (i.e., those with mild to moderate symptoms) are least likely to be offered it, and clients whose conditions are the least responsive to CBT are the only ones receiving it, further exacerbating the problem of waitlists. In addition to too few practitioners in the United Kingdom, there are too few training courses, which further limits access. As a result, there quickly developed a situation where there were strong inequalities in terms of access to CBT (Williams & Chellingsworth, 2010).

In conjunction with the increased pressure on service providers, there are other factors that explain why individuals do not receive treatment. The majority of individuals do not seek help themselves, which may be related to treatment costs, the stigmatisation of depression, and long travel distances for those in rural areas (Barney,
A similar situation exists within New Zealand. There is an overall shortage of registered psychologists (Austin, 2010), thus limiting access to treatment, and the already limited government funding for psychotherapy sessions has been reduced to meet increasing demand (Te Pou o Te Whakaaro Nui, 2012). Hence a number of people are unable to access psychological services unless they finance treatment themselves, which is not possible for many. The health economist Lord Richard Layard (2004) suggested a solution to the problem in England: an increase in the availability and accessibility of evidence-based psychological therapies. He argued that the implementation of these services would result in vast benefits on both an individual basis and on an economy-wide level. This solution will be discussed more in depth shortly.

In summary, clinical depression represents a significant burden for individuals, communities and economies. In the treatment of depression, CBT is recognised as one of the preferred therapeutic options (alongside antidepressant medications, interpersonal psychotherapy and behavioural activation; NICE, 2009) due to its clear techniques, sound theoretical base, ability to explain behaviour and strong evidence base. An important consideration at this point is that despite the many advantages of CBT, increased pressure on service providers as well as individuals not receiving treatment for various reasons means that many people who require treatment are unable to access it. This situation has led to the investigation of ways to increase access and availability of CBT, which are discussed in Chapter 2.
CHAPTER 2
THE EVOLUTION OF LOW-INTENSITY CBT INTERVENTIONS

Overview
This chapter focuses on the evolution of low-intensity interventions. It reviews the background to the development of low-intensity interventions and describes the key features of low-intensity interventions, including the additional principles to that of CBT. Low-intensity interventions are embedded within specific systems of delivery in mental health care, which is reviewed and followed by a successful example of such implemented in England. The chapter concludes by reviewing New Zealand’s position on low-intensity interventions.

Origins of low-intensity interventions
In the quest for CBT services that are accessible, cost-effective and evidence-based, alternative treatment delivery models have played an important role. An influential article by Lovell and Richards (2000) suggested that although there was an evidence base for delivering CBT in its traditional format (12–20 one-hour sessions), there was also evidence to suggest that CBT could be offered in two additional ways: using wider access approaches, for example CBT self-help or group treatments; and the delivery of the key components of CBT in a more focused, shorter intervention, such as behavioural activation for depression, and progressive exposure and response prevention for anxiety (Williams & Chellingsworth, 2010). The evidence for the latter came about due to the advent of “dismantling studies”, in which interventions are “deconstructed” to understand which therapeutic components are important and which are redundant. Such studies compare simpler aspects of therapy like behavioural techniques, with more complex cognitive techniques. Other studies compare complex “multi-strand treatments” (techniques drawn from both cognitive and behavioural models) with simpler “single-strand treatments” (drawn from one model).

In investigating the elements for CBT for depression, for example, Jacobson et al. (1996) randomly assigned 150 depressed outpatients to one of three groups, either behavioural activation only (BA), behavioural activation plus activation and modification of dysfunctional thoughts (AT), or cognitive therapy (CT), which included behavioural activation, activation and modification of dysfunctional thoughts plus
schema-focused work. The results showed that all groups improved and, importantly, that both BA and AT treatments were just as effective as CT at altering negative thinking as well as dysfunctional attributional styles – specific target symptoms for both AT and CT (Jacobson et al., 1996). Other CBT dismantling studies have also found little superiority for one treatment over another, or no difference between multi-strand and single-strand approaches for varying clinical presentations such as OCD, agoraphobia, PTSD and social phobia (Abramowitz, 1997; Chambless & Gillis, 1993; Feske & Chambless, 1995; Tarrier, Sommerfield, & Pilgrim, 1999). These studies suggest that there is little difference between simpler and more complex cognitive treatments, and that multi-strand treatments may not convey additional benefit to single-strand interventions (Lovell & Richards, 2000).

Other authors have proposed that CBT should be offered using wider access approaches. Therapist time could be reduced either by offering brief therapies (such as bibliotherapy/self-help books) or the use of alternate delivery systems (e.g., telephone, computer, self-help clinics). There are many examples of uncontrolled and controlled studies that have compared brief therapies with a placebo, no treatment, or non-CBT treatment and studies that have investigated alternative access systems in the delivery of treatments (telephone treatment, postal self-help books, computer programmes) with promising results (e.g., Gould & Clum, 1995; Kenwright, Liness, & Marks, 2001; Lovell, Fullalove, Garvey, & Brooker, 2000). Another argument for offering CBT in an alternate way is the inefficiency inherent in the traditional delivery system. The usual method of accessing CBT for a client in the first instance is generally consultation with a general practitioner (GP) for referral to a therapist’s waitlist. When seeing the therapist, clients are allocated approximately 50 minutes per session, and engage in therapy weekly for a total of 12–20 sessions. Treatment is usually in a face-to-face format, on an individual basis. In order to receive therapy, the client must travel to the therapist’s office, and usually must do so between the hours of 9am and 5pm.

Although self-referrals, out of hours, domiciliary, group or other services do exist, this traditional outpatient model is the major route of access for CBT, and unfortunately this delivery system is inefficient for a number of reasons. Firstly, time is wasted when clients do not attend sessions; this is a common occurrence with up to 25 percent of clients not attending initial appointments (Zegleman, 1988). Secondly, the usual CBT session duration of approximately 50 minutes is based on tradition and therapist convenience rather than evidence: it is unknown if this is the optimum session
time for therapeutic efficacy (Dobson & Dobson, 2009). And thirdly, a negatively accelerated dose–effect curve has been demonstrated for psychological treatments in general (Howard, Kopta, Krause, & Orlinsky, 1986). This can be partially accounted for by the fact that people improve at different rates, with large numbers substantially improving in the early stages of therapy (known as early rapid response; Ilardi & Craighead, 1999). This has also been confirmed for CBT treatments specifically, for example Barkham et al. (1996) demonstrated that when limits on the number of sessions were imposed upon clients, they improved more rapidly. While clients who received more sessions (e.g., 16) ultimately improved more than those who received eight sessions, the difference was minimal when taking into consideration the extra effort from both therapist and client. Hence Lovell and Richards (2000) concluded there was an increasingly persuasive evidence base for brief CBT interventions, accessed through alternative delivery systems, which have a powerful effect on a wide range of disorders that traditionally would have been treated using regular and prolonged therapist-assisted face-to-face sessions. This has led to the development of a wide range of low-intensity interventions, and the evidence base for these interventions has progressively strengthened over the past 13 years (see Chapter 3 for a full review of this evidence base).

**Key features of low-intensity interventions**

A low-intensity intervention is an umbrella term that encompasses a variety of approaches whose primary purpose is to increase access to evidence-based psychological therapies, using the “minimum level of intervention necessary to create maximum gain” (Bennett-Levy & Farrand, 2010, p.8). Thus, low-intensity interventions refer to low usage of specialist therapist time, or usage in a cost-effective way (e.g., in a group context). The distinction between low- and high-intensity interventions is a recent development, the terms being coined in relation to the idea that less intensive therapies (or minimal interventions) should be offered alongside more intensive therapies (Bower & Gilbody, 2005; Haaga, 2000). That is, low-intensity interventions should be offered initially to clients experiencing mild to moderate psychological difficulties, with the aim of enabling high-intensity CBT (such a face-to-face therapy) to be accessed by those with more severe difficulties (Bower & Gilbody, 2005). Low-intensity psychological interventions have been developed based upon a number of different theoretical models, yet the most empirically supported low-intensity approaches are those based on CBT
(Richards, 2010), and these interventions are herein referred to as low-intensity CBT (LICBT). To summarise the definition of these interventions in brief, LICBT interventions are typically relatively simple and brief, and aim to communicate CBT principles in an accessible and flexible way, in a variety of forms and media.

Due to its evolution from traditional CBT, low-intensity therapies are based on the theoretical model and principles of CBT aforementioned. However LICBT is distinct in terms of its use of differing forms of therapy delivery, and as a result there are additional principles that help to define the approach.

A principle specific to LICBT is that of efficiency. This means that both individuals and whole populations should benefit by treatment being delivered in the most cost-effective manner (Richards, 2010). LICBT is a high-volume approach that enables a practitioner to help more clients than is possible in a high-intensity format. This is achieved through reducing the amount of time the practitioner is in contact with individual clients, whether this is through brevity of therapy duration, seeing them for fewer or shorter sessions, delivering the intervention to many clients simultaneously (e.g., in a group context), or by supporting their use of specific materials (e.g., self-help, Internet-based interventions).

An additional principle relates to the specific “vehicles” used to facilitate the delivery of CBT. For example, self-help materials, large group formats and computerised CBT are all vehicles used to facilitate the delivery of CBT and these help the practitioner to administer the intervention at an accelerated pace. While homework has traditionally been a feature of traditional CBT, the relationship between the practitioner, materials and the client has changed within LICBT. The CBT now largely resides within the materials, as opposed to within the therapist. In traditional CBT the idea is that the therapist brings their expertise in CBT, while the client brings their expertise about themselves. However in LICBT the materials provide the information on CBT, and the practitioner brings their expertise in providing guidance and support (Bennett-Levy & Farrand, 2010).

Finally, early access to services is important in LICBT for prevention and early intervention (Papworth et al., 2013). To maximise service effectiveness, clients need to be able to access help early in the development of their difficulties. At such an early stage, a relatively small amount of therapeutic input may significantly shift the trajectory of the client’s problems. With time, difficulties may become chronic and embedded within a client’s lifestyle, thereby reducing the ability to respond to a low-
intensity approach.

There are further differences between traditional or high-intensity CBT and low-intensity therapies in regards to the language used in the materials and the greater emphasis placed on measurement of routine clinical outcomes. In terms of the language used in the materials, some traditional CBT materials use technical language requiring a high reading age, which may limit comprehension and can result in increased attrition. For example, Beck et al.’s (1979) *Cognitive Therapy for Depression* has a reading age of 17, though the more recent *Mind over Mood* (Greenberger & Padesky, 1995) has a reading age of 15 (Williams & Martinez, 2008; Williams & Whitfield, 2001). Hence, in order to increase engagement, accessibility and potentially adherence, LICBT materials have a lower reading age: Williams’ (2009) *Overcoming Depression and Low Mood: A Five Areas Approach*, for example, has a reading age of 12.6 years.

Although the measurement of clinical outcomes is important in high-intensity CBT, there is a greater emphasis placed on this in low-intensity interventions. In measuring and monitoring outcomes, the treatment can be evaluated with sensitive, accurate and valid measurement tools and this is beneficial for a number of reasons, ranging from an individual level, to the level of practitioners and services and even the national level (Martin, 2013). An individual can benefit from the collection and monitoring of outcome data by validating their experience, seeing their response to treatment, and demonstrating progress. In addition, outcome measures can monitor risk in LICBT. For a practitioner, outcome data can be used to help guide assessment, inform treatment, offer another source of information, and can be used in supervision to determine suitability of the treatment and efficacy of the service being delivered. Finally, on a national scale, outcome data can be collated to evaluate treatment or programme efficiency (such as in the Improving Access to Psychological Theories [IAPT] scheme, discussed below) and identify gaps in treatment provision. See Table 2.1 for a summary of the similarities and differences between high- and low-intensity CBT interventions.

It is important to consider the wider perspective of how mental health services should be structured so that both high- and low-intensity CBT can be delivered, and “stepped care” is central to enhancing the capacity of services in terms of access and choice.
Table 2.1 Similarities and differences between high- and low-intensity CBT interventions

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<tr>
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<th>Differences</th>
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<td>Present-focused</td>
<td>Efficiency/ cost</td>
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<td>Empiricism</td>
<td>Vehicles of delivery</td>
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<td>Collaborative</td>
<td>Early access</td>
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<td>Structured and time-limited</td>
<td>Clinical outcomes</td>
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<td>Interacting symptoms</td>
<td>Therapeutic relationship</td>
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**Stepped care model of service delivery**

Low-intensity interventions are not remote from other mental health services, but are embedded within systems of treatment delivery, which ensures that people receive the intervention most appropriate for their needs (Bower & Gilbody, 2005). As previously mentioned, the principal organisational system of treatment delivery is the idea that less intensive therapies should be offered alongside more intensive therapies, which is known as stepped care (Haaga, 2000; Richards 2010). Stepped care is a variation of the traditional system in which clients are referred from primary care to a specialist when the primary healthcare worker does not possess the resources or skills to deliver the required treatment (Richards, 2010). It is a system of delivering and monitoring treatments so that the most effective, yet least resource-intensive treatment is delivered to clients first (Richards & Borglin, 2011).

The stepped care model has two fundamental features: first, the recommended treatment step should be the least restrictive to those available while achieving the required outcomes. This means that the treatment should burden the client and the healthcare system as little as possible on the way towards a positive clinical outcome (Richards, 2010). The second principle is that stepped care is self-correcting, which means that a feedback mechanism is involved whereby the intensity of the treatment can be adjusted if required (Bower & Gilbody, 2005). Thus, the results of treatments and decisions about treatment provisions are monitored systematically and changes are made if current treatments are not achieving significant health improvement. For example, within the initial “steps” (for clients with mild to moderate problems), interventions range from those that are less intensive, like psychoeducation or self-help interventions, to more intensive forms of individual therapy for those who are unresponsive to treatment or have more severe problems, such as CBT (considered to be
an ideal candidate for stepped care due to its strong evidence base and the ability to have a consistent approach across low- and high-intensity steps) and pharmacotherapy. Accordingly, some individuals will only experience one step, whereas others may experience different components of the service that are based on other steps (see Figure 2.1).

There are, however, some criticisms of the stepped care model. Bower and Gilbody (2005) assert that although stepped care has the potential to improve the delivery efficiency of psychological therapies, the exact form of stepped care which maximises client benefit is unclear. They argue that there are two ways in which stepped care may be organised within a health system: the **stepped approach**, which allocates a low-intensity intervention to all clients, and then uses the scheduled review to “step up” clients who do not benefit from this initial treatment (Richards & Suckling, 2008). In contrast, a **stratified or matched** approach initially allocates clients to interventions at different steps according to objective measures of their symptoms (Richards & Suckling, 2008). The latter is potentially a better method, as it does not necessitate that clients endure failing treatments prior to eventually getting their needs met, but is dependent on accurate assessment and knowledge of the types of clients who are most likely to benefit from a particular intensity of intervention. A combination of 'stepping' and 'stratification' is likely to be required, and the NICE guidelines (2009) recommend both systems simultaneously.

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**Figure 2.1** The stepped care model (NICE, 2009)
Another criticism of the model is that there is a perception that low-intensity interventions (at the lower steps) are second best to high-intensity treatments. For example, the language of the stepped care model implies a hierarchy – phrases such as “stepping up” or “stepping down” suggest that certain treatments are better than others (Williams & Martinez, 2008). In a survey of 265 accredited CBT practitioners, Keeley, Williams and Shapiro (2002) asked for their attitudes towards the use of low-intensity (specifically self-help) approaches. The majority considered self-help to be less effective than therapist intervention in terms of potential benefits to the client (69%), client compliance (73%), client satisfaction (73%), and client expectancy of success (68%). Yet in a recent meta-analysis investigating the comparative effectiveness of guided self-help (low-intensity) treatments with traditional face-to-face psychotherapy for depressive and anxiety disorders, Cuijpers et al. (2010) found no indication that the effects of guided self-help and face-to-face treatments differ significantly from each other, despite using statistical tests able to detect small differences. This was also true for follow-up periods of 12 months. Despite these criticisms, the stepped care model has been implemented successfully within mental health services around the world to deliver both high- and low-intensity interventions, and an example of a programme that utilises stepped care is the England’s Improving Access to Psychological Therapies initiative (Clark et al., 2009).

**Improving Access to Psychological Therapies**

Perhaps the most significant recent development in the wider landscape of CBT, and in particular LICBT, is England’s IAPT programme. This programme was instigated in 2006 to implement LICBT interventions within the National Heath System (NHS). It was a multi-million pound effort to test the economist Lord Layard’s (2004) hypothesis that large-scale expansion of evidence-based psychological therapies would increase both happiness and productivity. Layard reasoned that the provision of psychological therapies in the treatment of depression and anxiety would improve the health and well-being of individuals, positively impact the number of people fit to work, and overall ease the financial burden on the taxpayer for the cost of not treating those suffering from depression and anxiety.

The aim of the programme was to enable the NHS to implement the NICE guidelines for treating depression and anxiety disorders by making effective psychological therapies more readily available to everyone who needs them, at the
right time and in the right place (Seeward & Calrk, 2010). After the evaluation of two pilot sites in 2006 (Clark et al., 2007), 11 sites were funded before the process of rolling services out across the nation started in 2008 (IAPT & Department of Health, 2008). In 2011, key successes of the programme included over one million people entering treatment with 680,000 completing it; significantly improved recovery rates consistently in excess of 45 percent and 65 percent; and over 45,000 people moving off sick pay benefits (IAPT & Department of Health, 2012).

Similar interventions have since been implemented around the world. In Scotland, a multi-level, multi-purpose model called “STEPS” is a variant of the stepped care model and was developed in response to the need for an effective, acceptable and accessible service for common mental health problems such as depression and anxiety (White, 2010). More recently, the “Bounce Back: Reclaim Your Health” (Lau & University of British Columbia, 2011) low-intensity initiative was launched in Canada with the objective of developing a range of CBT services within a stepped care approach, and to improve access to CBT services for people with indicated mental health diagnoses.

In the year 2000, Australia launched beyondblue: the national depression initiative through a stepped care model (Highet, Shann & Young, 2010). This involved the implementation of a range of low-intensity interventions across population groups and settings, such as the Internet-based self-help programme ‘e-couch,’ which addresses depression, anxiety, relationship problems, and grief (Beyond Blue, 2010). Other countries that have implemented low-intensity interventions using a stepped care model include Chile (Araya et al., 2003), the United States (Unützer et al., 2008), India (Patel et al., 2010), and the Netherlands (Van’t Veer-Tazelaar et al., 2010).

In New Zealand, the Ministry of Health (2009) first identified the need for a stepped care approach to be adopted into the primary health care services in 2009. This was highlighted as a key priority action to improve both service provision and outcomes for individuals in primary and specialist services. More recently, the Mental Health Commission (2012) reinforced the need for a stepped care approach spanning primary, community and specialist services, stating “one of the more powerful approaches which enabled the most effective use of available resources has been the development of ‘stepped care’”. Furthermore, they proposed that there should be an uptake of evidence-based low-intensity self-help options to prevent and/or manage mild to moderate mental health and addiction difficulties. It therefore appears that an investigation into low-
intensity interventions for adults in New Zealand is a priority moving forward, an investigation which the research reported in this thesis is contributing to.

In summary, in the investigation of ways to increase access and availability of CBT dismantling studies demonstrated that aspects of therapies could be offered in more focused, shorter, interventions and still be effective. This led to the evolution of low-intensity psychological interventions, which use the “minimal level of intervention necessary to create maximum gain” (Bennett-Levy et al., 2010, p. 8). The principles of LICBT interventions comprise those of CBT, and additionally include the principles of efficiency, differing vehicles for delivery, early access to services, and greater focus on outcomes. Stepped care is now widely implemented as a model to organise the provision of mental health services, where low-intensity interventions are offered first before clients stepping up to more high-intensity treatments such as traditional CBT. The development and implementation of the IAPT initiative in the England and other countries worldwide illustrates the successful employment and utilisation of low-intensity interventions and the stepped care model in health systems on a global basis. Chapter 3 introduces and reviews a particular form of low-intensity intervention, self-help.
CHAPTER 3
SELF-HELP INTERVENTIONS

Overview
Examples of widely used low-intensity cognitive behavioural therapy (LICBT) interventions are self-help materials, psychoeducation, bibliotherapy, psychoeducation groups, brief face-to-face therapy, and guided self-help, which is the focus of the current study. This chapter reviews the client group at whom self-help is targeted and the research literature on various models of self-help treatment. Many low-intensity interventions use different modalities to provide guidance and support, and one example is the telephone. Research on use of the telephone in high- and low-intensity interventions is also reviewed.

Definition of self-help interventions
This study adopts the definition provided by Williams (2003), in which self-help treatment is defined as the “delivery of materials that employ a media-based format to treatment such as a book, computer or video tape. However delivered, self-help materials aim to increase the user’s knowledge about a particular problem, and also to equip them with skills to better self-manage their difficulties” (p. 173). The self-help protocol is typically composed of information, explanations and exercises that are relevant for the particular problem. As noted in the definition, treatment modalities include written books, computer software, videotape or the Internet. Self-help materials may be used as a standalone psychological intervention, without therapist contact (known as unguided self-help), or as an adjunct to therapist-delivered care (guided self-help). The concept of working through the materials independently is important as it highlights that the materials provide sufficient clarity to do so and, in addition, that the person learns to help him or herself (Williams, 2003).

Self-help therefore plays an important role in increasing the client’s sense of control over and understanding of their mental health, preventing relapse, reducing the amount of time spent in therapy and increasing motivation (Keeley et al., 2002). It is important to clarify the difference between psychoeducation (the provision of therapeutic information) and self-help, as although they may have some overlap in content and both are low-intensity interventions, the goals of self-help and
psychoeducation differ. Psychoeducation is an important part of all CBT treatments and aims to increase client knowledge, whereas self-help approaches aim to increase not just knowledge but to teach skills, coping strategies, and allow efficient self-management with minimal therapist contact (MacLeod, Martinez, & Williams, 2008).

Self-help approaches have many advantages, including low stigmatisation, the ability to be easily updated, are flexible in that the client can complete it when convenient and at their own pace, and they allow for the client to take control of their own recovery (Williams & Whitfield, 2001). Moreover, gains may be consolidated by completing or revising treatment materials whenever necessary, at no extra cost.

**Who benefits from self-help?**

It is important to initially discuss the client group who will benefit from the use of self-help before reviewing the types of self-help and the efficacy of these. Various factors will affect whether clients are able to make effective use of self-help materials. Older literature suggests that self-help interventions should be applied only to individuals with mild to moderate depression (Cuijpers, 1997). It has been stated that self-help materials require sustained attention and motivation – skills that may be significantly impaired by depression. Furthermore, considering the serious risks of suicide when dealing with depressed clients, self-help interventions would be more appropriately suited to less severely depressed individuals (Gregory, Schwer Canning, Lee, & Wise, 2004). More recently, however, it has been suggested that self-help interventions can be suited for moderately severe depressed individuals. In a meta-analysis of 16 data sets (2470 clients with depression) comparing low-intensity interventions with usual care, Bower et al. (2013) noted that despite being referred for low-intensity interventions, many clients had moderate to severe depression at baseline. Their results demonstrated a significant interaction between baseline severity and treatment effect, suggesting that clients who are more severely depressed at baseline demonstrate larger treatment effects than those who are less severely depressed. It is important to note that the magnitude of the interaction was small and may not be clinically significant; nonetheless, these results suggest that more severely depressed clients show at least as much clinical benefit from low-intensity interventions (Bower et al., 2013).

The United Kingdom’s National Institute for Health and Care Excellence (NICE; 2009) propose that CBT self-help may be utilised in the treatment of mild and moderately severe depression. In the initial findings of IAPT demonstration sites, Clark
et al. (2009) illustrated that low-intensity interventions may indeed be used for populations of similar severity as high-intensity interventions. However, although both approaches may be effective in a range of severity, it is important to consider complexity of clinical presentations, as it seems more likely that a high-intensity approach may be more suited in determining interventions based on a complicated clinical formulation (Ridgway & Williams, 2011). NICE (2009) suggests the following factors should be considered when determining the appropriate step in a stepped care model: evidence of risk, comorbid mental health problems, complex social problems, and past treatment history. In selection for self-help treatments, practitioners should also consider a number of additional client characteristics such as cultural relevance and acceptability of self-help content and format to the potential recipient (Campbell & Smith, 2003); the client’s expectations of treatment in regard to the relationship with the therapist and their potential for feeling discounted or rejected by receiving a recommendation for self-help (Floyd, 2003); and a client’s reading level (Campbell & Smith, 2003) and learning style (Williams, 2003).

As aforementioned, it is important for the individual to be matched to the method of delivery of self-help as much as possible. This implies that the client is offered the type of intervention they need, delivered in a form they find acceptable (Williams & Chellingsworth, 2010). This allows people suffering from certain symptoms of depression who would usually not attend certain sessions (due to a lack of energy, low mood) to be involved in a programme (e.g., via the telephone, or computerised CBT [CCBT]).

Finally, the evidence suggests that many people (both practitioners and users) find CBT self-help treatments acceptable interventions for psychological distress. A survey of 265 CBT practitioners in Britain found that 88.7 percent recommended self-help to clients (Keeley at al., 2002). Practitioners indicated that they mainly used CBT-based self-help resources, and most used written material. Those trained in the use of self-help were more likely to use it, however only 36.2 percent of practitioners had any previous training. Users of self-help are also in agreement that self-help is an acceptable intervention. Eighty-six percent of participants on a CCBT programme reported they were satisfied or very satisfied with the programme, noting convenience, ability to proceed at their own pace and privacy as advantages (Andrews, Cuijpers, Craske, McEvoy, & Titov, 2010); and people have also expressed their satisfaction with the
addition of a self-help programme to medication, despite it being no more effective than medication alone (Salkovskis, Rimes, Stephenson, Sacks, & Scott, 2006).

**Unguided self-help**

Unguided or “pure” self-help interventions are resources that involve no therapist contact, such as bibliotherapy/written self-help (handouts, manuals, workbooks), DVDs, audiotapes, the Internet, and computer programmes. CBT is particularly suited to a written or computerised format due to its structured approach, educational form, and ability to be presented in a logical and progressive manner. Due to the capacity of the Internet for the ready delivery of services and programmes directly to consumers, this has become a focus for many self-help programmes, be it via Internet-delivered CBT interventions (iCBT) or CCBT programmes (for convenience’s sake, hereafter both iCBT and CCBT will be referred to as CCBT). Please note that CCBT programmes may also be offered with guidance from a practitioner, and studies with or without a support person are acknowledged under the appropriate sections below.

**Efficacy of unguided self-help**

The efficacy of pure self-help interventions has been examined in a considerable number of studies, some of which are only briefly reviewed here. Randomised controlled trials (RCTs) on CCBT in recent years have demonstrated they are more effective than no care or treatment as usual. For example, Proudfoot et al. (2004) randomly allocated 274 clients experiencing depression and/or anxiety to receive *Beating the Blues* or treatment as usual within a primary care setting. The results of this study were statistically significant: the CCBT group had depression scores as measured by the Beck Depression Inventory-II (BDI-II) two to seven points lower than the treatment as usual group. In addition, scores on other response variables were significant: anxiety decreased, work and social adjustment improved, negative attributions decreased and positive attributions increased. CCBT also appeared to be an acceptable intervention for people experiencing anxiety and depression in primary care (Proudfoot et al., 2004).

*Overcoming Depression* (Williams, Taylor, Aubin, Harkin, & Cottrell, 2002) is a six-session CBT-based CD Rom that has demonstrated statistical effectiveness in significantly reducing symptoms of depression in a pilot study in a psychology clinic in Glasgow, Scotland (Whitfield, Hinshelwood, Pashley, Campsie, & Williams, 2005). In
New Zealand, *Overcoming Depression* was implemented in a primary care setting and was found to significantly reduce depression, with reductions being maintained at six-month follow-up. However, the programme did not reduce symptoms of depression significantly more than a waitlist control. There was a high amount of attrition in this study (31%) and both the treatment and control groups had small sample sizes (Scheibmair, 2010).

Anderson et al. (2005) conducted a meta-analysis of CBT-based self-help books and reported some effectiveness in relieving symptoms of depression, however the evidence was drawn from small studies of limited quality. They reported that although these books are readily available, there is little direct evidence for their effectiveness and more work is required in primary care to investigate the cost-effectiveness of self-help and the most suitable presentation of the materials.

Meta-analyses on unguided self-help have demonstrated positive results. Cuijpers et al. (2011) found small but statistically significant effects on participants with elevated levels of depressive symptomatology (Cohen’s $d=0.28$). Furthermore, at four to 12 months post-intervention these results were still statistically significant ($d=0.23$). The overall quality of these studies was high, as the researchers used only self-report measures as to not introduce bias. Lewis, Pearce and Bisson (2012) conducted a systematic review of self-help interventions for anxiety disorders and compared with a waitlist control, self-help interventions yielded significant differences, with an effect size (Cohen’s $d$) of 0.84. This included both unguided and guided self-help studies however, yet when restricted to only web-based and multimedia programmes the effect size was 0.90.

As well as being effective for depression and anxiety, there is also evidence that unguided self-help is effective for other clinical problems such as panic disorder (Nordin, Carlbring, Cuijpers, & Andersson, 2010); social phobia (Rapee, Abbott, Baillie, & Gaston, 2007), bulimia nervosa (Ghaderi & Scott, 2003); and other problems such as weight control (Scogin, Bynum, Stephens, & Calhoon, 1990) and assertion and career choices (Marrs, 1995).

Nevertheless, there have also been some less convincing results returned by the research. Unguided bibliotherapy was used to treat anxiety and depression in primary care, and was found to be no more effective than the waitlist control, although a small

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1 Cohen’s $d$ (effect size) is defined as the difference between the means, $M_1 - M_2$, divided by standard deviation, $s$, of either group.
sample size may have reduced the possibility of finding a statistical difference (Fletcher, Lovell, Bower, Campbell, & Dickens, 2005). Salkovskis et al. (2006) also found that the addition of bibliotherapy to antidepressant medication for depression in a primary care setting was no more effective than antidepressant medication alone. However, they found high levels of satisfaction with the bibliotherapy and asserted that self-help may be more effective in practices that are less well resourced.

**Limitations of unguided self-help**

There are also a number of limitations associated with completing self-help without the guidance of a practitioner. For example, computer-guided self-help programmes are typically designed to address one type of problem at a time and are unable to identify more complicated issues. That is, such a programme is unable to detect subtle verbal and non-verbal cues, or answer all the questions a user may have (van’t Hof, Cuijpers, & Stein, 2009). A pure self-help intervention may not conduct a proper diagnostic interview and thus users may choose an inappropriate intervention aimed at a disorder different to the one they are presenting. Furthermore such interventions are not feasible and acceptable for all clients; for example, those that are illiterate or unfamiliar with the relevant technologies. In addition, access to a computer or the Internet is limited or non-existent in low-income countries (Cuijpers & Riper, 2007).

Another issue is that of the retention rate in self-help studies. For clients, the high level of flexibility in deciding when to access self-help can be seen as a convenience, yet this can often have a negative effect on one’s perseverance in completing the self-help course. Dropout rates in self-help studies vary greatly, from zero to 75 percent, although it has been argued that this is comparable to other psychological therapies (Kaltenthaler et al., 2008). In a review investigating the barriers to CCBT, results indicated that 79 percent of participants who entered a CCBT treatment completed the programme, suggesting a 21 percent dropout rate (Waller & Gilbody, 2009). Dropout rate is related to feelings of hopelessness and poor motivation and as such may amplify feelings of depression and anxiety (Whitfield, Williams, & Shapiro, 2001). On the other hand, Ridgway and Williams (2011) argue that it seems unjustified to suggest that dropout rates are an inevitable consequence of self-help; it is clear that for some clients they adhere well to such interventions and find them highly acceptable. It has been suggested that this difficulty with dropout rates might be overcome by specifying a fixed period of time to complete the sessions (Sánchez-Ortiz
et al., 2010).

Finally, due to the absence of a therapist, there is a lack of detection of the worsening of a patient’s clinical state (MacLeod et al., 2008). Although some materials include items to assess the client’s clinical state, they lack the personal review central to a practitioner’s judgment. The addition of support or guidance is able to overcome this issue by monitoring the client’s progress through periodic support sessions or phone contact. Thus guided self-help may enhance motivation and in turn reduce dropout rates, while providing monitoring for safety.

**Guided CBT self-help**

Guided self-help is in contrast to pure self-help (treatment without therapist contact) and has been suggested to be more effective than the provision of information alone because it provides the optimal balance between efficiency and effectiveness (de Graaf et al., 2009; Gellatly et al., 2007). Richardson, Richards, and Barkham (2008) suggest that the “contribution of common factors that operate in personal therapeutic encounters, for example, therapist responsiveness and the therapeutic alliance, may be one possible overlooked reason for the reduced effectiveness of self-help materials” (p. 13). This suggests that the therapeutic impact of CBT self-help may be attributable to more than just the materials themselves and the effects of self-help can be enhanced by delivering it in the context of a support person (Richardson & Richards, 2005). In low-intensity interventions, the guidance provided by such a practitioner is of a supportive nature designed to facilitate progression through the self-help programme and support the use of written materials or the Internet. Gellatly et al. (2007) argue that there is no need for therapy to take place; support/monitoring is all that is required. In contrast to traditional CBT, which is often led by a highly trained and qualified specialist practitioner (CBT trained or psychologist), low-intensity interventions use practitioners specifically trained to deliver LICBT, who may not have a health or high-intensity CBT qualifications (Ridgway & Williams, 2011).

**Low-intensity practitioners**

It is important to discuss the definition and role of the low-intensity practitioner as this differs across contexts. The practitioners who provide the guidance or support have been referred to by a number of different titles including coach, self-help support worker, low-intensity worker, paraprofessional, or psychological well-being practitioner
(PWP), the term used by IAPT. Although the titles may share similar role functions, definitions and the role of the practitioner may differ depending on the service they are working within. Within the IAPT curriculum, PWP are specifically trained to deliver low-intensity interventions and as such are trained and highly qualified for the role, which is known to predict better outcomes (Bower, Gilbody, Richards, Fletcher, & Sutton, 2006). As well as offering guided self-help, the role of a PWP may be seen more as a case manager. This may involve organising additional support from external agencies and working alongside general practitioners (GPs) and other staff in primary care, promoting community engagement, and supporting the use of medication (Baguley et al., 2010).

There is a paucity of literature comparing the effects on outcomes of PWPs, low-intensity practitioners, and traditional CBT therapists. Montgomery, Kunik, Wilson, Stanley and Weiss (2010) reviewed the utility of paraprofessionals versus professionals in administering CBT for anxiety and depressive symptoms, though only four studies (of high methodological rigour and quality) met inclusion criteria. They concluded that paraprofessionals can be effective in delivering CBT, and although data from two of the studies suggested slight advantages for professionals, paraprofessionals generally achieved comparable results. Christensen and Jacobson (1994) examined the effects of courses led by low-intensity practitioners, and concluded that low-intensity practitioners usually produce effects that are greater than those of control conditions and comparable to those of high-intensity therapists. Bright, Baker and Neimeyer (1999) compared the effectiveness of paraprofessionals and professionals in administering CBT group therapy and a minimal support group therapy. None of the paraprofessionals had advanced degrees in psychology, whereas all the professional therapists had a Master’s degree or higher in clinical or counselling psychology, with several years’ experience. The results demonstrated that paraprofessionals are as effective as professionals in reducing depressive symptoms and clients in both conditions improved equally. However, it is of note that following treatment more clients in the professionally-led CBT group were classified as non-depressed than those in groups led by paraprofessionals. Thus, although the literature indicates that paraprofessionals or low-intensity practitioners may be as effective as professionals in delivering CBT, more research is required to make more definite conclusions regarding effectiveness at follow-up.
Efficacy of guided CBT self-help

The efficacy of guided self-help has been demonstrated in a substantial number of studies which continues to increase. A seminal review by Gellatly et al. (2007) demonstrated that practitioner support leads to significantly improved outcomes in the use of self-help for depressive symptoms. For pure self-help interventions, they found an effect size (Cohen’s d) of 0.06 (considered small according to current convention). Yet when the analysis was restricted to include only guided self-help studies, the effect size increased to 0.80 (considered large). Although there were various methods of delivery and different learning styles involved, the authors also found no difference in the effectiveness of written self-help (0.48) and online self-help (0.38), which suggests that the particular technology may be less crucial. Interestingly, they identified that studies recruiting participants from non-clinical settings, clients with existing problems (as opposed to at risk), and CBT techniques were all associated with greater effectiveness. One suggestion of why this may be so is that because a non-clinical population is usually recruited via advertisements in the media, and these individuals may be more likely to respond positively as they are likely to be more highly motivated, having referred themselves for help rather than having been referred by a health professional.

A study by Williams et al. (2013) is of interest in relation to the current study with regard to the self-help book used. The researchers carried out the largest-ever RCT (at the time of writing) examining guided CBT written self-help in a primary care setting for people with depression (n=281). They compared use of a self-help book (Overcoming Depression and Low Mood: A Five Areas Approach [Williams, 2009]) plus four short face-to-face support appointments as well as routine primary care treatment, with primary care treatment as usual. Their results demonstrate that mean improvement on the BDI-II was 5.36 points greater for the guided self-help CBT group than for the treatment as usual group. Furthermore, at 12 months improvement continued to be present in favour of the guided self-help CBT group. It is of note that the sample reflected a notable frequency of severe depression which supports the NICE finding that guided self-help can be beneficial for those experiencing more severe depressive symptoms, yet the participants were also well treated with medication for depression. A noteworthy strength of the study is that it was community-based and therefore included “real-life” referrals from varying socioeconomic backgrounds.
However, there are some limitations to the study, most notably that the exclusion criteria excluded people with low energy, concentration difficulties and tiredness (the rationale was that participants needed to be able to focus on the materials); this however excludes a number of people presenting with the core symptoms of depression.

In a review of the impact that type of support – guided, minimal and self-administered/unguided – has upon the effectiveness of written CBT self-help, Farrand and Woodford (2013) reported findings that are consistent with the above literature; a medium effect size for written CBT self-help when compared to the control conditions employed. Interestingly however, the authors found that the effect size (Hedges’ $g^2$) did not vary significantly with the type of support provided. Furthermore, for guided self-help, the effect size for telephone support was significantly larger than for other forms of support (such as email, face-to-face, mixed).

Guided self-help treatment has also been shown to be effective with a range of other clinical presentations. Hirai and Clum (2006) conducted a meta-analysis of 33 studies on the effectiveness of self-help interventions (books, audiotape/videotapes and CCBT) on a variety of anxiety disorders including panic disorder, generalised anxiety disorder, social anxiety and specific phobia. Compared to controls for target symptoms they found moderately average effect sizes ($d=0.62$ at post-treatment; $d=0.51$ at follow-up). Interestingly, in their analysis of dropout rates they found no statistical difference between treatment and control groups, concluding that self-help may be considered a viable and acceptable option by the general public in the treatment of anxiety. Furmark et al. (2009) found that individuals with social anxiety improved with CBT self-help. They found that pure bibliotherapy and Internet-based treatments were superior to a waitlist control on measures of social anxiety, depression and quality of life and although the guided treatment had the highest effect sizes (measured by Cohen’s $d$), the effects from the bibliotherapy augmented with online group discussions were directly comparable.

Sharpe et al. (2011) conducted a RCT adding guided self-help to the usual care received by clients suffering from functional (psychogenic or somatoform) symptoms. Clients in the guided self-help condition were allocated a CBT-based self-help workbook and face-to-face guidance sessions in addition to treatment as usual. They found that addition of guided self-help to usual care improved subjective health and presenting symptoms at three months, more so than the control condition of usual care.

\[^2\] Another measure of effect size, also known as a the corrected or unbiased effect size
However, the treatment effects were no longer statistically significant at six months post-treatment.

Binge-eating episodes can also be improved with guided CBT self-help (Bailer et al., 2004; Ghaderi & Scott, 2003; Palmer, 2002). For example, Sánchez-Ortiz et al., (2010) investigated the effectiveness of a guided CCBT programme for bulimia nervosa and other related eating disorders in a student population. Participants were randomly assigned to immediate CCBT with email support over three months or a delayed waitlist control condition. Supported CCBT produced statistically significant reductions in eating disorder psychopathology and binge-eating episodes compared to the waitlist condition, and these gains were maintained or continued to improve at six months follow-up.

Limitations of guided self-help

Despite the substantial literature that provides support for guided CBT self-help treatment, the evidence appears to be lacking with regard to treatment gains at follow-up. Coull and Morris (2011) conducted a meta-analysis to investigate the effectiveness of guided CBT self-help treatments that included 13 studies. They found that although guided self-help was effective at post-treatment, there was limited effectiveness at follow-up. In an RCT comparing guided self-help to a waitlist control condition (n=114), Mead et al. (2005) found no difference in anxiety or depressive symptoms between the groups at three months post-intervention, although they did report patients’ satisfaction with the self-help intervention.

A recent meta-analysis by Farrand and Woodford (2015) examined the effectiveness of CBT self-help for depression and anxiety in people with long-term conditions (the studies included both guided and unguided self-help). Their results were far from encouraging and in contrast to studies of CBT self-help in the treatment of depression and anxiety in a mental health population, small effect sizes were found for both depression (g=-0.20) and anxiety (g=-0.21). The authors note that, when recorded, participants exhibited mild or subclinical symptoms of depression or anxiety and that previous research indicates psychological treatments are more efficacious with participants demonstrating higher levels of severity at baseline (Bower et al., 2013; Driessen, Cuijpers, Hollon, & Dekker, 2010).

Less convincing results from guided self-help research were obtained by Berger, Hämmerli, Gubser, Andersson and Caspar (2011) who directly compared guided (email
support) and unguided Internet-based treatments for depression, to a waitlist control
group. Of the 59 participants who completed the programme, there were statistically
significant reductions in both treatment groups compared to the control group; the
between-group effect size for the unguided group was $d=0.66$ and for the guided group,
$d=1.14$. Despite this, the results demonstrated that guided self-help treatment was not
significantly superior to the unguided condition, which indicates that Internet-delivered
treatments can be effective whether or not support is added.

Limited effectiveness has been found for OCD and guided self-help. Mataix-
Cols and Marks (2006) found no controlled studies testing the efficacy of bibliotherapy
or self-help groups for OCD, and Lewis et al.’s (2012) meta-analytic review of RCTs on
the impact of guided self-help on anxiety disorders found no difference between guided
self-help and an therapist-administered CBT intervention in OCD. The authors did,
however, find significant evidence for generalised anxiety disorder, panic disorder and
social phobia.

Although low-intensity interventions are beginning to surface within New
Zealand (e.g., Websites like depression.org and The Lowdown), there is minimal
literature on guided self-help programmes in a New Zealand context. SPARX,
developed by researchers at Auckland University, is a free online CBT programme
aimed at adolescents with depression (Merry, Stasiak, Shepherd, Fleming, & Lucassen,
2010), and was currently being tested in a clinical trial at the time of writing. Recovery
via the Internet for Depression (University of Otago, 2007) is a 700 participant RCT
testing the efficacy of the Australian CBT web-based self-help programme MoodGym,
that is currently underway at Otago University, although at the time of writing there
were no published articles on outcomes of this trial. Beating the Blues (New Zealand
Guidelines Group, 2008a) was introduced to a primary care setting in Northland in 2008
($n=100$) and findings demonstrated clinical change in depression and anxiety. In
addition, it was well received by clinicians and clients. Thus there is a need for the
implementation and evaluations of low-intensity programmes in a New Zealand
population, in terms of investigating the effectiveness as well as the acceptability of such
interventions.

**Self-help compared with face-to-face therapy**

There is research that suggests that self-help treatment is as effective as face-to-face
therapy (Cuijpers, 1997; Gould & Clum, 1993; Marrs, 1995; Priemer & Talbot, 2013;
Scogin et al., 1990). Cuijpers et al. (2010) reviewed 21 RCTs of treatment of depression and anxiety covering 810 participants with similar numbers of participants in the face-to-face therapy studies (or high-intensity interventions) as in the guided self-help studies (low-intensity interventions). The results indicated no significant statistical differences between the effects of guided self-help and face-to-face therapies (despite the tests applied having sufficient statistical power to detect small differences) and this was also true at a follow-up period of one year. The study does have important limitations, however. There was a small sample of studies, which limits the possibility to explore differences between subgroups. In addition, the quality of the studies were not all optimal with regard to the insufficient information provided on methodologies used. Despite these limitations, the authors assert that high- and low-intensity therapies for depression and anxiety have comparable effects, leading to equal mental health improvements.

A previous meta-analysis on mixed formats of self-help treatment indicated an overall superior but small effect of face-to-face treatment compared self-help (Hirai & Clum, 2006), but more recent meta-analyses focusing on computer and Internet-based self-help have indicated no difference in the outcome of self-help treatment compared with face-to-face treatment (Lewis et al., 2012; Reger & Gahm, 2009). Thus the current evidence regarding the effect of self-help treatment is promising, and indicates that individuals treated with low-intensity interventions have fairly similar outcomes to those who have received face-to-face treatment.

**Guidance provided via different modalities: Use of the telephone**

As previously mentioned, a distinct feature of low-intensity interventions is that practitioners carry out their work using a variety of flexible and accessible formats. Face-to-face working is part of this and the use of other modalities such as telephone, email, groups, and computers all improve access and choice. The telephone is increasingly being used as a means to support treatment delivery due to its capacity to overcome many of the physical, social, and economic barriers that prevent access to mental health services (Bee et al., 2008; Lovell, 2010). The use of the telephone as a support modality is briefly reviewed next as it is an important component of the current study.

Providing support to clients over the telephone offers several advantages to clients by permitting distance communication with a practitioner by accessing relevant
technology. This removes limitations imposed by remoteness or travelling away from home; inability to attend a clinical practice due to physical, psychological social and economic reasons; barriers to consultation due to work, childcare; or emergencies (Mohr, Hart, & Marmar, 2006; Parsonson & Stokes, 2012). However, despite such advantages, conventional wisdom seems to insist that for most purposes psychological therapies should be delivered in a face-to-face format. It is argued that the effectiveness of face-to-face interventions depends upon on the development of a high-quality therapeutic alliance between therapist and client (Bachelor & Horvath, 1999) and that the use of the telephone (or Internet for that matter) lacks non-verbal cues and interpersonal contact, resulting in perceived loss of therapeutic alliance. Although there is a paucity of literature examining the therapeutic alliance in telephone interventions, emerging research shows a positive therapeutic alliance and comparable level of alliance can be achieved with telephone-delivered care, for example with the use of voice quality (Lingley-Pottie & McGrath, 2007).

**Efficacy of high-intensity therapy using the telephone**

Evidence to support the efficacy of telephone-delivered psychological interventions is accumulating. In a meta-analytic review of psychological therapies mediated by remote communication technologies (telephone, Internet, videophone), 10 of the 13 studies included delivered the intervention via the telephone (Bee et al., 2008). Results demonstrated that when compared to control conditions, technology-mediated therapies demonstrated a large effect size (Cohen’s $d=1.15$) for anxiety disorders and a medium effect (0.44) for depression, although the authors note small sample sizes and methodological limitations in some of the studies. Lovell et al. (2006) conducted a RCT comparing telephone-delivered psychotherapy directly with face-to-face therapy for adults diagnosed with OCD. They found comparable statistically and clinically significant changes in symptoms, and minimal attrition for both face-to-face and telephone psychotherapy. Other treatments have compared telephone-delivered treatment with treatment as usual, with successful outcomes (e.g., Mohr et al., 2005; Swinson, Fergus, Cox, & Wickwire, 1995).

**Efficacy of low-intensity interventions using the telephone**

Although the use of support in guided self-help programmes has been demonstrated to be effective, there is minimal literature directly comparing type or mode of guidance
(such as face-to-face and telephone) on outcomes in low-intensity interventions. Bilich, Deane, Phipps, Barisic and Gould (2008) investigated the effectiveness of CBT bibliotherapy with varying levels of telephone support. Treatment conditions were minimal telephone contact (up to five minutes weekly) and assisted telephone contact (up to 30 minutes weekly). Both experimental groups demonstrated statistically significant reductions in depression compared to the waitlist control, and treatment gains were maintained at one-month follow-up. Although this study demonstrated the success of guidance provided by the telephone, it did not directly compare different modes of guidance, which is of interest to the current study.

Palmer et al. (2002) examined the efficacy of telephone and face-to-face guided self-help for bulimia nervosa and binge-eating disorder. Participants were randomised to a waitlist group, minimal guidance (one face-to-face assessment session), telephone guidance, or face-to-face guidance group. Of those in the waitlist condition, only 19 percent showed at least some improvement, compared with 25 percent in the minimal guidance group and 36 and 50 percent in the telephone and face-to-face guidance groups respectively. Furthermore, dropout rates were less in the telephone and face-to-face support groups compared to waitlist and minimal guidance.

More recently, Hammond et al. (2012) compared the clinical and cost-effectiveness of face-to-face and over-the-telephone delivery of a low-intensity CBT programme in a naturalistic setting within the IAPT initiative. They found that support over the telephone and face-to-face delivery showed equivalent effectiveness, except for people with more severe illness, where face-to-face was superior. In addition, the per session cost for telephone-delivered support was 36.2 percent lower than face-to-face support.

Acceptability of telephone psychotherapy

Participants in research studies of telephone interventions often demonstrate lower levels of attrition than in studies of face-to-face therapies (Ludman, Simon, Tutty, & Von Korff, 2007; Mohr, Carmody, Erickson, Jin, & Leader, 2011; Simon, Ludman, Tutty, Operskalski, & Korff, 2004; Tutty, Spangler, Poppleton, Ludman, & Simon, 2010). In a recent meta-analysis by Mohr, Vella, Hart, Heckman, & Simon (2008), the mean attrition rate for RCTs of telephone delivered psychotherapy for depression was eight percent – markedly lower than the mean rate of 47 percent for face-to-face therapy (Wierzbicki & Pekarik, 1993). Moreover, the literature suggests that service users find
the telephone an acceptable means of receiving therapy (Brenes, Ingram, & Danhauer, 2011; Lovell et al., 2006; Ludman et al., 2007). It is of note that in some of these studies quantitative measures of satisfaction were employed that were developed by services (as opposed to users), and thus may have a limited view of acceptability. Studies that have explored acceptability more adequately, such as utilising qualitative questionnaires, have found positive results, yet more research is required in this area (Bee et al., 2008). The use of the telephone in both high- and low-intensity interventions thus appears to be promising in terms of client satisfaction, reducing attrition, cost-effectiveness and increasing adherence to the treatment.

In summary, self-help based on the principles of CBT has been shown to be effective for depression and a number of other clinical presentations, although it is evident outcomes are improved with practitioner support. Providing guidance avoids difficulties associated with the lack of verbal and non-verbal cues, minimises attrition to the programme and, importantly, reduces risks associated with worsening of a client clinical state. Guidance is provided by an individual specifically trained to administer such interventions, and evidence suggests that outcomes of treatment are similar compared to professionals or high-intensity CBT workers. Telephone-administered low-intensity interventions provide an opportunity to address common barriers to accessing face-to-face therapy appointments. Although limited, emerging literature on the utility and benefits of conducting psychotherapy with the telephone combined with high client satisfaction and low attrition rates shows that telephone-administered low-intensity interventions are a promising mode of delivery.
CHAPTER 4
STUDYING THE NATURE OF CHANGE IN LOW-INTENSITY CBT

Overview
Exploration of change over time is a central concern in psychotherapy research (Laurenceau, Hayes, & Feldman, 2007). Clients come into therapy with certain behavioural, emotional and/or cognitive difficulties and seek relief from these problems as well as improved quality of life by the termination of treatment. Traditionally, this change has been determined by evaluation of interventions by pre-treatment to post-treatment comparisons, such as in a randomised controlled trial (RCT), and linear and steady change is assumed (Stulz et al., 2007). This type of research is known as outcome research and is the most common type of investigation in CBT studies. Although outcome studies are important in answering questions about if a treatment works and to some extent, for whom it works, they provide much less information about how or why an intervention works (Hayes, Hope, & Hayes, 2007). Furthermore, a fairly large proportion of the clients who seek help or participate in research trials do not demonstrate clinically significant change from treatment (Lambert, 2013). Thus there is a need to better understand the nature of change during the therapy process and how this influences the outcome of treatment. There has been a resurgence of interest in studying the nature of change across therapy and increased recognition of the importance of this in treatment development in high-intensity treatments and, more recently, in low-intensity interventions as well (Hammond et al., 2012; Hayes, Laurenceau, et al., 2007). This chapter firstly reviews the issues associated with the study of change and then provides an introduction to the process of change and the different patterns that have been observed across depression treatment in psychotherapy research. The chapter concludes with a review of the low-intensity intervention change literature to date.

Issues in the study of change
A common assumption in psychotherapy research is that change is gradual and linear and this is often reflected in the research designs and statistics used to study change (Hayes, Laurenceau, et al., 2007). However, there are limitations associated with such assumptions which restrict the ability to address questions about process, and to infer the findings relevance to clinical practice. For example, in an RCT, which has been coined the “gold standard” in terms of obtaining evidence for the efficacy of a
psychological intervention (e.g., Akobeng, 2005), outcome is usually assessed at pre-treatment and again at post-treatment. If additional measurements are taken, this is usually at follow-up points, rather than more intensive assessments during treatment. While follow-up assessments are essential for making statements about durability of treatment effects, they do not allow for statements about the process of treatment. In addition, because outcome is mostly measured at the beginning and end of treatment, few studies contain measures of presumed mediators (variables that provides information on why or how change is occurring) at points between pre- and post-treatment. Potential mediating variables are generally assessed at the same time as the symptom variables which does not allow for an effective test of a variable as a mediator of change.

The majority of research studies also focus on group averages, with less emphasis on the rich information that can be collected in individual time-course data. Examining the individual variability allows for identification of a distinct point where change accelerates, decelerates or levels off, and thus reviewing individual time-course data moves beyond the question of whether change occurs and towards an understanding of how it occurs (Barkham, Stiles, & Shapiro, 1993; Collins, 2006). Traditional pre-post designs provide only a snapshot of these change processes, and statistical, correlational and analysis of variance (ANOVA) based analyses are limited when it comes to capturing such discontinuities (Nowak & Vallacher, 1998) as there is often little or no information regarding variability of responses both within individuals, and between different individuals (Jacobson & Truax, 1991). Hayes, Laurenceau, et al. (2007) argue that psychotherapy researchers should move beyond these constraints by collecting different types of data and using analytic strategies that capture these fluctuations and the nature of change across interventions. For example, clinical significance is typically regarded as the assessment of meaningful change due to treatment (Jacobson & Truax, 1991; Kazdin, 1999, 2001; McGlinchey et al., 2008). A clinically significant intervention has been referred to as an intervention leading to a decrease in distress, a restoration of levels of functioning, and increased quality of life for an individual (Blampied, 2001). Examining clinically significant change across interventions requires the analysis of treatment programmes at the individual level.
**Studying change in psychotherapy**

As aforementioned, the shape of change over the course of therapy for each individual is based on the idea that change is a continuous process over time (Laurenceau et al., 2007). However, taking two measurements, for example at pre-treatment and post-treatment, does not describe the different trajectories an individual could have during these time points. For example, did the individual’s depressive symptoms steadily decrease over time? Or did their symptoms initially increase then dramatically decrease towards the end of therapy? Individual trajectories are unable to be deduced in such a situation.

In order to understand the nature of change across a treatment, multiple assessments over time are required (rather than just pre- and post- assessment), as well as the examination of the individual trajectories of variables (rather than group averages). If the variables of interest are assessed frequently over the course of therapy (e.g., on a session-by-session or weekly basis), treatment processes can be examined to better understand what facilitates and inhibits change. Although these methods are in one sense a new way of examining mechanisms of change, in another sense they are a revival of the single-subject design that has had a long history in psychotherapy and behaviour change research (Kazdin, 1982). Krause, Howard and Lutz (1998) urge a return to the analysis of individual data “in order to maximise relevance for clinical practice, the results of treatment research should always be reported at this most disaggregated or individual change level” (p. 838).

Knowing the shape or nature of change can provide researchers with a more accurate understanding of when most of the change is occurring. Furthermore, rates of change can determine whether the rate was constant over the treatment. This shape of change can subsequently be compared to the predicted underlying theory of change for an intervention. For example, in a skills-based intervention you would expect an S-shaped trajectory, with symptoms getting worse before they get better (Laurenceau et al., 2007). Being aware of the shape of change provides information regarding the particular points in therapy to focus on in order to identify the process of change and the variables related to the change. For example, Lambert (2010) noted that deterioration in therapy could be predicted before it occurred by utilising information about the client’s distress level and difficulties at the beginning of therapy and their response to treatment in early sessions. In addition, other client demographic variables such as ethnicity, sex, experience of the therapist, and type of treatment added very little once distress and
disturbance were taken into account. The shape of change can also reveal differences between those who respond to treatment and those who do not. This information may shed light on whether the non-responders made any gains at any point during the course of therapy, whether gains were made then lost, or if gains were variable over the course of treatment. The specific shapes or patterns of change that have been identified in depression literature will now be reviewed.

Discontinuous change patterns in depression

In depression literature, researchers have described three distinct shapes of change or patterns that predict symptom improvement in CBT: early rapid response, sudden gains, and the depression spike (Hayes, Laurenceau, et al., 2007).

Early rapid response

Early rapid response patterns are shown by “early responders”; that is, clients who show significant positive change within a small number of sessions (Lambert, 2013). Ilardi and Craighead (1994) characterise early rapid response by a substantial decrease in depressive symptoms by the third week, with 60-80 percent of total decrease in depression occurring by week four (note: this was at session eight, with two sessions per week) and subsequently change levels off. It has been demonstrated that an early response to therapy is positively related to better intermediate and long-term outcomes (Lambert, 2005). For example, Renaud et al. (1998) investigated early response in adolescents treated for depression and found that early responders showed better outcome at the end of treatment, and at follow-up one- and two- years later. Fennell and Teasdale (1987) examined clients receiving CBT for depression. They noted variability in amount of treatment received, initial response, and final treatment outcome. Their results demonstrated that early responders engaged in a different way than later responders; that is, early responders appeared to proceed from one issue to the next (sequentially). In contrast, “later responders” appeared to continue to revisit the same topic across sessions.

Ilardi and Craighead (1994) argue that this early improvement in symptoms is a result of common factors rather than specific CBT techniques as these have not been administered in any relevant dose by session four. On the other hand, Tang and DeRubeis (1999) argue that as a number of CBT therapies typically include two sessions per week in the initial stages of treatment, a relatively large dose of specific
techniques are administered early in treatment. At present there is a lack of agreement on defining an early responder – it may be based on clinician ratings, reduction of symptoms, deviation from expected rates of improvement, or other methods (Haas, Hill, Lambert, & Morrell, 2002). In addition to being identified in depression, early rapid response has also been found to predict improvement in other clinical disorders such as panic disorder (Penava, Otto, Maki, & Pollack, 1998), bulimia (Grilo, Masheb, & Terence, 2006), and alcohol abuse (Breslin, Sobell, Sobell, Buchan, & Cunningham, 1997).

**Sudden gains**

Tang and DeRubeis (1999) identify what they term a “sudden gain” or improvement in severity. This is a large improvement during a single between-session interval that does not reverse. Graphs of averaged symptom change suggest gradual and linear change, yet Tang and colleagues found that graphing individual time-course data demonstrated that 39–46 percent of clients experienced a sudden gain and this pattern predicted improvement in depression (Tang & DeRubeis, 1999b; Tang, DeRubeis, Beberman, & Pham, 2005). Sudden gains have also been associated with better functioning at the end of treatment in other therapies such as systematic family therapy (Gaynor et al., 2003), CBT for recurrent and atypical depression (Vittengl, Clark, Dunn, & Jarrett, 2007), and supportive-expressive therapy (Tang, Luborsky, & Andrusyna, 2002).

**Depression spike**

A “depression spike” is defined as a transient period of symptom exacerbation that predicts later symptom reduction (Hayes et al., 2005). This is a large increase in depression during certain phases of therapy, followed by a decrease in symptoms – the conceptual opposite of the sudden gain. In exposure-based cognitive therapy for depression, Hayes et al. (2005) used hierarchical linear modelling to reveal an overall S-shaped (cubic) trajectory of symptom change on the Modified Hamilton Rating Scale for Depression (MHRSD; Miller, Bishop, Norman, & Maddever, 1985). Individual trajectories demonstrated an early rapid response pattern, and the exposure phase of therapy was characterised by depression spikes. Both of these patterns of change predicted more improvement in depression at the end of treatment, after controlling for initial severity (Hayes et al., 2005).
Other change trajectories

Other change trajectories have also been identified in different presentations. For example, in social anxiety, Heimberg and Becker (2002) describe three patterns associated with improvement: the “steady decline”, the “spike” and “habituation”. Stulz et al. (2007) found five different slopes of change in a sample of 192 outpatients receiving psychotherapy for anxiety and depression. The five groups of early change were a) those who showed high initial impairment followed by improvement; b) those who showed low initial impairment and improvement; c) those who demonstrated early improvement (analogous to early rapid response mentioned above); d) medium level of impairment and continuous improvement; and e) medium impairment followed by discontinuous improvement. The shapes of early change were associated with different treatment outcomes and duration of treatment. For instance, of the two medium impairment groups, the discontinuous change group showed more reliable change than the continuous change group (44% vs 19%). Although some individuals did show more deterioration than in the continuous group, a discontinuous pattern of change did not necessarily predict poor outcome. The authors asserted that in the group of early improvers, who were clearly improved at discharge, it would be reasonable to recommend that clients in this group would not require longer-term therapy. Overall, the results from this study indicate that the identification and predication of early shapes of change can provide important information to support outcome management, facilitate early identification of clients at risk of treatment failure, and provide feedback to therapists. It is noted that a variety of therapies were included in this study (e.g., cognitive therapy, psychodynamic therapy, gestalt therapy, transactional analysis, cognitive analytic therapy and other integrative therapies).

These patterns of change (early rapid response, sudden gains, depression spike and those described by Stulz et al., 2007) are all discontinuous and non-linear, and as a result would not be apparent in pre-post analyses of group data (Laurenceau et al., 2007). However, they provide information on important transition points that can reveal what it is therapists are doing to facilitate change in clients at this time (Hayes, Laurenceau, et al., 2007).

Process of change research in low-intensity interventions

Although different trajectories are more established in traditional CBT for depression, little is known about the nature of therapy in less intensive interventions for common
mental health problems. At the time of writing only two studies were identified: Delgadillo et al. (2013) and Vaz, Conceição and Machado (2013). Vaz et al. (2013) investigated the number of sessions and time required for a clinically meaningful symptomatic change using a guided self-help CBT approach with a sample of 42 clients with bulimia nervosa. Guided by previous research, the authors defined clinically meaningful change as a 51 percent reduction in bulimic symptoms. Their results revealed that the mean time for achieving a 51 percent reduction in binge-eating episodes was 3.68 sessions and that 50 percent of participants were in session three when they achieved this change.

As a second study aim, the authors investigated predictors of success in the guided self-help treatment, including the role of early response to treatment, binge frequency, severity of eating-related attitudes, psychological distress, and negative affect at pre-treatment. In terms of remission or partial remission, the only significant predictor was early response and this was also evident at follow-up after six months. This implies that early response to treatment was the most significant predictor of binge-eating remission, which is supported by previous studies (e.g., Fairburn, Agras, Walsh, Wislon, & Stice, 2004; Grilo et al., 2006; Masheb & Grilo, 2007). There were some limitations to this research however. There was no control group and it had a relatively small sample size. The researchers attempted to minimise the effect of sample size by using an intention-to-treat analysis and suggest that future research should try to replicate their results in a larger study. Nevertheless, this study highlights the need to carefully monitor treatment and change in eating and purging behaviours as a way of improving outcome in the treatment of bulimic disorders, and that evaluation of early response to treatment appears to be a good predictor of outcome in a guided self-help intervention.

The second study, by Delgadillo et al. (2013), investigated if early symptom change was predictive of final outcome in a brief low-intensity CBT intervention for depression and anxiety. Their sample (n=1850) was taken from the IAPT programme and included individual and group-based guided self-help interventions. Their primary outcome was reliable and clinically significant change on measures of depression and anxiety, and in addition the authors developed an outcome prediction model to test the hypothesis that those clients who showed early (reliable) change in treatment were more likely to recover at the end of treatment. They found that 70 percent of clients with reliable and clinically significant improvement were accurately identified as early as
session three, and optimal recovery rates were observed between sessions four and six. They concluded that clients who showed early treatment change were twice as likely to recover at the end of treatment. Furthermore, this remained the case after controlling for potential confounders such as medication, baseline severity, and pre-treatment symptom changes.

The authors also noted that attrition was significantly associated (in terms of a statistical difference) with poor outcomes and that the highest attrition rates were observed in session four. This is an important finding, identifying a specific number of sessions (one through to three) as a window for the maximising of engagement and retention. This research thus contributes important observations about factors associated with clinical outcomes of low-intensity interventions. Therefore, despite the paucity of research on early response in low-intensity interventions (as would be expected given its recent development), both of these studies demonstrate early response as a pattern of change and highlight the need for more research in this area.

To summarise this chapter, although change in psychotherapy can happen in a gradual and linear way, there is increasing evidence from psychotherapy studies that it also occurs in non-linear and discontinuous ways (Laurenceau et al., 2007). Taking measures at more regular intervals during treatment, rather than just at pre-treatment and post-treatment, allows for the identification of factors or transition points during therapy that facilitate or inhibit change. Although the process of change has been described as a relatively innovative area in psychotherapy research, it can be likened to the single-case design in that it better enables the uniqueness of individuals to be attended to while allowing clinical meaningful clinical changes to be documented (Blampied, 2001). Through improved knowledge about the effects of treatment on individuals, therapists are better able to establish the potential treatment benefits to others. For example, early rapid response is a specific pattern that has been shown to predict positive outcomes in therapy (Ilardi & Craighead, 1994). Although it is well established in high-intensity psychotherapies, there is minimal literature on this occurrence within low-intensity interventions. It is evident that further research is needed that examines the nature of change in low-intensity programmes and that the identification of early rapid response has beneficial clinical implications in terms of early identification of clients at risk of poor outcomes.
CHAPTER 5
OVERVIEW OF THE CURRENT STUDY

This chapter provides a summary of the main arguments within the introductory chapters and the rationale for the current areas of focus based on theory and research into the area of LICBT interventions. It concludes with a presentation of the overall aims and hypotheses of the current research. Chapter 6 outlines the methodology adopted in this research.

Rationale for the current study
Low-intensity CBT (LICBT) interventions have emerged over the last decade and following the implementation of the IAPT programme in England, have become a fundamental component of mental health services. Low-intensity interventions are explicitly a high-volume, low-intensity approach to CBT, and the goal is to increase the accessibility of CBT by providing it in ways that minimise restrictions on clients and the use of scarce and expensive professional resources (Westbrook et al., 2011). National health guidelines in the United Kingdom advocate the use of LICBT interventions for mild to moderate depression and anxiety (NICE, 2009, 2014), and state that programmes should include the provision of written materials (or alternative media) and be supported by a trained practitioner, as evidence demonstrates that interventions offered with support show statistically significant higher improvements in symptoms (Gellatly et al., 2007). Other developments in the low-intensity approach are occurring in Australia, Sweden, Canada, The Netherlands, and the United States (Bennett-Levy & Farrand, 2010), and more recently in New Zealand with the proposal of a stepped care approach to delivery of mental health services (Ministry of Health, 2012).

As aforementioned, a recent RCT in primary care in Glasgow found that the CBT self-help book *Overcoming Depression and Low Mood (ODLM)*, combined with guidance from a trained practitioner, resulted in statistically significant reductions in depression as measured by the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996). A study has been conducted on the computerised version within a primary care service in New Zealand (Scheibmair, 2010), however to the best of the author’s knowledge, no research had been conducted on this book in New Zealand at the time of writing. Thus the rationale for implementing a low-intensity intervention was to determine whether this type of intervention would be suitable and effective in a
sample of New Zealand adults, in terms of reducing symptoms of depression and investigating levels of satisfaction with the programme.

The telephone is increasingly being used as a means to support treatment delivery. For some people, the use of the telephone provides flexibility and saves time and money, and it offers the opportunity to provide some form of treatment to individuals living in remote and rural areas, where mental health services may be difficult to access (Lovell, 2010). Likely a result of these advantages, use of the telephone reduces attrition in psychotherapy (Mohr et al., 2008). The literature suggests that telephone-delivered therapy is superior to treatment as usual (Ludman et al., 2007), equivalent to face-to-face therapy (Lovell et al., 2006), and it is beginning to be used to deliver low-intensity interventions such as guided self-help (e.g., Bilich et al., 2008). There is a paucity of literature regarding the optimal mode of delivery of guidance in low-intensity programmes, therefore the current study aimed to fill this gap by directly evaluating the differences in treatment outcomes between participants completing the same low-intensity programme and receiving guidance either in a face-to-face format or via the telephone.

As established in Chapter 4, there are significant disadvantages within previously dominant models of assessing change (e.g., use of pre-treatment and post-treatment assessments). Such approaches are limited by their ability to modify practice for a client in real time, and in addition not all clients are the same and not all benefit from treatment in the same way (Newnham & Page, 2007). In recent years there has been a call for the return of individual analyses (as opposed to the focus on group means) when studying the discontinuities of symptom change across treatment (Hayes, Feldman, et al., 2007). As well as determining whether the treatment was effective, this allows for researchers to get an understanding of under what conditions treatments work, for whom, how they work and why they work. Although there is substantial research into the process of change in high-intensity CBT interventions (Hayes et al., 2005; Ilardi & Craighead, 1999; Stulz et al., 2007; Tang, DeRubeis, Hollon, Amsterdam, & Shelton, 2007), there is minimal literature on low-intensity interventions, likely due to their recent innovation. The current study considered these limitations and as such was an effectiveness “real-world” study. Assessment of outcome measures at multiple fixed assessment intervals across the duration of the programme allowed for the exploration of the nature of individual change across the applied LICBT intervention.
There are several reasons why the current study focused on the occurrence of early rapid responding during the intervention. Previous research in the area of CBT for depression and early rapid response has shown that it is not a random or clinically insignificant event; rather it is associated with more positive outcomes in the longer term (Ilardi & Craighead, 1999). In addition, Delgadillo et al. (2013) found support for early responders in a low-intensity intervention, and also discovered that clients who dropped out of the programme were able to be identified early on in the treatment process. These findings have implications for clinical practice in low-intensity interventions.

According to the stepped care model of delivery of mental health interventions introduced in Chapter 2, the least intrusive intervention required to achieve clinical change for an individual is recommended initially, and a client is moved to more intensive treatments if the problem persists. For example, a guided self-help programme can be used as the first/entry step to be followed by more intensive interventions if required. Under this treatment model, analysing the process of change, such as the number of sessions and the time required to produce a symptomatically meaningful change during guided self-help treatment, is crucial to support decisions about continuation of ongoing treatment, or the need to switch to a more intensive modality. Therefore, the early identification of clients at risk of poor outcomes could potentially maximise the chances of improvement through the referral system to more intensive therapy. Indeed, this is particularly important with regard to high attrition in the early stages of therapy and may lead to more efficient and effective service. Although these effects are well established in conventional psychotherapy, less is known about such phenomena in low-intensity interventions, thus the current study aimed to build on the existing evidence for early rapid response in low-intensity interventions, as well as investigate the association between this phenomena and outcomes in a low-intensity intervention.

General aims
This research had two overarching aims. The primary aim was to investigate the effectiveness of a guided CBT self-help programme for adults in New Zealand experiencing depression or low mood. That is, to evaluate whether the ODLM self-help book by Williams (2009), in conjunction with guidance from a specifically trained practitioner, could significantly (statistical and clinical) reduce symptoms of depression
and psychological distress in adults in a community context. Guidance was to be provided in two formats: face-to-face or over the telephone. As depression can also cause significant problems in a person’s life satisfaction and functioning (Oei & McAlindren, 2014), it was also important to assess whether the intervention improved individuals’ ratings on measures of quality of life. The research also investigated whether these changes were maintained after termination of the programme, at six- and 12-weeks’ follow-up.

The second aim of the research was to examine the nature of change that individuals experienced over the intervention. As well as evaluating the effectiveness of the intervention in terms of examining changes pre-treatment versus post-treatment, the current study administered outcome measures at fixed intervals across the intervention so that it was possible to view individual change over this time. In addition, this research sought to examine whether individuals demonstrated the discontinuous change pattern known as early rapid response and, if they did, whether this influenced outcome in any way. The specific research hypotheses are stated below.

**Specific hypotheses**

1. Participants who complete the guided self-help programme will show statistically significant improvements in depression, psychological distress and quality of life after completion of a guided self-help programme.

2. Improvements in depression, psychological distress and quality of life will be maintained after termination of the programme until follow-up at 12 weeks post-intervention.

3. It is expected that the modality of guidance, either face-to-face or via the telephone, will have an effect on outcome measures and on attrition to the programme. Specifically, those receiving telephone guidance will demonstrate at least equal improvements in outcome measures and less attrition from the programme, compared to those participants receiving face-to-face guidance.

4. Participants are expected to demonstrate reliable and clinically significant change across the programme, and this will be maintained at follow-up.

5. Early rapid response patterns of change are predicted to be evident in the change trajectories of some participants, and participants that demonstrate this pattern will be associated with more positive treatment outcomes.
6. Participants are expected to report high levels of satisfaction with the ODLM-guided self-help programme.

The following chapter presents the method used in the current study.
CHAPTER 6
METHOD

Research design
This study employed a within- and between-group repeated-measures, non-experimental design (see section on analytical approach for further details). Participants were assessed at baseline (one week prior to initiation of the programme) and weekly during the six-week programme, then at six and 12 weeks’ follow-up. Four support sessions in total were provided either face-to-face, or over the telephone during the six-week programme. The independent variables were the mode or type of support received by the participant (face-to-face or telephone) and the time of assessment (e.g., pre-, during, and post- intervention). The dependent variables were scores obtained on the specified outcome measures (described below).

Participants
Participants for this guided self-help study were recruited as part of a larger study called “Help Yourself to CBT”. The requirements for inclusion in the study were as follows: participants needed to be between 18 and 65 years of age, be proficient in English reading and writing, have no major hearing or sight impediments, be experiencing depressive symptoms or low mood, not be experiencing alcohol/substance dependency, have no major mental health diagnosis (e.g., bipolar disorder) and were not at imminent risk of harm to self or others. A key focus of the study was to make the intervention readily accessible to the community; therefore there were no restrictions on gender, ethnicity or medication use.

A total of 48 people applied via a website to take part in the Help Yourself to CBT study. Of these, 26 registered for the individual support programme: 18 for face-to-face support and eight for telephone support. Seven of these withdrew prior to the baseline measures being taken (six in the face-to-face condition and one in the telephone condition), leaving 19 participants who attended the initial session. Thirteen participants completed the programme in its entirety (four sessions over six weeks and follow-up measures), meaning six participants dropped out of the programme (five in the face-to-face condition and one in the telephone condition). Of the five that dropped out in the face-to-face condition, one dropped out after week one, one dropped out after
week four, and three dropped out at week five. The one participant that dropped out of
the telephone condition did so at week five (see Figure 6.1).

Figure 6.1 Flow chart of participants’ progression through the study
The final sample consisted of 13 females and five males, with the majority of participants aged in their mid-to-late 30s at intake (mean age=37, SD=2.34, range=19–61). The majority of the sample identified their ethnicity as New Zealand European (79%). Three participants identified as British and one as Macedonian. Seventy-nine percent of the sample were married or in a relationship at intake, and just over half (53%) were employed either in full- or part-time positions. Seventy-nine percent of the participants had received therapy previously, ranging from talking therapy only to being an in-patient. Twenty-one percent of participants were using antidepressant medication for their current problems at the time of intake. Compared to the participants in the telephone support condition, those in the face-to-face support condition were more likely to be culturally diverse, unemployed, and currently receiving treatment. Table 6.1 provides a summary of the demographics for the total sample that started the guided self-help programme.

**Participant intake characteristics**

Mann-Whitney U³ tests were used to determine if there were any statistical differences between certain demographic/intake characteristics at baseline and follow-up (where applicable) for the outcome measures. Participants in both conditions (face-to-face and telephone) were combined for the analyses. There were no significant statistical differences between males and females in baseline or follow-up scores on depression, psychological distress and quality of life. For those participants using medication during the programme, significant differences were found across all outcome measures at 12 weeks’ follow-up, but not at baseline. However, these differences were not in the expected direction. Those using medication had a significantly higher depression score at 12 weeks’ follow-up ($Md=5.50, n=4$) compared to those not using medication ($Md=2, n=8$), $U=4.5, z=1.98, p=.048, r=.57$. Psychological distress levels at 12 weeks’ follow-up were higher for those on medication ($Md=12.5$) than those not using medication ($Md=6$), $U=3, z=-2.23, p=.026, r=.64$. Furthermore, participants using medication had a significantly lower median score of quality of life at 12 weeks’ follow-up ($Md=60.5$) in comparison to those not on medication ($Md=75$), $U=3, z=-2.23, p=.026, r=.64$.

³ This is the non-parametric equivalent of the independent samples t-test. It is explained in more depth in this chapter, under Data analysis.
### Table 6.1 Baseline demographic characteristics of participants receiving face-to-face and telephone support

<table>
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<th>Variable</th>
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<th>%</th>
<th>T (n=7)</th>
<th>%</th>
<th>Total N (n=19)</th>
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<td>14</td>
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<td>17</td>
<td>3</td>
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<td>50</td>
<td>7</td>
<td>100</td>
<td>13</td>
<td>68</td>
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</tbody>
</table>

*Note.* Total percentages may not equal 100 due to rounding to one decimal point. FTF=face-to-face support condition; T=telephone support condition.
Materials

The self-help book

Overcoming Depression and Low Mood: A Five Areas Approach (ODLM; Williams, 2009) is a self-help book that uses the principles of CBT to treat depression and low mood. This self-help book was chosen for use in the current study due to its evidence base. The programme has been shown to be statistically effective in both book and CD-ROM formats (Whitfield et al., 2005; Williams et al., 2013). At the time of writing, ODLM was in its third edition, which was the edition used in the current study. The book itself is comprised of 16 sections or workbooks, for example “Doing Things to Boost How You Feel”, “Problem Solving”, “Overcoming Anxiety and Avoidance”, “Noticing and Changing Unhelpful Thinking” and “Overcoming Sleep Problems”. Williams and Whitfield (2001) tested each individual workbook within a collaborative group of general practitioners (GPs), psychologists and practice nurses who used the workbook with clients and who offered feedback which was then used to improve content. The workbooks have a reading age of 11–14 years and the CBT content is presented in a jargon-free format.

The ODLM is designed to be used as a pure self-help treatment and can also be used in a guided self-help programme with support provided by a practitioner. The book is the main component of treatment and the individual follows what is termed a learner-led approach – participants may choose to complete as many workbooks as they wish in any order that they wish (see Figure 6.2), with the exception of two compulsory modules. The first compulsory workbook is an introductory one called “Understanding Why You Feel as You Do”, which helps orientate the client to the programme. After this participants are able to choose with the practitioner which workbooks are relevant to them to complete. The final module is also compulsory and teaches effective strategies for relapse prevention. Each workbook includes a “Putting into Practice” plan to encourage application in everyday life (similar to homework in traditional CBT).

When CBT is delivered via a self-help package, it has been suggested that for it to be considered low-intensity, sessions need to be shorter in terms of time (10–40 minutes) and number (e.g., three to 10 sessions). Research recommends including three to four short support sessions (Williams & Chellingsworth, 2010; Williams et al., 2013). The NICE guidelines (2009) suggest that a guided self-help programme should run for six to nine weeks including follow-up, and other guided self-help programmes have been implemented from anywhere between four weeks to three months, with follow-up
periods between four weeks and 12 months (Bower, Richards, & Lovell, 2001; Williams et al., 2013). Additionally, the IAPT guidelines (Baguley et al., 2010) recommend the initial assessment should be conducted face-to-face, regardless of type of support the participant will subsequently receive. This enables information to be gathered regarding psychopathology and the self-help intervention to be explained.

*Figure 6.2 Snowflake, or learner-led model with optional ODLM workbooks for low mood represented by the outer circles*

**The Five Areas Approach**

The five areas approach is an approach developed by Chris Williams to communicate key CBT principles in a simple and straightforward way. It is similar to Greenberger and Padesky’s (1995) five-part model, although it uses different language to describe the different parts. For example, in the five areas approach the environment is categorised into life situation, relationships and practical problems; cognitions are called altered thinking; emotions are called altered mood; physiology is altered physical symptoms; and behaviour is termed altered behaviour. In the first session the five areas approach is introduced, and is used to conceptualise the difficulties the participant is experiencing. Each workbook is based on one of the five areas. Figure 6.3 provides a description for the workbooks in relation to the five areas approach.
Practitioner Training

In England, psychological wellbeing practitioner (PWP) training involves a one-year postgraduate training course in IAPT low-intensity skills at a higher education institution. Although the low-intensity practitioner in this study received low intensity-specific training, it was not the same as the PWP training and therefore will not be referred to as such.

The low-intensity practitioner in this study was the writer, a non-clinically qualified psychology graduate in her second year of the Doctorate in Clinical Psychology programme at Massey University, Auckland. The aim of the low-intensity practitioner’s training was for her to be competent in providing guidance in a self-help CBT programme for people experiencing depression and low mood. Training consisted of the following components:
Two full-day workshops were provided by registered clinical psychologists which involved intensive training in the administration of low-intensity CBT (LICBT). Protocol was taken directly from Williams and Chellingsworth’s (2010) *CBT: A Clinician’s Guide to Using the Five Areas Approach* (chapter 4, pp. 58–77). These workshops included multiple role-plays focused on being able to explain the nature of the programme in a jargon-free way, and the acquisition of skills related to the application of the five areas approach. This included being able complete a five areas assessment in 30 minutes; formulate a summary of the participant’s current difficulties in terms of the five areas; and being able to help the client identify the links between the different areas.

Further training was achieved by reading the support resources provided by Chris Williams (Williams, 2012).

The online modules of the *ODLM* course (which can be found at www.llttf.com) were completed in order to help familiarise the trainee with the content of the programme.

The second edition of the IAPT *Reach Out* training manual for PWP delivering low-intensity interventions is used to support the delivery of training for psychological wellbeing practitioners (Richards & Whyte, 2009). Within this manual, there are links to online film clips demonstrating specific skills to be learned. Reading this manual and viewing the video clips provided further training for the low-intensity practitioner involved in the current study.

**Measures**

Each week the participants were sent an email message that contained a link to complete three questionnaires online. These took on average five minutes to complete. The participants had one week to access the link before it expired, and were sent a reminder message to complete the measures the day prior to expiration. Permission was granted from the copyright-holding authors for use of the measures in written and online format.

**Patient Health Questionnaire Depression Scale (PHQ-9)**

The PHQ-9 was developed by Kroenke, Spitzer and Williams (2001) and is the depression scale from the full Patient Health Questionnaire. It is a nine-item self-report measure of depression that assesses both the diagnosis and severity of depression.
Participants are asked to identify how often they have been troubled by the listed symptoms in the past two weeks on a four-point scale (0 “not at all”; 1 “more than half the days”; 2 “several days”; 3 “nearly every day”. (The authors were contacted regarding using the measure weekly, as opposed to fortnightly as stipulated, and this was confirmed as appropriate.) The items are summed to give a score between zero (minimum) and 27 (maximum). The authors suggest using cumulative scores of 5, 10, 15 and 20 as cut-off points to indicate “mild”, “moderate”, “moderately severe” and “severe”, respectively. The authors of the PHQ-9 report a score of 10 or higher is recommended as the cut-off for diagnosing major depressive disorder (Kroenke et al., 2001), although a more recent meta-analysis suggests a range of cut-off scores between 8 and 11 has acceptable diagnostic properties (Manea, Gilbody, & McMillan, 2012). The PHQ-9 has been found to differentiate between depressed and non-depressed individuals (Martin, Rief, Klaiberg, & Braehler, 2006), however in a recent study comparing the PHQ-9 to the BDI-II (Beck et al., 1996), the authors found the BDI-II categorised a greater proportion of clients (total \( n=172 \)) with severe depression than the PHQ-9 (Titov et al., 2011). This suggests that the PHQ-9 may be more suitable to a community sample as opposed to people experiencing symptoms of clinical depression.

The PHQ-9 has established reliability, with a Cronbach’s alpha of \( \alpha=.89 \) and test-retest reliability of .84 (Kroeneke et al., 2001). For the current study, \( \alpha=.89 \) which is consistent with previous research. The PHQ-9 compares well with other measures of depression (Löwe, Kroenke, Herzog, & Gräfe, 2004) and has satisfactory convergent validity with the brief BDI-I, \( r=.73 \) (Martin et al., 2006). Sensitivity to change is an essential characteristic of measures used to monitor response to treatment, and it was important that the PHQ-9 be responsive to treatment change. This has been repeatedly established for the PHQ-9 (Kroenke, Spitzer, Williams, & Löwe, 2010; Löwe et al., 2004; Löwe, Schenkel, Carney-Doebleton, & Göbel, 2006). McMillan, Gilbody and Richards (2010) compared definitions of clinically significant change and their Reliable Change Index (RCI) on the PHQ-9 was calculated to be five points. The RCI calculated for this study was also five points (see Data analysis).

Finally, the PHQ-9 is recommended as a measure to assess severity of depression in the New Zealand guidelines for the identification of common mental disorders in primary care (New Zealand Guidelines Group, 2008b). In addition, it is the depression scale used in the IAPT initiative (Papworth et al., 2013).
**Clinical Outcomes in Routine Evaluation-10 (CORE-10)**

The CORE-10 is a brief 10-item form of the original 34-item CORE-Outcome Measure (OM) developed by Evans (2000). The CORE-10 (Barkham et al., 2012) is recommended for use session by session to monitor change in the domains of subjective wellbeing, symptoms, functioning and risk to self. There are two items each for depression and anxiety; one item that addresses trauma and physical problems; a “functioning domain” item cluster that addresses general functioning, close relationships and social relationship; and one risk item pertaining to risk to self. Half of the items focus on low-intensity problems (e.g., “I feel anxious/nervous”) and half focus on high-intensity problems (e.g., “I feel panic/terror”). Items are scored on a five-point scale from 0 (“not at all”) to 5 (“all the time”) and are totalled to give a cumulative clinical score (ranging from zero to 40).

In a recent review of the CORE-10’s psychometric properties, the measure had excellent internal reliability with $\alpha = .90$ (Barkham et al., 2012), and for the current study $\alpha = .86$. In terms of validity, the CORE-10 correlated with the CORE-OM at .94, with sensitivity and specificity values of .92 and .72 respectively (Barkham et al., 2012). The clinical cut-off score for psychological distress is 11, with a reported RCI of six. The RCI calculated for the current study was five. The CORE-10 cut-off score for depression is 13.

**Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form (QLES-SF)**

The QLES-SF is a 16-item short form of the Quality of Life Enjoyment and Satisfaction Questionnaire (Endicott, Nee, Harrison, & Blumenthal, 1993). It measures quality of life on the domains of physical health, subjective feelings, leisure activities, social relationships, general activities, satisfaction with medication, and life satisfaction. Participants are asked to rate how satisfied they have been over the last week (e.g., with work, physical health, mood) on a five-point scale from 1 (“very poor”) to 5 (“very good”). A raw total score is obtained by summing the first 14 items - the last two items are standalone items (item 15 asks about medication and item 16 is a global question related to life satisfaction). The raw total score is transformed into a percentage maximum score using an algorithm. Higher scores are indicative of greater enjoyment or satisfaction (range is 14 to 70). The QLES-SF has high reliability ($\alpha = .90$, test-retest .93) and has 80 percent sensitivity and 100 percent specificity to change (Gladis, Gosch, Dishuk, & Crits-Christoph, 1999; Stevanovic, 2011). In the current study, reliability
was $\alpha=.94$; similar to previous literature. Stevanovic (2011) analysed the convergent and criterion validity of the QLES-SF, however it is noted that this was in a small sample of people ($n=57$). All items were significantly correlated to the total score, ranging from 0.41 to 0.81, with the exception of item 3 (satisfaction with work, $r=0.18$). The QLES-SF was significantly correlated with the Clinical Global Impression severity and improvement scales (CGIs and CGIi) and the Patient-reported Global Impression severity scale (PGIs) (Guy, 1976); 0.89, 0.47 and 0.43 respectively.

The authors did not define a clinical cut-off score nor was one able to be found in the literature, however it is suggested that two standard deviations from the norm is an appropriate cut-off substitution (see Jacobson & Truax, 1991). Thus the clinical cut-off used in the current study was 50.70, which corresponds to two standard deviations from community norms (Eisen et al., 2006).

**Planner and review sheets**

In addition to the above standardised outcome measures, participants were asked to complete planner and review sheets (see Appendix A-1) at each session. The planner sheet details which workbook should be completed in the next week, when the participant is likely to be able to complete it, identification of any problems that could arise with regard to completion, and ways to overcome such difficulties. A review sheet was used in the following session to see if the participant was able to accomplish the workbook that was planned for completion. If they had completed it, questions were asked regarding what went well, what didn’t go so well, if anything learned was from this from workbook, and applications of the experience. If not, discussion was focused around things that stopped the participant from completing the workbook, such as internal and external factors, and how the participant could plan to tackle such blocks in future. Table 6.2 lists the measures used and the time points they were administered at.

**Post-intervention feedback**

**Client Satisfaction Questionnaire (CSQ-8)**

The CSQ-8 (Attkisson & Greenfield, 1995) is a brief version of the original 18-item questionnaire (Larsen, Attkisson, Hargreaves, & Nguyen, 1979) that enquires about participants’ opinions and conclusions regarding the services they have received. Response options differ from item to item, but all are based on a four-point scale, with higher scores pertaining to greater satisfaction. Examples of items include “How
satisfied are you with the amount of help you have received?” (1 “quite dissatisfied”; 2 “indifferent or mildly dissatisfied”; 3 “mostly satisfied”; 4 “very satisfied”), and “Have the services you received helped you to deal more effectively with your problems?” (4 “yes, they helped a great deal”; 3 “yes, they helped somewhat”; 2 “no, they didn’t help”; 1 “no, they seemed to make things worse”). While addressing several elements that contribute to service satisfaction, the CSQ-8 has no subscales and reports a single score measuring a single dimension of overall satisfaction (ranging from eight to 32).

The CSQ-8 has excellent internal consistency (ranging from .83 to .93) and has been found to correlate with dropout rates, number of sessions attended, and self-reported symptom improvement (Attkisson & Zwick, 1982). This measure has been used in previous trials using the computerised version of ODLM (Scheibmair, 2010; Whitfield et al., 2005) and was completed by the participants in the current study at the final week of the programme to inform overall treatment satisfaction.

**Additional qualitative feedback**

Additional feedback questions were sent to all participants during the follow up period, asking whether the self-help book had been used since completing the programme, were any skills from the programme still being used, the overall impact that the programme may have had on participants’ present life situation, and any unhelpful aspects of the programme (see Appendix A-2).

**Table 6.2 Measures administered across the duration of the study**

<table>
<thead>
<tr>
<th>Time/Measure</th>
<th>BL</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
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<th>W5</th>
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<th>FU6W</th>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<td>X</td>
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<td>X</td>
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</tbody>
</table>

*Note.* BL=baseline; W=week; FU=follow-up. The numbers correspond to each week of the intervention. 6W= six weeks’ follow up; 12W= 12 weeks’ follow up.

**Procedure**

Newspaper advertisements recruiting participants were placed in the *North Shore Times* and the *Coffee News* in the North Shore of Auckland and posters and flyers advertising
the details of the study were distributed in public areas such as libraries, community centres, bus stops and supermarkets throughout the North Shore (see Appendix B for examples of advertisements). In order to incorporate the latest technology and tools of communication, online mediums such as TradeMe and Facebook were also used to advertise the study. A website (www.cbthelp.massey.ac.nz) was specifically created for the current study and used to inform potential participants of details of the research, including information about CBT, guided self-help, and the studies available (individual guided self-help either face-to-face or telephone support; or group guided self-help), information about the low-intensity practitioner, and links to additional mental health services such as the crisis team.

Interested persons were required to answer screening questions (Appendix C) related to exclusion criteria and if deemed appropriate for the study they were directed to a registration page. Unsuccessful participants were directed to a page that informed them they were unsuitable for the research and provided them with a list of other services they may like to contact if required. In the registration process, participants were able to select which mode of support they would prefer, either face-to-face support (FTF) or telephone support (T). Self-allocation as opposed to random allocation to support conditions is in line with the LICBT premise of matching care and increases accessibility, engagement, acceptability and the potential reduction of attrition. In addition, it emphasises the practical and real-life nature of the current study, in contrast to the RCT.

Once registration was complete, the participants were contacted by the low-intensity practitioner and a time arranged for the initial session. A week before the initial session, participants were sent the PHQ-9, CORE-10 and QLES-SF in an email link to complete as baseline measures. Those in the face-to-face group started a week before those in the telephone group. All participants received four individual sessions of up to 30–40 minutes over a six-week period. Two follow-up points at six and 12 weeks’ post-intervention were included to investigate if changes in outcomes measures were sustained over this period. Specifically, participants in the FTF support condition received four face-to-face sessions while in the T condition, face-to-face support was reduced to only the initial session (however one participant in the T condition was unable to attend an initial FTF session so this session was conducted over the phone). Subsequent support and progress were monitored via three telephone sessions over a six-week period. One participant in the telephone condition preferred the use of the
voice over Internet protocol service Skype, so support sessions were conducted using this instead. Table 6.3 shows the support schedule for the FTF and T groups.

Table 6.3 Schedule of support sessions for guided self-help offered to participants in the FTF and T conditions

<table>
<thead>
<tr>
<th>Week</th>
<th>BL</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>FU6W</th>
<th>FU12W</th>
</tr>
</thead>
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<td>F</td>
<td>–</td>
<td>F</td>
<td>–</td>
<td>F</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week</th>
<th>BL</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>FU6W</th>
<th>FU12W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact</td>
<td>–</td>
<td>FA</td>
<td>T</td>
<td>–</td>
<td>T</td>
<td>–</td>
<td>T</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

Note. The upper table is the FTF condition, the lower the T condition. FA=face-to-face assessment session; F=face-to-face support session; T=telephone support session; BL=baseline; FU=follow-up. The numbers correspond to each week of the intervention.

All face-to-face and telephone sessions were carried out at the Centre for Psychology, a private psychology clinic that is part of Massey University. Support protocols provided by Chris Williams (Williams, 2004; 2012) for both the FTF and T support conditions were adapted for the current study. The initial session focused on an introduction to the study and the purpose of the session, LICBT, and the use of self-help materials. The subjects of time, role of the practitioner, and nature of the programme were emphasised and the participant was informed about what be required over the course of the programme. After a brief discussion regarding the presenting problems of the individual, a collaborative five areas assessment of their current difficulties was completed and the participant was given a copy to take home. As well as providing psychoeducation, completing this together ensured that the participant would be familiar with the five areas approach when they were required to do an assessment on their own. If necessary, diagrams of the vicious cycle of avoidance, reduced activity, unhelpful behaviour (from Williams & Chellingsworth, 2010, pp. 20–22) were used to aid in understanding individual situations.

Each participant was then provided with a copy of Williams’s ODLM book free of charge and workbooks one and two (“Starting Out” and “Understanding Why I Feel as I Do”) were reviewed by the participant and low-intensity practitioner as they were the workbooks the participant would be asked to complete over the following week. At the end of the session planner and review sheets were explained to participants and a planner sheet completed for the week ahead.
At the second session, an overview of the session was given, and a review sheet was completed based around whether or not the participant was able to read the first two workbooks. If they had read them, there was discussion of what went well and what didn’t go so well. If the workbooks weren’t completed, this was discussed and a plan to overcome blocks was put in place for the coming week. At the end of workbook two is a checklist that the participant (hopefully) would have completed with regard to the workbooks they felt were relevant to them and that they planned to read. A collaborative decision was made regarding the next one to two workbooks to be completed over the next two weeks.

Sessions three and four were similar to session two, in that the previously completed workbooks were reviewed with a review sheet, and again a joint decision was made about the upcoming workbooks to be completed. At the fourth and final session, there was a final evaluation of the participant’s progress over the six-week period. The “Planning for the Future” workbook was reviewed, specifically focusing on early warning signs and an emergency response plan.

For both groups, outcome measures were sent weekly to the participant via an email link that was active for a week. A reminder email was sent the day before the link expired. On the last week of the programme, the CSQ-8 was added to the measures to be completed. Each week the completed measures were emailed to the low-intensity practitioner to view and track progress of the participants. Follow-up measures, as well as additional feedback questions, were emailed to participants in the same manner at six- and 12-weeks post-intervention. As SMS (text) and email are considered useful tools of communication in order to enhance low-intensity interventions, these were used in the current study to remind participants of upcoming appointments or to complete measures.

**Ethical considerations**

Ethical approval was obtained from the Health and Disability Ethics Committee under the auspices of the Massey Centre for Psychology (Albany) Research team (CEN/11/09/051, June 2012). Confidentiality of information was maintained for all participants. All registration information and session information were kept in a locked secure environment and weekly spreadsheets were password protected. Participants were given a code number for identification purposes and are not identifiable either in raw data or in the final research report.
All participants were informed in written and verbal form of the nature and purpose of the study (see Appendix D-1). Consent for participation in the study was gained from all participants (Appendix D-2). Additional information regarding the research was made available through contact with the programme facilitator. The voluntary nature of the research was made clear, ensuring that participants had the right to decline to take part in the study at any time.

The research was considered to pose a low risk of harm to participants. Treatment progress and integrity were monitored closely utilising the outcome measures to track levels of symptom severity, and screenings and close supervision with a senior clinical psychologist were provided, with the low-intensity practitioner prepared to refer the participant if necessary. The participants were clearly informed how to contact the low-intensity practitioner between sessions, and what to do if they felt worse at any stage or needed more help. A risk protocol (see Appendix E) was created in case participants demonstrated a worsening in symptoms and were no longer suitable for the study. One participant contacted the low-intensity practitioner a few days after their initial session with thoughts of suicide. The low-intensity practitioner consulted the risk protocol, engaged in immediate supervision and the participant was referred to a high-intensity CBT session that afternoon.

Finally, Dr Lily George was available as a Māori cultural advisor for this project, however cultural supervision was not required during the programme.

**Analytical approach**

The original design of this research was based on using a multi-level modelling (MLM) approach to analysis in order to examine the intra- and inter-variability within and between individuals over time. Estimates of required sample size was based on previous studies that employed similar clinical interventions (e.g., Sachenweger, 2010). However following the completion of the intervention and the resulting decreased sample size due to attrition, it was decided that MLM would not be the most appropriate way to analyse the data.

In order to capture the richness of the data obtained, a “mixed” analytical approach was employed in this study, utilising statistical analyses, visual analysis and clinically significant change analyses. Because the design was not initially established for this method of analysis, this resulted in a research design in which participants no
longer served as their own control condition (as in MLM) and as such conclusions drawn regarding the effectiveness of the programme are limited.

Campbell and Heringer (2010) suggest that utilising both visual and statistical analyses provides the most conservative means to reach a conclusion about the presence or absence of a functional relationship between variables. They note that statistical methods allow for the identification of small but potentially important effects that may be ignored in a visual analysis, and are more objective than visual analysis. In cases where visual analysis and statistical analysis agree, the conclusions reached are more convincing and allow statements of their effectiveness with greater confidence. However, there is no agreement on the correct or ideal statistical method to use with single participant data, although a strong recommendation is given to investigate the degree of autocorrelation in the data set (Campbell & Herzinger, 2010). Thus, the current study used statistical analysis to examine the relationships between variables, and visual analysis of individual progress was undertaken to investigate non-linear change and points of discontinuity within the intervention process. Kazdin (2011) argues that graphical display (e.g., a simple line graph) is particularly useful for seeing the patterns in the data obtained over time and other single-case advocates maintain that an independent variable’s effects on the dependent variable should be visible to the naked eye.

Research that focuses on the treatment of mental health difficulties such as depression has increasingly emphasised the importance of demonstrating that interventions not only show a statistically reliable difference, but also that the intervention has a real impact on the individual – known as clinical significance (McGlinchey, Zimmerman, & Atkins, 2008). As mentioned in Chapter 4, there are several disadvantages to relying on statistical significance tests to evaluate effectiveness alone. For example, there is no information about the variability of the response to treatment (i.e., within-group variability) (Jacobson & Truax, 1991). Further, determining that an intervention’s effect is statistically significant does not provide information about the size, importance or clinical significance of the effect. Clinical significance is typically regarded as the assessment of meaningful change due to treatment (Jacobson & Truax, 1991; Kazdin, 1999, 2001; McGlinchey et al., 2008). It refers to whether the intervention makes a real difference in an individual’s everyday life, or to others with whom the client interacts (Kazdin, 1999). Therefore clinically significant change was determined in the current study to track the movement of each
individual across time, thus providing interesting change-pattern data that could be used to evaluate the changes shown by each individual, as well as providing information on reliable and clinical significance (Zahra & Hedge, 2010).

Finally, qualitative information from participants was obtained to evaluate the acceptability of the intervention and their experience.

Although the adopted mixed nature of the study design has its obvious weaknesses with regard to no control group or assessment of baseline stability, it also has some strengths. The visual analysis components are ideal for investigating an applied, “real-life” psychological intervention and evaluating changes in the behaviour of individuals. Since individuals’ data are presented it is possible to independently analyse the effect an intervention has on each participant. Intra-subject variability can be analysed and shapes of change across the programme determined. If there is inter-subject variability, it is possible to analyse individual characteristics that may account for performance differences. Furthermore, the data of those participants for whom the intervention was not effective can be analysed to determine individual differences that may account for why this is so.

Data analysis
In order to investigate the treatment effects across the duration of the programme and follow-up for the entire sample, repeated-measures ANOVAs were conducted. For a repeated-measures ANOVA to be able to provide a valid result, the following three assumptions must hold about the data; (1) there are no outliers in any of the groups; (2) each group’s data is normally distributed; (3) the variances of the differences between related groups are equal (the assumption of sphericity). It needs to be noted that the ANOVA was only carried out on participants who contributed data points to each time point; thus any participant who missed completing the measures at any of the specified time points were not included in the analyses.

When the sample was separated for investigation of the effect of the type of guidance on outcome, the sample sizes were small. Small sample sizes present a problem in statistical analyses as they are less likely to meet the requirements and assumptions of parametric tests, thus increasing the probability of both Type I and Type II errors (Spicer, 2005). Non-parametric tests have fewer assumptions and sample size requirements, making them feasible alternatives. Thus in the current study, a group-level analysis using non-parametric tests was undertaken to investigate general patterns
on the outcome measures within each support condition. The Friedman test (the non-parametric equivalent to the repeated-measures ANOVA) was applied to assess changes in the outcome measures in each condition across three time points using median scores. Assumptions for this test are that the data are continuous, participants are from the same sample, and that participants contribute data once at each time point across two or more time periods (Pallant, 2011). The Friedman test is an overall, non-directional test, and therefore post-hoc analyses were performed using the Wilcoxon Signed Ranks test (Pallant, 2011). The Wilcoxin Signed Rank Test is designed for use with repeated measures and is a non-parametric alternative to the repeated-measures t-test. Instead of comparing means however, this test converts scores to ranks and compares these at Time 1 and Time 2.

The resulting increased probability of a Type I error was addressed through the use of Bonferroni’s inequality. This is an adjustment made to the alpha level used to judge statistical significance and involves setting a more stringent alpha level for each comparison, to keep the alpha across all the tests at a reasonable level. The adjusted probability level of $p<.017$ was used.

The Mann-Whitney U test was performed to test for differences between the types of guidance provided to participants. This test is a non-parametric alternative to the t-test for independent samples, again using medians for comparisons. The assumptions of this test are that the dependent variable is continuous, the independent variable consists of independent groups, there is independence of observations, and data is non-normally distributed (Pallant, 2011).

Finally, reliable and clinical change analysis was undertaken based on the work of Jacobson and Truax (1991). Clinically significant change is defined as the score at which the probability of coming from a clinical and non-clinical distribution is equal. Scores below this point are classified as the non-clinical range. Clinically significant change requires that a person is above the cut-off pre-treatment (i.e., is in the clinical range) but below this at post-treatment. Reliable change is where the change in scores must be greater than what could be due to the inherent reliability of the measure. A reliable change index (RCI) was calculated using estimates from clinical and non-clinical population distributions (means and standard deviations) for the measures from the clinical pre-treatment scores and estimates of internal reliability from the current study, and the non-clinical distribution from original validation studies (Barkham et al., 2012; Kroenke et al., 2001; Stevanovic, 2011). Thus:
\[ \text{RCI} = \frac{M_2 - M_1}{\sqrt{2(s_1\sqrt{1-r_{xx})^2}}} \]

where

- \( M_2 \) and \( M_1 \) are the clinical and non-clinical distribution means
- \( S_1 \) is the standard deviation of the clinical distribution at intake
- \( r_{xx} \) is the internal reliability (Cronbach’s alpha) of the measure used

Internal reliability estimates using Cronbach’s alpha were performed on the three outcome measures, PHQ-9, CORE-10 and QLES-S at baseline (see Chapter 7 for reliability analyses). These were calculated as 0.89, 0.86 and 0.94 respectively, and were selected along with the pre-treatment standard deviations to be used in the RCI calculation.

For the PHQ-9, a score of 10 was set as the clinical cut-off; for the CORE-10 a score of 11; and for the QLES-SF a score of 50.70, as aforementioned (see Measures section). As changes in scores for individual participants must take integer values, this means a participant must have shown a pre-treatment/post-treatment change of at least five points for the PHQ-9, five points for the CORE-10 and 10 points for the QLES-SF to be considered reliable. Table 6.4 lists the reliable change calculations.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Reliable Change Index</th>
<th>Rounded</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHQ-9</td>
<td>4.25</td>
<td>5</td>
</tr>
<tr>
<td>CORE-10</td>
<td>4.59</td>
<td>5</td>
</tr>
<tr>
<td>QLES-SF</td>
<td>9.79</td>
<td>10</td>
</tr>
</tbody>
</table>

Please note, when determining whether participants achieved reliable and clinically significant change by termination, this was taken as a change from baseline to follow-up, rather than a change from termination to follow-up as was used in the statistical analyses.

In the current research early rapid response was deemed to have occurred if there was reliable and clinically significant change by week three of the programme. Week three was chosen due to the evidence from previous studies that saw change by this time period (Delgadillo et al., 2013; Vaz et al., 2013). If later weeks were selected
(e.g., week four), this would have meant three of the support sessions would have taken place (as opposed to two), which could be argued no longer qualifies for early rapid response.
CHAPTER 7
RESULTS

Overview
This chapter begins by describing the preliminary data screens and reliability analyses employed in this study. The subsequent results are presented in five main sections. The first section presents descriptive statistics and analyses in order to evaluate the effectiveness of the Overcoming Depression and Low Mood (ODLM)-guided self-help programme. The next section presents a visual analysis of the nature of change across the programme for those that completed and for those who did not complete the programme, along with reliable and clinically significant change (RCSC) analyses. Early response to treatment analyses are presented next, followed by the results on client satisfaction with the programme. The final section reports three individual case studies, one from each condition, as well as an additional case study of the participant who did not complete the programme.

All data were analysed using the Statistical Package for Social Sciences (SPSS) for Windows, Version 20.0 (SPSS Inc., 2011).

Preliminary data screening
The data for the outcome measures (PHQ-9, CORE-10 and QLES-SF, CSQ-8) were initially screened to ensure accurate data entry, for missing data; normal distribution of the data; and the presence of outliers.

Missing data
Missing data were distinguished between missing items (on a specific questionnaire) and failure to complete the questionnaires for any given week; such failure meant that for that particular week data were missing for all the questionnaires. It was decided that this latter type of missing data would be left as missing (8.1%), due to the high percentage and individual nature of the analysis. Of the 19 participants that started the programme, eight did not complete the weekly measures at one time point during the programme, of whom one missed two weeks and later dropped out of the programme.

With regard to missing items, overall there were minimal data missing (0.19%), corresponding to three items in total from the QLES-SF. Three participants missed three different items on the QLES-SF, therefore the missing data were judged to be missing
completely at random; that is, the reason the data were missing was unrelated to any observed or unobserved data (Scheffer, 2002). Data missing completely at random can be imputed, allowing analyses to continue relatively unbiased (Hawthorne & Elliott, 2005). The missing values were imputed using expectation-maximisation (EM) imputation so as to increase the available analysis sample (Schafer & Graham, 2002). This approach involves filling in missing values and therefore helps to mitigate any loss of power created by a diminished sample size. EM is now the approach of choice when performing imputation to remedy missing data concerns.

**Normality and outliers**

Normality was assessed using both the Shapiro-Wilk (S-W) statistic and skewness and kurtosis values. The S-W test of normality was used as this is generally considered more appropriate for smaller samples (Allen & Bennett, 2012). Table 7.1 presents the skewness and kurtosis values and the S-W statistic for the sample’s baseline data. For all three outcome measures at baseline, values of skewness and kurtosis met requirements for normality (West, Finch, & Curran, 1995), and the S-W statistic was statistically non-significant (Pallant, 2011), thus the baseline sample appears to be normally distributed. Boxplots and trimmed means were inspected for outliers and none were detected.

**Random integrity check**

Following the preliminary data screens, 10% of the data files were randomly selected and checked against the original computer files. The files had all been correctly recorded, and therefore correct entry was assumed for the remaining data.

**Bivariate relationship between measures**

A Pearson’s product-moment correlation was conducted to assess the relationships between the outcome measures. Preliminary analyses showed all relationships to be linear with both variables normally distributed. There was a moderate positive correlation between the PHQ-9 and CORE-10, and a strong negative relationship between the QLES-SF and the PHQ-9, and the QLES-SF and the CORE-10. Table 7.2 shows these relationships.
Table 7.1: Descriptive statistics for the entire sample on outcome measures from baseline to follow-up.

<table>
<thead>
<tr>
<th>Measure</th>
<th>BL (W0)</th>
<th>W1 (W1)</th>
<th>W2 (W2)</th>
<th>W3 (W3)</th>
<th>W4 (W4)</th>
<th>W5 (W5)</th>
<th>W6 (W6)</th>
<th>FU06W (FU6W)</th>
<th>FU12W (FU12W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHQ-9</td>
<td>12.67</td>
<td>10.59</td>
<td>8.47</td>
<td>7.88</td>
<td>7.29</td>
<td>6.93</td>
<td>6.11</td>
<td>5.17</td>
<td>4.85</td>
</tr>
<tr>
<td>SD</td>
<td>4.52</td>
<td>5.08</td>
<td>5.29</td>
<td>6.11</td>
<td>5.27</td>
<td>5.85</td>
<td>5.69</td>
<td>5.27</td>
<td>5.27</td>
</tr>
<tr>
<td>CORE-10</td>
<td>18.67</td>
<td>17.65</td>
<td>13.93</td>
<td>15.0</td>
<td>12.29</td>
<td>10.93</td>
<td>8.14</td>
<td>8.42</td>
<td>8.46</td>
</tr>
<tr>
<td>SD</td>
<td>4.43</td>
<td>6.10</td>
<td>7.55</td>
<td>8.02</td>
<td>8.14</td>
<td>7.69</td>
<td>8.42</td>
<td>8.42</td>
<td>8.46</td>
</tr>
<tr>
<td>QLES-SF</td>
<td>36.44</td>
<td>41.12</td>
<td>45.88</td>
<td>50.65</td>
<td>50.65</td>
<td>53.75</td>
<td>50.20</td>
<td>48.72</td>
<td>45.87</td>
</tr>
<tr>
<td>SD</td>
<td>14.42</td>
<td>17.13</td>
<td>16.66</td>
<td>20.32</td>
<td>20.32</td>
<td>21.05</td>
<td>20.31</td>
<td>16.69</td>
<td>14.65</td>
</tr>
</tbody>
</table>

Note: M=mean; SD=standard deviation; S-W p-value is the significance level for the Shapiro-Wilk test. PHQ-9=depression measure; CORE-10=psychological distress measure; QLES-SF=quality of life measure. BL=baseline; W=week (where numbers correspond to week of the programme); FU= follow-up (where 6W and 12W is number of weeks post-intervention).
Table 7.2 Bivariate relationships (Pearson correlation) between outcome measures

<table>
<thead>
<tr>
<th>Measures</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PHQ-9</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. CORE-10</td>
<td>.54*</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3. QLES-SF</td>
<td>-.70**</td>
<td>-.67**</td>
<td>-</td>
</tr>
</tbody>
</table>

* Correlation is significant at the p<.05 level.
** Correlation is significant at the p<.01 level (two-tailed).

Exploring the effectiveness of the self-help programme

In order to determine whether participants showed significant improvements in outcome measures after completing the programme and whether these gains were maintained at follow up, statistical analyses were completed on the:

- **Entire sample**: Changes on outcome measures of depression, psychological distress and quality of life for all participants across the duration of the programme; as well as maintenance of treatment gains over the follow-up period. Attrition rates are also presented.

- **Support conditions**: The differences between face-to-face (FTF) and telephone (T) conditions were explored. Firstly, the demographic variables between the two groups were investigated, and then, if there were any differences between the two conditions at baseline, changes on outcome measures of depression, psychological distress and quality of life were investigated. In addition, whether treatment gains were maintained for both support conditions at the follow-up period.

**Entire sample**

The effectiveness of the programme was explored across the entire sample, over the duration of the programme. Firstly, it was important to graphically view the relationship between the outcome measures across time on the same scale. The data were standardised and averages were calculated for each time point (baseline through to follow-up), for each of the three measures and these were then converted to z-scores using with the following formula:

\[ z = \frac{x - \mu}{\sigma} \]

where

x is the value in the data set;
\( \mu \) is the average over the entire period for that measure; 
\( \sigma \) is the standard deviation (SD) over the entire period for that measure.

Figure 7.1 depicts this relationship. Over time, the reduction in depression was paralleled by the reduction in psychological distress, and that as these decrease, quality of life increases. The measures all intersect at around week four of the intervention.

![Figure 7.1 The relationship between the outcome measures from baseline to follow-up.](image)

*Note.* BL= baseline, W1= week one, W2= week two, etc; FU6W= six weeks’ follow-up, FU12W= 12 weeks’ follow-up.

Table 7.1 includes a summary of the descriptive statistics (mean, standard deviation) for the outcomes measures for the entire sample. This showed that for all participants, the mean scores on the PHQ-9, CORE-10 and QLES-SF decreased from baseline to week six of the programme, and continue to decrease until follow up. To determine if the differences were significant across different time points repeated measures ANOVAs were conducted to analyse treatment effects across the duration of the programme. The three time points were: baseline, week three (middle of the programme) and week six (termination of the programme). With regard to the first two assumptions of the ANOVA, the Shaprio-Wilk (S-W) statistic indicated a non-normal
distribution for the following time points: the PHQ-9 at weeks three and six, and the CORE-10 at week six. However, van Belle (2002) and Lorenzen and Anderson (1993) suggest that $F$-statistic equations are robust to violations of the assumption of normality, and as the skewness and kurtosis were in the normal range it was decided to continue with the use of a repeated measures ANOVA. The third assumption was determined by conducting Mauchly’s test of sphericity. This indicated that the assumption of sphericity had not been violated for the PHQ-9 ($\chi^2(2)=2.34, p=.31$) and the CORE-10, ($\chi^2(2)=1.48, p=.48$). However, sphericity was violated for the QLES-SF ($\chi^2(2)=10.21, p=.01$), therefore the Greenhouse-Geisser correction (which assesses the severity of departures from sphericity) was applied for this outcome measure ($\varepsilon=0.57$). Table 7.3 summarises the results of the repeated measures ANOVAs. These results demonstrate that the guided self-help intervention elicited statistically significant changes in all three outcome measures over the duration of the programme.

**Table 7.3** Summary results for repeated measures ANOVA at three time points (baseline, week three and termination of the programme) ($n=12$).

<table>
<thead>
<tr>
<th></th>
<th>$F$</th>
<th>df</th>
<th>partial $\eta^2$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHQ-9</td>
<td>23.46</td>
<td>2.20</td>
<td>0.70</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>CORE-10</td>
<td>8.70</td>
<td>2.20</td>
<td>0.47</td>
<td>&lt;.005</td>
</tr>
<tr>
<td>QLES-SF*</td>
<td>11.73</td>
<td>1.19, 11.66</td>
<td>0.54</td>
<td>&lt;.005</td>
</tr>
</tbody>
</table>

*Greenhouse-Geisser correction applied.

The resulting increased probability of a Type I error was addressed through the use of Bonferroni’s inequality, with an adjusted probability level of $p<.017$. Post hoc analysis with a Bonferroni adjustment revealed that depression significantly decreased from baseline to week three ($M=4$, 95% CI [.74 to 7.26], $p<.005$), and from baseline to termination ($M=6.36$, 95% CI [4.17 to 8.56], $p<.001$), but not from week three to week six ($M=2.36$, 95% CI [0.15 to 4.88], $p=.07$).

Psychological distress significantly decreased from baseline to termination ($M=7.81$, 95% CI [1.47 to 14.16], $p<.05$), and from week three to week six ($M=4$, 95% CI [0.71 to 8.89], $p<.001$), though not from baseline to week three ($M=3.72$, 95% CI [1.14 to 8.59], $p=.16$).

Quality of life significantly increased from baseline to termination ($M=19.91$, 95% CI [4.37 to 35.44], $p<.05$), and from week three to termination ($M=11.09$, 95% CI
[4.61 to 17.57], \( p < .005 \), but not from baseline to week three (\( M = 8.18 \), 95% CI [2.85 to 20.49], \( p = .17 \)).

To determine if the treatment effects were maintained post-intervention, repeated measures ANOVAs were conducted at the following three time points: week six (termination of the programme), six weeks’ follow-up and 12 weeks’ follow-up. Mauchly’s test of sphericity indicated that the assumption of sphericity had not been violated for any of the measures at these time points: PHQ-9 (\( \chi^2(2) = 1.72, \ p = .43 \)); CORE-10 (\( \chi^2(2) = 3.32, \ p = .19 \)); QLES-SF (\( \chi^2(2) = 3.19, \ p = .20 \)). Results from the ANOVAs indicated that the guided self-help programme did not lead to any statistically significant decreases in depression over the specified follow-up period, \( F(2, 22) = 0.94, \ p = .41 \). Similarly, psychological distress did not significantly decrease, \( F(2, 22) = 0.12, \ p = .89 \); nor did measures of quality of life significantly increase over this time, \( F(2, 22) = 2.36, \ p = .12 \).

**Attrition to the programme**

Out of the 19 participants who started the programme, 12 (63%) completed all four sessions and the majority of weekly measures until the last follow-up period at 12 weeks’ post-intervention (37% attrition). Five participants dropped out in the FTF condition (42%) and one in the telephone condition (14%). Thus, there was considerably less attrition in the programme when support was provided over the telephone.

To establish if there were differences between participants that dropped out of the study and those who did not, participants were grouped into two categories: those who completed the programme (completers) and those who dropped out (non-completers). The one participant whom completed all support sessions but did not complete the final follow-up was placed in the completers group. There was only one participant who dropped out of the T group, thus it was decided to combine participants from both conditions who did not complete the programme when exploring the differences in the overall sample.

A Mann-Whitney test was performed to determine if there was any difference between the completers and non-completers. While non-completers had a lower median score of depression at baseline (\( Md = 14 \)) compared to completers (\( Md = 10.5 \)), no significant difference was found between baseline scores of depression. There was a significant difference found on baseline scores of psychological distress, where those
who dropped out had a higher median distress score ($Md=22, n=6$) compared to those who completed the programme ($Md=17.5, n=12$), ($U=9.5, z=-2.6, p=.01, r=.59$). No significant differences were revealed on the baseline scores of quality of life, however non-completers had a lower quality of life score at intake ($Md=27$) compared to completers ($Md=34$).

**Face-to-face and telephone support conditions**

To explore the differences between the support conditions across the programme, the sample was separated into (FTF) and telephone (T) support conditions (see Table 7.4 for the descriptive statistics). Due to the reduced sample sizes in each treatment group, non-parametric statistics were conducted to compare outcome measures. Firstly, Mann-Whitney tests were performed to determine if there were differences between the FTF and T support conditions on demographic variables. No significant differences were found between the support conditions on age ($U=39, z=-.26, p=.80$); previous treatment ($U=37.5, z=-.54, p=.60$), current treatment ($U=35, z=-1.11, p=.27$); or on medication use ($U=28, z=-1.67, p=.09$).

Mann-Whitney tests were also used to explore any differences between the conditions at baseline, week six and 12 weeks’ follow up. For the PHQ-9, there were no significant differences between the FTF and T conditions at baseline; or at termination (week six). However, at 12 weeks follow up, those in the T support condition were significantly less depressed ($Md=0$) than the FTF participants ($Md=5, U=2.5, z=-2.47, p<.05, r=.71$). Psychological distress (CORE-10) scores in the FTF condition did not differ significantly from the T condition at baseline, termination, or 12 weeks’ follow-up. Similarly, quality of life scores did not significantly differ between the two conditions at baseline or termination, however at 12 weeks’ follow-up the T condition had significantly higher QLES-SF scores ($Md=75$) than the FTF group ($Md=64, U=2.0, z=-2.5, p<.01, r=.72$).

Changes on outcome measures for the two support conditions were investigated. These were conducted separately for each group. The Friedman test was used to explore differences at time points across the programme for each condition. Participants who had data points at each time point were used for analyses. Times specified were baseline, week three and week six. For those receiving support in the FTF format, there was a statistically significant difference for the PHQ-9 (median) scores across these three time points, $\chi^2(2, n=7)=9.85, p<.005$. The Wilcoxon Signed Rank (WSR) revealed
that decreases in PHQ-9 median scores were significant for the FTF condition from baseline \((Md=12)\) to termination of the programme \((Md=3)\), \(z=-2.38, p<.017\), with a large effect size \((r=.55)\). Changes from baseline to week three, and from week three to week six, were not significant. When support was provided over the telephone \((T)\), there was a statistically significant difference in PHQ-9 scores across baseline, week three, and week six of the programme, \(\chi^2(2, n=4)=7.6, p<.05\). However the WSR test demonstrated no significant changes at the corrected significance level in the T condition.

For the FTF condition, the CORE-10 median scores decreased from baseline \((Md=17)\), to week three \((Md=12)\), to termination \((Md=7)\), but the differences were not statistically significant, \(\chi^2(2,7)=3.43, p=.18\). In contrast, for the T group, CORE-10 scores decreased significantly from baseline \((Md=18)\) to week three \((Md=10)\) to termination \((Md=7)\), \(\chi^2(2,4)=6.53, p<.05\). However the WSR with a Bonferroni adjustment did not reveal any further significant differences across these time points.

On the QLES-SF, for the FTF group there was a significant difference across the three time points, \(\chi^2(2,7)=6, p=.05\). Although there was an increase in median scores from baseline \((34)\) to week three \((54)\) to termination \((61)\), a WSR with a Bonferroni correction did not demonstrate any significant difference across the specified time intervals. Similarly, for the T group a Friedman test revealed a significant difference across the three time points, \(\chi^2(2,4)=8, p<.05\), yet the WSR test was again insignificant. In regards to maintenance of gains from termination to follow up, the three time points specified for this analysis were: termination \(6\) weeks of the programme, six weeks’ follow-up and 12 weeks’ follow-up. On the PHQ-9, for both the FTF and the T groups, the Freidman test indicated no significant differences in scores across the three time points where \(\chi^2(2, n=7)=.07, p=.96\) and \(\chi^2(2, n=5)=2.0, p=.37\), respectively.

Likewise, on the CORE-10 the results for both FTF and T groups indicated no significant differences across the three time points, where \(\chi^2(2, n=7)=.08, p=.96\) and \(\chi^2(2, n=5)=1.0, p=.61\), respectively.

On the QLES-SF, for the FTF group there was no significant difference across the three time points, \(\chi^2(2, n=7)=2.57, p=.28\). For the T group a Friedman test revealed a significant difference across the three time points, \(\chi^2(2, n=5)=7, p<.05\), yet the WSR test was insignificant with the Bonferroni correction.
Table 7.4

<table>
<thead>
<tr>
<th>Week</th>
<th>BL</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>FU6W</th>
<th>FU12W</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FTF</td>
<td>T</td>
<td>FTF</td>
<td>T</td>
<td>FTF</td>
<td>T</td>
<td>FTF</td>
<td>T</td>
<td>FTF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>12</td>
<td>6</td>
<td>11</td>
<td>6</td>
<td>9</td>
<td>6</td>
<td>10</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>PHQ-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>5.05</td>
<td>3.06</td>
<td>5.26</td>
<td>3.57</td>
<td>5.92</td>
<td>4.59</td>
<td>7.18</td>
<td>3.66</td>
<td>5.66</td>
</tr>
<tr>
<td>CORE-10</td>
<td>19.58</td>
<td>16.83</td>
<td>18.82</td>
<td>15.50</td>
<td>15.59</td>
<td>11.00</td>
<td>16.70</td>
<td>12.17</td>
<td>13.82</td>
</tr>
<tr>
<td>M</td>
<td>4.46</td>
<td>4.12</td>
<td>6.49</td>
<td>5.13</td>
<td>8.24</td>
<td>5.79</td>
<td>8.68</td>
<td>6.46</td>
<td>8.91</td>
</tr>
<tr>
<td>QLES-SF</td>
<td>35</td>
<td>34</td>
<td>30</td>
<td>25</td>
<td>34</td>
<td>30</td>
<td>25</td>
<td>34</td>
<td>30</td>
</tr>
<tr>
<td>M</td>
<td>1.43</td>
<td>1.28</td>
<td>1.09</td>
<td>0.50</td>
<td>0.56</td>
<td>0.53</td>
<td>0.56</td>
<td>0.50</td>
<td>0.56</td>
</tr>
</tbody>
</table>

Note: M=mean; SD=Standard deviation; S-W=Shapiro-Wilk; PHQ-9=depression measure; CORE-10=psychological distress measure; QLES-SF=quality of life

M=mean; SD=Standard deviation; S-W=Shapiro-Wilk; PHQ-9=depression measure; CORE-10=psychological distress measure; QLES-SF=quality of life.

Week 1: FTF=face-to-face; T=text.
Week 2: FTF=face-to-face; T=text.
Week 3: FTF=face-to-face; T=text.
Week 4: FTF=face-to-face; T=text.
Week 5: FTF=face-to-face; T=text.
Week 6: FTF=face-to-face; T=text.
Follow-up: 6 weeks: FTF=face-to-face; T=text.
Follow-up: 12 weeks: FTF=face-to-face; T=text.

Table 7.4: Descriptive statistics for the outcome measures for each support condition from baseline to follow-up.
Summary

For the entire sample, in general, ANOVAs demonstrated statistically significant reductions in depression, psychological distress and quality of life across the programme, however these were not maintained at follow up points.

When separated into support conditions, non-parametric statistics were utilised and demonstrated statistically significant reductions in depression for the both FTF and T conditions, however when corrected this was no longer significant for the T group. For psychological distress, although no significant changes were demonstrated for the FTF condition, a significant reduction in distress was found for the T group, yet this was not maintained following the a Bonferroni correction. Finally, for quality of life, both FTF and T demonstrated significant differences across the programme, though no further differences were found after the corrected significance level was applied.

With regards to attrition, there was much less attrition in the T condition compared to the FTF condition.

Exploring the nature of change in the self-help programme

Although the statistical methods above indicated significant results, averaging the data excludes the rich variability that exists within individual cases. This section examines the data at an individual level, specifically looking at the patterns of change across the duration of the programme and follow-up points.

Depression: completers

Figure 7.2 graphically presents the depression scores from the PHQ-9 for the 13 participants who completed the intervention through until 12 weeks’ follow-up. Table 7.5 shows depression severity at baseline, termination and 12 weeks’ follow up. The patterns of depression were mixed, but the general trend was that they all decreased over time. There are a few points to note. There is a clear distinction between participants based on initial severity; that is, those experiencing higher and lower levels of depression at baseline. For example, participants 4, 10 and 12 had more severe PHQ-9 scores at intake and although there was a gradual reduction in depression severity, the pattern of change for these participants was non-linear and variable over the duration of the programme. On the other hand, for the other participants whose depression severity was mild or moderate at intake, the change trajectories were less variable and demonstrated a more linear decrease in depression scores, up until the first follow-up.
point. Of note, at six weeks’ follow-up, four participants (6, 8, 9, 17) who had lower levels of depression severity at baseline experienced an increase in depression score, whereas in contrast the three with higher initial levels of depression all decreased at this time point.

Some participants showed an increase in depression prior to the weeks without a support session, or prior to termination of the programme. For example, participant 12 experienced an increase in depression at week 3 – a week without a support session (although this individual did not complete the measures at week two, they did attend the support session). At week five (one week prior to termination), four participants depression scores increased (4, 14, 15, 19) and at the final support session (week six), four other participants scores increased (6, 9, 10, 12) while the remainder stayed at the same level, or decreased. For one participant (18) it was hard to determine the change trajectory, due to only having completed five of the nine measurement points. Despite differing trajectories, at 12 weeks’ post-intervention, all participants were experiencing mild or no depression.

*Figure 7.2* Individual depression severity trajectories for completers

* indicates a week where a support session was provided.
Reliable and clinical change

At the initial baseline measures, depression severity as defined by the PHQ-9 ranged from mild to severe (refer to Table 7.5). Fifty-four percent of the participants experienced reliable and clinically significant change (RCSC) by termination of the programme. At 12 weeks’ follow-up, RCSC was demonstrated by ten (77%) of completers. The three participants that did not show RCSC started and completed the programme with mild or no depressive symptoms. It needs to be noted that participants may have demonstrated reliable change but not clinical change, or vice versa, and this can be seen in the tables included in Appendix F. Table 7.5 presents a summary of participants’ depression severity at the initial and final sessions and at 12 weeks’ follow-up, as well as RCSC for each individual at the same time points.

Table 7.5 Summary of changes in depression severity (PHQ-9) of completers in the FTF and T conditions

<table>
<thead>
<tr>
<th>Participant</th>
<th>Severity at baseline</th>
<th>Severity at termination</th>
<th>RCSC termination Y/N</th>
<th>Severity at 12W FU</th>
<th>RCSC 12WFU Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTF (n=7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Moderate</td>
<td>Mild</td>
<td>Y</td>
<td>Mild</td>
<td>Y</td>
</tr>
<tr>
<td>4</td>
<td>Moderately severe</td>
<td>Moderate</td>
<td>N</td>
<td>Mild</td>
<td>Y</td>
</tr>
<tr>
<td>6</td>
<td>Mild</td>
<td>Mild</td>
<td>N</td>
<td>Mild</td>
<td>N</td>
</tr>
<tr>
<td>8</td>
<td>Moderate</td>
<td>Mild</td>
<td>Y</td>
<td>Mild</td>
<td>Y</td>
</tr>
<tr>
<td>9</td>
<td>Moderate</td>
<td>Mild</td>
<td>Y</td>
<td>Mild</td>
<td>Y</td>
</tr>
<tr>
<td>10</td>
<td>Severe</td>
<td>Moderately severe</td>
<td>N</td>
<td>Mild</td>
<td>Y</td>
</tr>
<tr>
<td>12</td>
<td>Moderately severe</td>
<td>Moderately severe</td>
<td>N</td>
<td>Mild</td>
<td>Y</td>
</tr>
<tr>
<td>T (n=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Moderate</td>
<td>No depression</td>
<td>Y</td>
<td>No depression</td>
<td>Y</td>
</tr>
<tr>
<td>14</td>
<td>Moderately severe</td>
<td>No depression</td>
<td>Y</td>
<td>No depression</td>
<td>Y</td>
</tr>
<tr>
<td>15</td>
<td>Moderately severe</td>
<td>Mild</td>
<td>Y</td>
<td>Mild*</td>
<td>Y*</td>
</tr>
<tr>
<td>17</td>
<td>Moderately severe</td>
<td>Mild</td>
<td>Y</td>
<td>Mild</td>
<td>Y</td>
</tr>
<tr>
<td>18</td>
<td>Mild</td>
<td>Mild</td>
<td>N</td>
<td>Mild</td>
<td>N</td>
</tr>
<tr>
<td>19</td>
<td>Mild</td>
<td>No depression</td>
<td>N</td>
<td>No depression</td>
<td>N</td>
</tr>
</tbody>
</table>

Note. Categories of severity are determined by cut-off scores provided by the authors of the measure where 0–4 is no depression, 5–9 mild, 10–14 moderate, 15–19 moderately severe, and 20 indicates severe depression. FU=follow-up; RCSC=reliable and clinically significant change; Y=yes; N=no.

* indicates RCSC was for 6 weeks’ follow-up.
Non-completers

The individual change trajectories were very different for those who did not complete the programme (Figure 7.3). Firstly, the range of baseline depression scores were more severe (see Table 7.6). In contrast to the completers, three of the six non-completers increased in depression severity from baseline to their first support session. Although the other three experienced reductions, one of these participants (2) dropped out the following week due to severity of symptoms, and another participant (16) experienced an increase in depression. However, participant 7 continued to experience a dramatic decline in depression until week two, where they began to increase in PHQ-9 scores until they dropped out at week four, stating that the programme wasn’t appropriate for their individual problems.

Of note, the non-completer trajectories demonstrate an increase in depression severity the week prior to the participant leaving the programme (with the exception of participant 1), and for two participants (7, 16) this increase was quite compelling. Participant 1 had depression scores that decreased prior to dropping out, but informed the researcher that they were feeling worse and that the programme was not suitable for their needs. Participant 5’s depression gradually reduced across the duration of the programme, however this participant failed to attend the final support session and was unable to be contacted, hence there are no reasons available for this dropout.

![Figure 7.3 Individual depression trajectories for non-completers](image)

*indicates a support session.
Reliable and clinical change

Table 7.6 summarises the depression severity levels of those who did not complete the programme. None of the participants showed RCSC by the time they left the programme.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Severity at baseline</th>
<th>Dropout</th>
<th>RCSC at dropout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Moderate</td>
<td>Mild</td>
<td>N</td>
</tr>
<tr>
<td>2</td>
<td>Moderately severe</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>5</td>
<td>Mild</td>
<td>Mild</td>
<td>N</td>
</tr>
<tr>
<td>7</td>
<td>Moderately severe</td>
<td>Moderate</td>
<td>N</td>
</tr>
<tr>
<td>11</td>
<td>Moderate</td>
<td>Mild</td>
<td>N</td>
</tr>
<tr>
<td>16</td>
<td>Moderately severe</td>
<td>Severe</td>
<td>N</td>
</tr>
</tbody>
</table>

Note. Participant 2 dropped out at session two thus it was not possible to calculate reliable and clinical change.

Psychological distress: completers

Visual inspection of individual trajectories reveals extreme intra- and inter-individual variation (see Figure 7.4). Those participants who demonstrated more severe levels of depression on the PHQ-9, similarly displayed higher overall levels of psychological distress (for example 4, 10, 12) and their change trajectories fluctuated widely from baseline through to follow-up. In contrast, participants with lower levels of psychological distress (e.g., 3, 6, 9, 13, 14) demonstrated less variability across the time points. All participants exhibited trajectories that are discontinuous and non-linear, although participant 9 demonstrated the most stability in their change patterns. Of note is the increase in psychological distress scores that the majority of the participants experienced at week three of the programme. This was a week without a support session; yet the same increase was not evident in the PHQ-9 scores. When comparing individual PHQ-9 and CORE-10 patterns, the trajectories follow a similar course, yet the CORE-10 has a wider range of scores than the PHQ-9, hence the visual difference in variability across these measures.
Figure 7.4 Individual psychological distress trajectories for completers
*indicates a support session.

**Reliable and clinical change**

All participants exceeded the clinical cut-off (≥11) for psychological distress at baseline with the exception of participant 6 who was deemed non-clinical. By the end of the programme, ten participants (77%) had scores in the non-clinical range, and eight (62%) showed RCSC. This clinical change was maintained at 12 weeks’ follow-up. Table 7.7 presents a summary of outcomes the CORE-10 measure of psychological distress.
Table 7.7 Summary of changes in psychological distress (CORE-10) of completers in both FTF and T conditions

<table>
<thead>
<tr>
<th>Participant</th>
<th>Severity at baseline</th>
<th>Severity at termination</th>
<th>RCSC termination Y/N</th>
<th>Severity at 12W FU</th>
<th>RCSC 12W FU Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTF (n=7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>Y</td>
<td>Non-clinical</td>
<td>Y</td>
</tr>
<tr>
<td>4</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>Y</td>
<td>Non-clinical</td>
<td>Y</td>
</tr>
<tr>
<td>6</td>
<td>Non-clinical</td>
<td>Non-clinical</td>
<td>N</td>
<td>Non-clinical</td>
<td>N</td>
</tr>
<tr>
<td>8</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>Y</td>
<td>Non-clinical</td>
<td>Y</td>
</tr>
<tr>
<td>9</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>Y</td>
<td>Non-clinical</td>
<td>Y</td>
</tr>
<tr>
<td>10</td>
<td>Clinical</td>
<td>Clinical</td>
<td>N</td>
<td>Clinical</td>
<td>N</td>
</tr>
<tr>
<td>12</td>
<td>Clinical</td>
<td>Clinical</td>
<td>N</td>
<td>Clinical</td>
<td>N</td>
</tr>
<tr>
<td>T (n=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>Y</td>
<td>Non-clinical</td>
<td>Y</td>
</tr>
<tr>
<td>14</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>Y</td>
<td>Non-clinical</td>
<td>Y</td>
</tr>
<tr>
<td>15</td>
<td>Clinical</td>
<td>Clinical</td>
<td>N</td>
<td>Non-clinical*</td>
<td>Y*</td>
</tr>
<tr>
<td>17</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>Y</td>
<td>Non-clinical</td>
<td>Y</td>
</tr>
<tr>
<td>18</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>N</td>
<td>Non-clinical</td>
<td>Y</td>
</tr>
<tr>
<td>19</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>Y</td>
<td>Non-clinical</td>
<td>Y</td>
</tr>
</tbody>
</table>

*indicates the RCSC was for 6 weeks’ follow-up.

Note. The authors define clinical as ≥11 and non-clinical as less than 11.

Non-completers

The CORE-10 scores of the non-completers across the programme until dropout are unlike those of the completers (Figure 7.5). Participants 1, 7, 11 and 16 have similar trajectories, in that psychological distress seemed to be maintained over the duration of the programme, with a few peaks and troughs along the way. Indeed, participant 11 demonstrated a decrease at week five of the programme that coincides with their increase in PHQ-9 score, perhaps due to the CORE-10 highlighting different areas of distress that may have alleviated by dropping out of the programme. Participant 5 was mentioned previously due to the unknown reasons for dropout, and again this individual demonstrated a decline in psychological distress from baseline until the second to last week of the programme, and therefore did not add further information about the nature of change trajectories for non-completers.
Figure 7.5 Individual psychological distress trajectories for non-completers
*indicates a support session.

**Reliable and clinical change**

All non-completers had intake CORE-10 scores in the clinical range, and with the exception of participant 5, all left the programme in the clinical range. As Table 7.8 shows, only participant 5 demonstrated RCSC of the non-completers.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Baseline</th>
<th>Dropout</th>
<th>RCSC at dropout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Clinical</td>
<td>Clinical</td>
<td>N</td>
</tr>
<tr>
<td>2</td>
<td>Clinical</td>
<td>Clinical</td>
<td>N</td>
</tr>
<tr>
<td>5</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>Y</td>
</tr>
<tr>
<td>7</td>
<td>Clinical</td>
<td>Clinical</td>
<td>N</td>
</tr>
<tr>
<td>11</td>
<td>Clinical</td>
<td>Clinical</td>
<td>N</td>
</tr>
<tr>
<td>16</td>
<td>Clinical</td>
<td>Clinical</td>
<td>N</td>
</tr>
</tbody>
</table>

**Quality of life: completers**

Upon visual inspection of the completers graph (Figure 7.6), quality of life as measured by the QLES-SF can be seen to generally increase over the duration of the programme and subsequent follow-up points. The change pattern of participant 9 is almost linear until the first follow-up point, where their quality of life score decreased dramatically, almost to the same level at intake. Prior to termination of the programme (from week five to week six), six participants (4, 8, 13, 14, 15, 19) displayed a peak in quality of
life that subsequently dropped for some participants by the six-week follow-up point. This corresponds to decreases experienced in depression and furthermore, depression scores were significantly correlated with quality of life scores ($r=-.82$, $p<.001$).

![Figure 7.6 Individual quality of life trajectories](image)

*indicates a support session.

**Reliable and clinical change**

Ten participants (69%) had baseline QLES-SF scores classified as Impaired. By termination, eleven participants (85%) had increased in scores of quality of life to a Functional level, and this translated into RCSC. Similarly, at 12 weeks’ follow-up, eleven participants (85%) were in the Functional range and again, this was reflected in RCSC. However, while one participant went from Impaired (termination) to Functional (12 weeks’ follow up), one participant (15, who dropped out after the six-week follow up), actually reverted to the Impaired range at the six-week follow-up point. Table 7.9 presents a summary of RCSC for the QLES-SF.
Table 7.9 Summary of changes in quality of life (QLES-SF) of completers in FTF and T conditions

<table>
<thead>
<tr>
<th>Participant</th>
<th>Baseline</th>
<th>Termination</th>
<th>RCSC termination Y/N</th>
<th>12 weeks’ follow-up</th>
<th>RCSC 12W FU Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTF (n=7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Functional</td>
<td>Functional</td>
<td>N</td>
<td>Functional</td>
<td>N</td>
</tr>
<tr>
<td>8</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Impaired</td>
<td>Impaired</td>
<td>N</td>
<td>Impaired</td>
<td>N</td>
</tr>
<tr>
<td>12</td>
<td>Impaired</td>
<td>Impaired</td>
<td>N</td>
<td>Functional</td>
<td>Y</td>
</tr>
<tr>
<td>T (n=6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Functional</td>
<td>Functional</td>
<td>N</td>
<td>Functional</td>
<td>N</td>
</tr>
<tr>
<td>15</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Impaired*</td>
<td>N*</td>
</tr>
<tr>
<td>17</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Functional</td>
<td>Y</td>
</tr>
<tr>
<td>18</td>
<td>Functional</td>
<td>Functional</td>
<td>N</td>
<td>Functional</td>
<td>N</td>
</tr>
<tr>
<td>19</td>
<td>Functional</td>
<td>Functional</td>
<td>N</td>
<td>Functional</td>
<td>N</td>
</tr>
</tbody>
</table>

Note: Functional and impaired correspond to above or below cut-off of 50.70 (Eisen et al., 2006) on the QLES-SF respectively. FU=follow-up; RCSC=reliable and clinically significant change; Y=yes; N=no.
* indicates RCSC was for six weeks’ follow-up.

Non-completers

Once again, the non-completers showed very different trajectories to those who completed the programme (Figure 7.7). The quality of life trajectory for participant 5 reinforces the earlier finding of an inconsistent change pattern for non-completers and it would have been valuable to know their reasons for dropping out. Participants 1, 7 and 16 display similar patterns – very flat, stable trajectories that showed little overall increase at time of dropout. However participants 1 and 7 actually improved, whereas participant 16 actually deteriorated; that is, had a lower quality of life score at dropout compared to intake, which is consistent with the other outcome measures. Participant 11
also deteriorated on quality of life scores at dropout.

![Figure 7.7 Individual quality of life trajectories for non-completers](image)

* indicates a support session.

**Reliable and clinical change**

Table 7.10 shows that all of the six non-completers (with the exception of participant 5) demonstrated an Impaired quality of life at baseline. Four of the six did not demonstrated RCSC by the time they left the programme. Participant 7 showed RCSC by the time they dropped out of the programme, and as participant 5 was Functional as baseline and dropout, no RCSC was seen.

**Table 7.10 Quality of life severity and RCSC in non-completers**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Baseline</th>
<th>Dropout</th>
<th>RCSC at dropout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Impaired</td>
<td>Impaired</td>
<td>N</td>
</tr>
<tr>
<td>2</td>
<td>Impaired</td>
<td>Impaired</td>
<td>N</td>
</tr>
<tr>
<td>5</td>
<td>Functional</td>
<td>Functional</td>
<td>N</td>
</tr>
<tr>
<td>7</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
</tr>
<tr>
<td>11</td>
<td>Impaired</td>
<td>Impaired</td>
<td>N</td>
</tr>
<tr>
<td>16</td>
<td>Impaired</td>
<td>Impaired</td>
<td>N</td>
</tr>
</tbody>
</table>

*Note. RCSC=reliable and clinically significant change; Y= yes; N=no.*

**Early response in a guided self-help programme**

In order to determine if any participants experiencing depression demonstrated an early response to the guided self-help programme, mean change outcome measures were calculated at week three (when participants had received two support sessions) for the
PHQ-9. The entire sample was used for this (that is, completers and non-completers were combined) and scores were examined to establish how many participants had improved at week three and whether this improvement was associated with successful treatment outcome at both termination of the programme (week six) and at 12 weeks’ follow-up. Improvement was defined as a reduction of five points on the PHQ-9 (in other words the reliable change index, RCI; Jacobson & Truax, 1991) from baseline to week three. As depression and quality of life were significantly correlated, it was also decided to investigate if early rapid response was demonstrated in measures of quality of life. The RCI, or improvement score used for the QLES-SF, was an improvement of 10 points.

**Early rapid response in depression**

At week three, 51% of total change in mean PHQ-9 had occurred. Sixteen of nineteen participants had completed measures at week three (two had dropped out and one did not complete measures that week) and out of these, seven (44%) experienced a improvement in depression as measured by the RCI. Of the seven participants who demonstrated early improvement at week three, two were non-completers (5 and 7; recall 5 was the participant who appeared to improve until drop out, though reasons for drop out are unknown). The other five participants were completers. In terms of outcomes, three of the five (60%) achieved reliable and clinically significant change by termination, and all five completers achieved RCSC by 12 weeks’ follow up. See Table 7.11 for a summary of baseline and outcome data for the five participants who showed early improvement.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Baseline severity</th>
<th>Severity at termination</th>
<th>RCSC termination</th>
<th>RCSC 12W FU</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Moderately severe</td>
<td>Moderate</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>8</td>
<td>Moderate</td>
<td>Mild</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>9</td>
<td>Moderate</td>
<td>Mild</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>10</td>
<td>Severe</td>
<td>Moderately-severe</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>15</td>
<td>Moderately severe</td>
<td>Mild</td>
<td>Y</td>
<td>Y*</td>
</tr>
</tbody>
</table>

*indicates RCSC was for six weeks’ follow-up. Depression severity was determined by the PHQ-9. RCSC= reliable and clinical change, 12W FU=12 weeks’ follow up, Y=yes, N=no. Non-completers are not included.
Of those nine that did not show early improvement (non-early responders), two were non-completers (1 and 16). Of the non-early responders, three (43%) showed RCSC at termination, and four (57%) showed RCSC at 12 weeks’ follow up. Table 7.12 presents intake depression severity and RCSC outcomes for those who did not show early rapid responding. A Mann-Whitney U test revealed no significant difference between baseline levels of depression of early responders ($Md=11$, $n=7$), and non-early responders ($Md=11.50$, $n=12$), ($U=33$, $z=-.77$, $p=.44$).

Table 7.12 Depression severity and RCSC for those who completed the programme that did not demonstrate early response

<table>
<thead>
<tr>
<th>Participant</th>
<th>Baseline severity</th>
<th>Severity at termination</th>
<th>RCSC termination</th>
<th>RCSC 12W FU</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Moderate</td>
<td>Mild</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>6</td>
<td>Mild</td>
<td>Mild</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>12</td>
<td>Moderately severe</td>
<td>Moderately severe</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>14</td>
<td>Moderately severe</td>
<td>No depression</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>17</td>
<td>Moderately severe</td>
<td>Mild</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>18</td>
<td>Mild</td>
<td>Mild</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>19</td>
<td>Mild</td>
<td>No depression</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Note. Depression severity was determined by the PHQ-9. RCSC= reliable and clinical change, 12W FU=12 weeks’ follow up, Y=yes, N=no. Non-completers are not included.

Early rapid response in quality of life
By week three, 29 percent of mean total QLES-SF change had occurred. Ten participants (63%) showed early improvement (RCI) at week three. Of these ten, two were the same non-completers as noted above (5 and 7) that also demonstrated improvement on the PHQ-9 condition, thus eight were participants who completed the programme. As Table 7.13 shows, five of the eight completers (63%) demonstrated RCSC at termination, and six (75%) showed RCSC at 12 weeks’ follow up.
Table 7.13 Quality of life impairment and RCSC for early responders that completed the programme

<table>
<thead>
<tr>
<th>Participant</th>
<th>Baseline</th>
<th>Severity at termination</th>
<th>RCSC termination</th>
<th>RCSC 12W FU</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>4</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>8</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>9</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>12</td>
<td>Impaired</td>
<td>Impaired</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>14</td>
<td>Functional</td>
<td>Functional</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>17</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>18</td>
<td>Functional</td>
<td>Functional</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Note. Quality of life impairment was determined by the QLES-SF. RCSC= reliable and clinical change, 12W FU=12 weeks’ follow up, Y=yes, N=no. Non-completers are not included.

On the other hand, there were six participants (four completers and two non-completers) who did not demonstrate early responding on the measure of quality of life. Of the completers, only one showed RCSC at termination (who later dropped out) and none showed RCSC at follow up. Table 7.14 presents intake impairment in quality of life and RCSC outcomes for those who did not show early rapid responding. A Mann-Whitney U test revealed no significant difference between baseline levels of quality of life of early responders (Md=36.5, n=8), and non-early responders (Md=34, n=11), (U=31.5; z=-1.04, p=.30).

Table 7.14 Quality of life impairment and RCSC for those who completed the programme that did not show early rapid response

<table>
<thead>
<tr>
<th>Participant</th>
<th>Baseline</th>
<th>Severity at termination</th>
<th>RCSC termination</th>
<th>RCSC 12W FU</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Functional</td>
<td>Functional</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>10</td>
<td>Impaired</td>
<td>Impaired</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>15</td>
<td>Impaired</td>
<td>Functional</td>
<td>Y</td>
<td>N*</td>
</tr>
<tr>
<td>19</td>
<td>Functional</td>
<td>Functional</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Note. * indicates RCSC was for six weeks’ follow-up. Quality of life impairment was determined by the QLES-SF. RCSC= reliable and clinical change, 12W FU=12 weeks’ follow up, Y=yes, N=no. Non-completers are not included.

Summary

Participants in the guided self-help programme appeared to demonstrate the phenomenon of early response to treatment. At week three a high percentage (44% and 63%) of participants had experienced an early improvement in symptoms on the PHQ-9 and the QLES-SF, respectively. This early response pattern was associated with positive
treatment outcomes, in that early responders showed RCSC if not by the end of the programme, then by 12 weeks’ post-intervention. Two non-completers actually demonstrated early improvement, however the remaining non-completers did not show improvement at these early weeks. Despite this, there were participants who did not show an improvement score at these early weeks who nevertheless showed successful treatment outcomes.

Participant satisfaction with the programme

Client Satisfaction Questionnaire (CSQ-8)

Fifteen of 19 participants completed this quantitative scale. Two of the participants that completed this questionnaire were non-completers; one from each support condition. Their answers are presented and referred to specifically to see if any differences existed in satisfaction levels between completers and non-completers.

Scores on the CSQ-8 ranged from 20 to 32, with the average score being 28 out of 32 (higher scores indicate greater satisfaction). Participants rated the quality of the service as excellent (80%) or good (20%). Most indicated their needs were met; however four participants indicated that the programme met only a few of their needs. One of these was a non-completer. Nevertheless, the majority of participants (87%) indicated that they received the type of service they wanted and would recommend it to a friend, and 93 percent were satisfied with the amount of help they received. However one completer noted indifference with the service and the amount of help received. The majority (80%) said the programme helped them and they would use the programme again; two participants (13%) said the programme didn’t really help (one being a non-completer); and one said the programme didn’t help at all. However, all participants were either mostly or very satisfied with the services received and the majority (80%) said they would come back to the service. Figure 7.8 summarises the overall results in graphical form.

Mann-Whitney U tests were used to test for differences between the two support conditions on satisfaction (as measured by the CSQ-8) with the programme. This revealed no significant difference in satisfaction scores between support conditions, (U=2036; z=-.30, p=.76).
Figure 7.8 Results from the CSQ-8 (scores ranged from 20 to 32)

Qualitative feedback

A follow-up email was sent to participants to gather more qualitative information about their experiences of the programme. Six participants responded to this: four from the FTF condition and two from the T condition. Five reported continued use of the ODLM book since the programme had finished. Descriptions of use included referring to it for motivation or to refresh memory; using it for coping strategies to help through a difficult time; and completing the five areas approach with difficult situations. Skills that were learnt that were helpful and still being used included noticing and challenging unhelpful thinking, practical aspects around sleeping, problem-solving skills, assertiveness skills, and use of the five areas approach. Participants commented that the programme has increased their communication with their family about anxieties and mood, gave them motivation, and one mentioned how the book and programme have “had a huge impact” on their life due to learning how to identify triggers and defusing situations before they turn into a vicious cycle.

Five participants were extremely impressed with the programme, while one mentioned they still had a long way to go but it was a good start and another was not overly satisfied with the programme, stating that in order for the concepts to be useful one needed to practise the tasks and have little else going on. One participant commented that at times the book was too simple for their liking, and it wasn’t answering questions the participant found themselves asking. One participant enjoyed
being able to write down their own experiences in the book and refer to it at a later stage.

**Brief case studies**

This section presents individual case studies of three participants: one completer from each of the FTF and T conditions, and one non-completer. The participants who completed the intervention were selected on the following criteria: they had completed all four support sessions and baseline, they had completed the measures for the majority of weeks (may have missed one) and both follow-up weeks; and the information about their story was not easily identifiable. The names used in these case studies have been changed and specific information about the participants has been omitted to protect their anonymity.

**John: FTF Completer**

(Participant ID number: 9). John was a 33-year-old New Zealand European male who had recently returned to New Zealand from a number of years living overseas. At the time of the study, he was employed in full-time work, though over a few different jobs. He has a familial history of depression, and had previously experienced depressive episodes in which treatment consisted of medication and CBT. He was not on medication at the time of the study. He was interested in participating in the programme to learn skills to deal with his depression. In addition, he was experiencing anxiety at times when he was alone, which were common during the week due to his having time between jobs.

At the first FTF session, John explained his current situation and his concerns that depression would begin to be a normal part of his life. He spent a lot of time alone, and experienced negative thoughts about himself. A collaborative five areas summary was completed, and previous and current coping strategies were identified. At the second support session, John had completed the first two workbooks as well as read through the rest of the book. He commented that it “made sense” and his feelings were validated, however there were some aspects that he found he couldn’t relate to himself.

John reported being aware of most of the concepts (due to previous CBT), however he was not putting them into practice. Thus his goal for the coming weeks was to apply the skills and techniques learnt. He set himself three workbooks to read over the following two weeks on “Assertiveness”, “Unhelpful Thinking and Anxiety” and
“Avoidance”. John had a busy couple of weeks with work and was unable to complete all the workbooks, though he did read the “Assertiveness” workbook. He reported setting time aside for this, and actually sat at his desk and completed it. This gave him a sense of satisfaction and achievement, which at the time lifted his mood. Again, he mentioned sections that weren’t relevant however he was keen to practise articulating his opinions in order to apply what he’d learnt in a real-life situation. At the fourth and final support session, John had completed two more workbooks on “Relationships and Noticing” and “Challenging Unhelpful Thinking”. Reviewing the “Relapse Prevention” workbook was particularly helpful for John, especially the identification of early warning signs which John and the low-intensity practitioner collaboratively identified and listed in this session.

Figure 7.9 shows John’s reduction in depression and psychological distress from baseline to 12 weeks’ follow-up. His initial severity was moderate on the PHQ-9, and was in the clinical category for the CORE-10. His CORE-10 score was only three points above the cut-off value. John demonstrated a convincing early response to the intervention in the first three weeks. Although he continued to improve until week five of the programme, it was not at the same rate. John’s depression increased at the last week of the programme, and continued to increase until 12 weeks’ follow-up. Psychological distress paralleled this increase, and it would have been interesting to know if his depression levels continued to increase to intake severity over time. After termination, John was provided with information about additional support services, and this was something he said he would like to pursue. John’s quality of life scores mimic that of the other outcome measures. Quality of life steadily increases over the duration of the programme, then rapidly declines post-intervention.

John’s participation in the guided self-help programme reduced his depression and psychological distress, and improved his quality of life scores. This was evident over the duration of the programme, however these gains were not maintained at follow-up. John had recently returned to New Zealand from many years abroad, and was likely experiencing a period of adjustment to this new situation, which may have triggered his depressive symptoms. The guided self-help programme may have provided him with an opportunity to try and take charge of his depression and instilled him with hope, hence his improvement over the course of the programme. Subsequently, termination of the programme and its associated support sessions may have left him
feeling alone, increasing his negative thoughts and resulting in a worsening depression and psychological distress.

John mentioned several times that there were aspects of the book that didn’t “relate” to him, and commented that at times it was “too simple” for his liking, that it wasn’t answering questions he wanted answered. This suggests that John may have been searching for the meaning of his moods, or the aetiology behind his depression. In addition, he recalled certain CBT concepts from previous treatment and acknowledged needing to put them to practice. It may be that John’s expectations of the programme were not met, or perhaps a more intensive or mindfulness-based therapy might have been more suitable for his needs at the time. While the low-intensity programme was effective and his follow-up scores represented improvements comparative to baseline, his distress was increasing from termination and it was uncertain whether his symptoms would continue to decline.

**Sarah: T Completer**

(Participant ID number: 13). Sarah was a 29-year-old New Zealand European woman. At the time of the study, she was a stay-at-home mother of two young children, one a very young baby. She was married and reported no problems in her marriage. She was not using medication and had no history of therapeutic treatment. Sarah reported needing help calming her thinking in the evenings as she found it difficult to get back to

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![Figure 7.9](image.png)

*Figure 7.9* John’s standardised scores on the PHQ-9, CORE-10 and QLES-SF across baseline, the programme, and follow-up
sleep after being woken by the baby, and in addition was interested in learning assertiveness skills. She was cooperative and participative in sessions, and always completed more than the required weekly workbooks and activities. Completing the programme with telephone support enabled her to partake in the programme, as she was able to have support phone calls at home during the day when her children were sleeping.

In the first support session, Sarah reported she enjoyed learning and applying the five areas approach to a recent situation she had found difficult in her life. She reported understanding the concepts and was happy to complete the first two workbooks (“Starting Out” and “Understanding Why You Feel as You Do”) over the coming week. At the second session (provided over the telephone), Sarah had read the required workbooks, completed the practical tasks from the “Overcoming Sleep Problems” workbook, and read the “Being Assertive” workbook. She reported finding the information on being firm about what you want and the use of “I” statements helpful. She planned to complete two workbooks over the next two weeks, “Practical Problem-solving” and “Using Exercise To Boost How You Feel”.

At the third support session, Sarah had completed the tasks she had planned to do. She reported she really enjoyed the “Practical Problem-solving” workbook and found that by writing problems down in the book, making a plan and working through them step-by-step made a difference to the way she was feeling, and her ability to achieve things. She planned to apply her skills learnt in practical problem-solving to her next goal: starting to exercise again. Because previous attempts had been unsuccessful, she decided to unpack the problem and make goals, which were: (1) plan about exercise; (2) take steps in order to ensure I can exercise, e.g., organise childcare or take children with me; and (3) start exercising. She reported feeling positive about the plan to start exercising again, and said it felt more achievable breaking it down into smaller steps. At the final support session Sarah reported attempting and completing two more workbooks as well as working towards her goal of exercising, and reported organising a yoga lesson for the coming week.

As shown in Figure 7.10, Sarah’s results from the measures of depression (PHQ-9) and psychological distress (CORE-10) both reduced dramatically between baseline and follow-up 12 weeks’ post-intervention. A decline in both measures can be noted between baseline and week one, suggesting that Sarah felt better or more hopeful knowing that she was about to start the intervention the following week. Both of these
measures have very similar trajectories, and with the exception of week four, (which showed a slight increase in psychological distress), both declined over time. By termination of the programme Sarah was experiencing minimal psychological distress and no depressive symptoms, which was maintained six and 12 weeks after the intervention finished. Similarly, Sarah’s quality of life scores also dramatically improved over time. The increase from baseline to week one parallels that seen in the depression and psychological distress measures. From week one onwards Sarah’s quality of life scores increased in an almost stepwise progression, and at 12 weeks’ follow-up, her quality of life was in the high 90s.

Figure 7.10 Sarah’s standardised scores on the PHQ-9, CORE-10 and QLES-SF across baseline, the programme and follow-up

Note. She did not complete the measures for week three.

Sarah’s scores showed impressive improvement across all outcome measures from baseline to follow-up, and a range of factors may have contributed to her observed improvement. Sarah’s intake depression score was moderate, and her psychological distress score was just three points above the clinical cut-off. Sarah is an intelligent and educated woman, and her willingness to learn and her commitment to the programme was indicative of a pre-existing level of motivation and organisational skills. Due to having children Sarah had given up her job in order to be a full-time mother and it is likely there are other activities and/or friendships that she was no longer involved in, or to a lesser extent. Consequently, the programme may have provided Sarah the opportunity to develop and master these skills and attributes, thereby increasing her
confidence and impacting on her beliefs of self-efficacy and in turn increasing her motivation for the programme. Or, it may be possible that she just needed some encouragement provided by a support person, and thus a guided self-help programme was ideal for her at this time in her life. Finally, it is also possible that Sarah’s improvement may have been influenced by her positive engagement with her low-intensity practitioner. It may be that this positive interaction enhanced her social desirability performance – and as the measures are self-report they may be influenced by this phenomenon.

Although there may be many factors that contributed to the successful treatment outcome for Sarah, in her perception the programme and book helped her to communicate better with her family about the way she was feeling and increased her motivation and her awareness of negative thoughts. She felt she had more energy to do things and had a clearer mind. Furthermore, offering support via the telephone meant that Sarah was able to partake in the programme, which may have not been possible if this option had not been available.

**Tom: T Non-Completer**

(Participant ID number: 16). Tom was a 51-year-old New Zealand European male who was unemployed at the time of the study. He had received previous treatment in the form of medication and CBT for depression and was interested in participating in the programme (telephone condition) to learn further skills in an effort to move forward in his life.

At the first session, Tom was initially reluctant to speak about his current difficulties. However he soon opened up and described symptoms including low mood, hopelessness, low motivation, and lack of interest in previously enjoyed activities. He was unable to foresee any future for himself. Completing a five areas summary revealed thoughts of self-blame and associated feelings of anger, frustration and sadness. He had previously attempted CBT and found it useful, and was keen to try again in a different format. In the second support session, Tom had completed the first two workbooks and had found the timeline task and the “what advice would you give a friend in a similar situation” idea helpful. He sounded positive and decided that making a plan for when to do things would help him at this time.

At the third session, Tom had completed one of the two workbooks he had planned to do (“Unhelpful Thinking”), though he admitted to doing this the day before
the support session. In an effort to tackle internal factors that were blocking his completion of the workbooks, he planned to prioritise the workbooks and set aside time to do them. He reported finding the “Unhelpful Thinking” workbook difficult to complete, due to the upsetting emotions it produced. The week before his final support session, Tom contacted the low-intensity practitioner to withdraw from the programme. He reported feeling like the workbooks weren’t helping him; rather they were highlighting the enormity of his problems. He said he didn’t want to work on the future (referring to the final “Relapse Prevention” workbook) when he was unable to find the motivation for the present. He commented that perhaps the books could be useful if his thoughts “weren’t so negative”.

As can be seen in Figure 7.11, Tom’s depression and psychological distress trajectories differ from the previous participants’. Firstly, his baseline scores are more severe. Specifically, his intake depression severity was moderately severe; his CORE-10 score was well within the clinical range and his quality of life score was 23 on a scale of 0–100. Secondly, his outcome measures fluctuated weekly throughout the programme. Unlike the previous participants, who demonstrated similar depression and distress trajectories, Tom’s are inconsistent and variable. Quality of life initially increased up until week two but at week three decreased dramatically. In all measures, Tom’s symptoms deteriorated prior to dropout, which was the case for all non-completers.
Unfortunately Tom experienced a worsening of symptoms during the guided self-help programme. Because of the nature of the support sessions, it is unknown if any specific event or circumstances unrelated to the programme may have increased his distress, or if it was as Tom perceived and the workbooks emphasised his issues. Tom demonstrated more severe symptoms at baseline and throughout the programme compared to a number of participants who completed the programme, though as mentioned in Chapter 2 guided self-help has been shown to be effective for individuals with more severe symptoms as well as those with mild to moderate symptom severity. Tom’s low motivation would have made completion of the self-help book difficult and although a common symptom in depression, it is not ideal in a self-help programme. Because of Tom’s current unemployment, it is likely that the programme being free appealed to him, as it would many people. Although the self-help component of the programme was explained, Tom was keen to try something different and unfortunately it did not appear to work favourably for him.
Overview
The current research investigated whether a low-intensity CBT guided self-help programme, *Overcoming Depression and Low Mood (ODLM)*, would be effective at reducing levels of depression and psychological distress and improving quality of life in a sample of adults in New Zealand. The data were analysed both in terms of aggregated outcomes and also individual outcomes in order to determine both the statistical and clinical significance of the findings. This study also explored the nature of change for the participants across the programme. This was undertaken by examining individual change trajectories and by identifying whether participants demonstrated the specific pattern known as early rapid response.

This chapter presents and discusses the main findings of this study. The following section discusses the results pertaining to the original hypotheses of the study as outlined in Chapter 5. Contributions to the existing literature are then presented, followed by potential limitations and suggestions for further research. Finally, the practical implications the findings have for clinical practice in terms of treatment for depression are discussed.

Summary of hypotheses and study findings

*Hypothesis 1: Participants who complete the guided self-help programme will show statistically significant improvements in depression, psychological distress and quality of life after completion of a guided self-help programme.*

Overall, participants who completed the programme demonstrated statistically significant changes in levels of depression, psychological distress and quality of life across the duration of the programme, which was in line with expectations. However these changes were not consistent from baseline to termination. That is, participants demonstrated statistically significant changes in depression from baseline to week three, and although the levels of depression continued to decrease from week three to termination, this change was not statistically significant. Such inconsistencies in change across the duration of the programme, specifically the significant improvement from baseline to week three, may be due to greater improvements in the initial weeks, known
as early rapid responding. This will be discussed in more depth under hypothesis 5, below.

On the other hand, improvements in psychological distress and quality life were demonstrated from baseline to week three, though not at a statistically significant level. Rather, significant changes were seen in psychological distress and quality of life from week three to termination of the programme. One reason for this may be that the CORE-10 and QLES-SF are less likely to demonstrate rapid change in the first few weeks of the programme, although when examining this data on an individual level this point can be disputed. Therefore it is likely that while these secondary outcome measures do indeed demonstrate change, it takes more time for these changes to occur.

When separated into conditions according to the modality of guidance provided, the results were variable and most of the significant results were no longer significant once more stringent corrections were applied. For the face-to-face (FTF) group there was a large effect in terms of reduction of depression from baseline to termination of the programme, though further differences were not statistically significant at specified time points. This was similar in terms of depression levels and support provided over the telephone (T). For the FTF condition, median psychological distress scores decreased from baseline to termination, thought these were not deemed significant. In contrast, for the T condition reductions in psychological distress were significant, however when corrected with a Bonferroni adjustment this was no longer significant. For both conditions, median quality of life scores increased from baseline to termination, however again this was found to be non-significant.

The lack of significance is very likely a result of the small sample sizes of the support conditions, which leaves the null hypothesis unchallenged. It appears likely that with a larger sample size, these results would be statistically significant. Yet despite the lack of significance associated with the corrected alpha level, these results lend support to the existing literature which demonstrates that guided self-help programmes are effective at reducing levels of depression (e.g., Cuijpers, et al., 2010; Vernmark et al., 2010; Williams et al., 2013), psychological distress (Richards et al., 2003), and quality of life (Furmark et al., 2009). Similar to the results of the recent study by Hammond et al. (2012), these results indicate that in a low-intensity programme, T guidance is as effective as FTF guidance.
Hypothesis 2: Statistically significant improvements in depression, psychological distress and quality of life will be maintained after termination of the programme to follow-up at 12 weeks post-intervention.

Overall, there were continued improvements in measures of depression, psychological distress and quality of life from termination of the programme to follow-up six and 12 weeks’ post-intervention, although these changes were not statistically significant.

Likewise, when separated into support conditions, there were no significant differences in depression and psychological distress scores across the follow-up period. For those in the T group, on measures of quality of life, a significant difference was found from termination to 12 weeks’ follow-up, however when the alpha was adjusted with a Bonferroni correction this was no longer significant. No significant differences were found for the FTF group for scores on quality of life measures across the follow-up period.

The results of this study provide support for the hypothesis that gains would be maintained over time. Although gains were not maintained to a statistically significant degree, there gains did not drop off 12 weeks’ post intervention. These findings are consistent with the literature – for example, Williams et al. (2013) found that improvements in depression and secondary outcome measures were maintained at 12 months’ follow-up (although follow-up rate at this stage had dropped to 42%). In terms of Internet-guided CBT for social anxiety disorder, Carlbring, Nordgren, Furmark and Andersson (2009) found large pre-treatment to follow-up effect sizes 30 months post-intervention, and concluded that long-term effects seen in high-intensity CBT can also occur in low-intensity interventions too.

Hypothesis 3: It is expected that the modality of guidance, either face-to-face or via the telephone, will have an effect on outcome measures and on attrition to the programme. Specifically, those receiving telephone guidance will demonstrate at least equal improvements in outcome measures, and less attrition to the programme, compared to those participants receiving face-to-face guidance.

From baseline to the first follow-up interval six weeks’ post-programme, there were no differences in outcome measures between those in the FTF group and those in the T group. However, at 12 weeks’ post-programme, with respect to statistical significance, the participants who received T guidance were less depressed than those who received support face-to-face. Psychological distress scores or quality of life did not differ in
terms of statistical significance between support conditions. These results are in agreement with the literature which suggests T guidance is just as effective at reducing levels of depression as FTF guidance (Hammond et al., 2012).

Overall there was a relatively high level of attrition in this study (37%), although this figure is similar to other low-intensity studies and traditional CBT research (Wierzbicki & Pekarik, 1993). For example, a dropout rate of 37 percent was seen in the Bilich et al. (2008) study on varying levels of T guidance, which is comparable to this study. There was considerably less attrition in the T condition (14%) compared to the FTF condition (42%). The lower rate of attrition in the T condition confirmed the expectations of this study and reinforces the previous literature that demonstrates lower levels of attrition in telepsychotherapy studies than face-to-face studies (e.g., Mohr, Vella, Hart, Heckman, & Simon, 2008; Palmer, 2002). A potential explanation for the lower attrition rates is that telephone use may reduce barriers arising from transportation problems, lack of services in the area, childcare problems, lack of time, and social stigma (Parsonson & Stokes, 2012). Furthermore, this study increased accessibility and acceptability by allowing participants to choose their mode of support rather than be randomised to a support condition. This likely influenced the rate of attrition as participants likely chose a support group that suited their lifestyle and preferences, thereby increasing engagement and adherance.

The key concerns expressed by those who oppose the use of telephone-delivered therapy focus on the lack of non-verbal cues and interpersonal contact, resulting in a perceived loss of the therapeutic alliance (Richards et al., 2006). Although it would have been useful to obtain participants’ opinions regarding these concerns (especially those who had received previous treatment in the form of talking therapy), the combined results of the lower attrition rate for the T condition, the lack of differences between support conditions on outcomes, and the observation that the T condition were less depressed than the FTF group at 12 weeks’ post-programme, indicate that telephone guidance is an acceptable means of receiving therapeutic support and is at least as effective as FTF support in a low-intensity intervention.

**Hypothesis 4: Participants are expected to experience reliable and clinically significant change across the programme and this will be maintained at follow-up.**

This study explored the clinical significance of the effect of the intervention on measures of depression, psychological distress and quality of life. This type of analysis
informs whether the intervention produced reliable and clinically significant change (RCSC) for participants, which is relevant to clinical practice. This was achieved by calculating a reliable change index (RCI), as proposed by Jacobson and Truax (1991), as well as using the outcome measures’ determination of clinical change. Of those who completed the programme, seven of the 13 participants that completed the programme (54%) demonstrated RCSC in depression as measured by the PHQ-9 by termination of the programme, and this increased to 10 participants (77%) by 12 weeks’ follow-up. For psychological distress as measured by the CORE-10, eight of the 13 participants (62%) demonstrated RCSC by the end of the programme and by 12 weeks’ follow-up this increased to 10 participants (77%) who demonstrated RCSC. Eleven participants (85%) showed clinically significant change in quality of life scores as measured by the QLES-SF at termination and this was the same at 12 weeks’ follow-up (though of note, it was not the same 11 participants; rather one participant’s scores improved over this time such that they demonstrated RCSC, while another had deteriorated).

These findings highlight the magnitude of clinical change that was experienced by participants across the duration of the programme and, furthermore, not only the maintenance of these gains at the follow-up period, but also the number of individuals who may not have achieved clinical change by termination but did so at the follow-up points. Although the aggregated results used in determining statistical significance suggest that gains over the follow-up period were not statistically significant, these results indicate that on an individual level, change was clinically meaningful over this time.

The nature of change was explored by visually analysing the individual change trajectories over the duration of the programme. These were variable for each condition and measure, however for those who completed the programme an overall downward trend for depression and psychological distress and an upward trend for quality of life were clearly visible. For the non-completers, the trajectories were noticeably different from the completers and this will be discussed next with regard to early rapid response. Recall that clinical change requires the individual to have been in the clinical range at baseline and to have shifted status and be deemed non-clinical at the designated point (termination or follow-up). There were three participants who scored in the non-clinical range for depression on the PHQ-9, one in the non-clinical range on the CORE-10, and four in the Functional range on the QLES-SF. Despite demonstrating improvements and/or reliable change, these participants did not meet the criteria for RCSC. However,
inspecting their individual trajectories shows that these participants did indeed make improvements on all the outcome measures. Thus visual inspection of the trajectories provided information on such participants and meant that notable changes over the course of the programme could be seen.

**Hypothesis 5: Early rapid response patterns of change are predicted to be evident in the change trajectories of some participants. Those participants that demonstrate early rapid response are more likely to have better treatment outcomes.**

Inspecting individual participants’ trajectories demonstrated that for the majority, change was not linear over the programme and follow-up intervals; rather it was discontinuous and non-linear. This supports the claims made by Hayes et al. (2007) that other patterns of change are evident when data is collected at regular intervals during the intervention and individual time course data is examined rather than group averages. Preliminary findings in low-intensity literature suggest the presence of early rapid response in guided self-help interventions (Delgadillo et al., 2013; Vaz et al., 2013). In this study early rapid response was evident by the demonstration of reliable and clinically significant change by week three of the programme. The results demonstrate this pattern of responding was present in this study and therefore reinforce the findings of the existing literature.

Group mean symptom time courses were used to calculate the percentage of change in depressive symptoms across the earliest sessions, and by week three 51 percent of the total change in depression had occurred. Seven (44%) of the 16 participants who were able to provide data at week three were identified as showing an early rapid response in depressive symptoms, and of these, five (71%) showed RCSC by termination, and all five showed RCSC at 12 weeks’ follow-up. In contrast, for the nine participants who did not demonstrate early rapid response (non-early responders), only three showed RCSC by termination and four by 12 weeks’ follow up.

For measures of quality of life, 29 percent of total change occurred by week three. Ten participants (63%) showed early improvement, and of these, five (50%) showed RCSC at termination. By 12 weeks’ follow up, six of the 10 showed reliable and clinically significant change. For those who actually completed the programme and did not show early responding, only one achieved RCSC at termination (who later deteriorated) and none showed RCSC at 12 weeks’ follow up. The remaining participants dropped out before termination.
These results provide further support for the findings of the depression literature on the identification of early rapid response in both traditional CBT and low-intensity CBT and that it is important in predicting treatment outcomes (Delgadillo et al., 2013; Ilardi & Craighead, 1994; Stulz et al., 2007; Vaz et al., 2013). In addition, the results also suggest that other indicators of functioning may be amenable to this occurrence, such as quality of life. No previous research investigating early rapid response in depression could be found that also included measures of social functioning or quality of life. Previous research has demonstrated social adjustment and functioning tends to improve following amelioration of depressive symptomatology, and is more gradual to change (Furukawa et al., 2001). Although this could be assumed for measures of quality of life as well, the results of this study are contradictory to this, showing measures of quality of life were indeed able to demonstrate rapid change.

When tracking outcomes, the early identification of clients who are not responding in treatment can be provided as feedback to the clinician, with the aim of reducing the likelihood of poor outcomes. As well as identifying early rapid response in those who demonstrated clinically significant outcomes, this study highlighted that non-early responders (those who did not demonstrate early improvement based on the RCI) were at risk of poorer outcomes by termination or dropout from the programme entirely. It is of note that individuals may be at risk of poor outcomes at different times during the therapeutic process and, conversely, that some clients may demonstrate a different trajectory (e.g., gradual linear change, medium impairment followed by improvement, high initial impairment followed by improvement) and still demonstrate RCSC by the end of treatment (Stulz et al., 2007).

These results provide support for the rationale that in the context of a stepped care model of service delivery, identifying clients early in treatment who are at risk of poor outcomes can lead to the client being stepped up to a more intensive treatment model which may be of more benefit to them. As these results show, those that are not demonstrating early improvements are at risk of poorer outcomes, either at the end of therapy or by dropping out of treatment.

Hypothesis 6: Participants are expected to report high levels of satisfaction with the guided self-help programme.

The CSQ-8 was completed by 15 participants, including two that did not complete the programme. It was expected that participants would be satisfied with the guided self-
help programme and the results from the CSQ-8 are in line with this: all of the participants rated the service as either excellent or good, and all except one were satisfied with the service received. Participants were similarly satisfied with the guided self-help programme, whether they had received FTF or T support. These results lend further support to the existing evidence base on the acceptability of guided self-help interventions (Andrews et al., 2010; Lewis et al., 2012; Mead et al., 2005; Salkovskis et al., 2006). The non-completers that completed this scale had conflicting scores; that is, one rated the service as excellent, while the other said the programme didn’t help them. Attkisson and Zwick (1982) found that satisfaction as measured by the CSQ-8 was highly correlated with dropout, and although this appears commonsensical, there was not enough data to support this claim in this study.

Some qualitative feedback was also gained from six participants post-programme, two of whom were non-completers. The majority of the feedback was positive, and reflected the results obtained from the CSQ-8, though more information was gained about what participants liked or did not like about the programme. For example, one completer reported that at times the book was too simple for their liking, and they found their questions weren’t being answered, leading to them feeling frustrated. One of the completers noted that the programme didn’t really help them and only met a few of their needs. They commented that it was difficult to put the skills into practice, particularly due to having to focus on other events going on in their life. It is of note that this individual’s difficulties were primarily anxiety-related, and low mood was secondary to this. As the programme was focused on alleviating low mood and depression as opposed to anxiety, this was discussed at the initial assessment session and the participant decided to proceed. However, it appears this participant found the programme unhelpful and was dissatisfied with the programme as a result, despite completing the programme to the first follow-up interval. Participants also noted particular workbooks they found useful, such as “Being Assertive” and “Practical Problem-Solving”. Another participant noted how the biggest hurdle for their recovery was lack of funds and appreciated the provision of excellent tools for recovery, free of charge. As this was a research study participants were not charged for materials, however the literature notes the cost-effectiveness of unguided and guided self-help (Scogin, Hanson, & Welsh, 2003).
As only six participants responded, more feedback from both completers and non-completers would have been beneficial to gain further information on specific aspects participants found useful, or things they found unhelpful or did not like.

**Contributions to the literature**

In studying the nature of change in psychotherapy, there has been a shift away from the traditional pre-post methodological design to a more individual-focused analysis when investigating therapeutic process or outcome. The discovery of discontinuous change patterns within therapy has highlighted the importance of individual differences in change throughout the course of therapy, rather than just interpreting group averages. It has been argued that identification of discontinuities in symptom course across therapy is important as it may highlight important transition periods for clients (Hayes et al., 2007). A disadvantage associated with the traditional method of assessing change (i.e., ANOVA-based analyses) is that they do not take into account the rich variability that exists between individuals and rather attribute this variability to sampling or measurement error (Laurenceau et al., 2007). Thus it was important to utilise a methodological design and analysis that accounted for individual variability in change trajectories across the low-intensity intervention.

This study employed a mixed analysis, including statistical analyses, visual analysis and RCSC analysis in order to measure both the statistical and clinical effectiveness of the intervention, as well as the nature of change within the study. The advantage of the Jacobson and Truax (1991) approach is to focus attention on the actual power of treatments to return those who suffer from psychological symptoms to normal functioning. This is a healthy corrective to over-interpretation of group differences based on statistical effects of little clinical importance (Jacobson, Roberts, Berns, & McGlinchey, 1999). From this perspective, this study provides a more stringent and more meaningful test of the effectiveness of a low-intensity psychological treatment for individuals experiencing low mood.

The community-based sample of adults, along with the minimal restrictions on inclusion criteria, represent a “real-life” study design, which is a reflection of changes in the way research is now being conducted in an effort to make the interpretation and application of findings in clinical settings easier. It is also in keeping with the rationale for why low-intensity interventions were developed: to increase access to treatment for those requiring it (Bennett-Levy & Farrand, 2010). Although there are limitations
associated with this less tightly controlled design in terms of internal validity (Stulz et al., 2007), it meant that individuals were able to partake in the study and therefore access treatment regardless of current medication use, previous treatment, and the presence of comorbid difficulties, permitting an accurate representation of the people who will access low-intensity interventions in the future.

The finding of early rapid response in a guided self-help CBT programme extends the research that has demonstrated this occurrence in low-intensity interventions (Delgadillo et al., 2013; Vaz et al., 2013). The results of this study show that early rapid response was evident by week three of the programme, and that participants who showed this pattern of change subsequently went on to achieve RCSC by the end of the programme, reinforcing the view that the presence of early rapid response is in fact associated with more positive outcomes.

The presence of early rapid response highlights the need to identify the factors that predict early symptom reduction. Ilardi and Craighead (1994) concluded that Beck’s (1967) cognitive model of CBT cannot explain early improvement as cognitive modification techniques are not extensively applied in the first few weeks of therapy. Rather, they propose that hope might facilitate early change, as hope is a powerful component of change across psychotherapies. This is consistent with Howard et al.’s (1993) generic model of change in psychotherapy that proposes that remoralization, a facet of hope, is evident in the first few sessions of most therapies. It has been argued that hopelessness decreases early in CBT (Kuyken, 2004) and behavioural activation therapy for depression (Jacobson et al., 1996), and that such changes predicts better outcomes. Although the specific connection between hope and rapid reduction in depression is not yet clear, it has been proposed that early interventions such as providing treatment rationale, increasing engagement with the environment, and teaching skills to manage one’s emotions might engender hope in a disorder that is characterised by a loss of hope (Hayes et al., 2007; Snyder, Rand, & Sigmon, 2001). On the other hand, Tang and DeRubeis (1999) argue that these inferences may be incorrect and that cognitive techniques may indeed contribute to the substantial improvement in early sessions, thereby supporting Beck’s (1967) cognitive hypothesis. The reason given is that cognitive techniques may be employed as early as the second session in CBT and, that in traditional outcome studies, two sessions per week are typically provided in each of the first four weeks of therapy, thus such techniques are responsible for early rapid response.
The results from this study, however, may provide support for Ilardi and Craighead’s (1994) view that hope is associated with early rapid response (please note this is the author’s speculation as no measure of therapeutic alliance was used to assess this). That is, by week three, participants in either support condition had received only two 30–40 minute support sessions (one being the initial face-to-face session), and had completed a maximum of four workbooks (“Starting Out” and “Understanding Why I Feel as I Do”, as well as another one or two of the participants’ choice). There were a range of workbooks that had been completed by week three, the most common being “Overcoming Anxiety and Avoidance”, “Doing Things to Boost How You Feel”, and “Using Exercise to Boost How You Feel”. Interestingly, only one of the participants had attempted the workbook “Noticing and Changing Unhelpful Thinking” (based on cognitive restructuring), and this participant had only read half of it. This indicates that hope may be generated by the development of a therapeutic relationship, providing treatment rationale, psychoeducation, and some behavioural strategies, which are associated with early response to treatment.

This study also adds to the minimal literature on low-intensity interventions that directly compares the use of FTF and T guidance. Hammond et al. (2012) compared the clinical and cost-effectiveness of FTF and T delivery of low-intensity CBT, and found that T guidance was not inferior to FTF (except for those with severe illness). There were notable differences between the present study and the Hammond et al. (2012) study however: the intervention provided by the former was computerised CBT and this study used a book-based intervention, and the types of analysis also differed. Regardless, this study reinforces the findings that telephone support demonstrates equivalent outcomes to face-to-face delivery and adds evidence that this is true when the intervention is book-based with the addition of a support person.

This research also reflects a new way of delivering CBT to consumers in terms of increased choice for service users, by offering a variety of interventions in the acknowledgement that not all individuals will engage with the same type of service (Bennett-Levy et al., 2010). It is known that not all service users will feel comfortable in a one-on-one situation, and by the same token, many will not feel comfortable in a group situation. Providing the choice of type of intervention (group or individual support) as well as the choice of mode of guidance, likely increased access to treatment as well as acceptability, which is the overall goal of low-intensity interventions.
A concern that has been raised in the low-intensity intervention literature in terms of client suitability for treatment is that of severity of depression (and other clinical presentations for that matter). It has been suggested that self-help interventions may be more appropriate for milder problems (Cuijpers, 1997) and insufficient for more serious disorders (Gregory et al., 2004), with lack of motivation and levels of risk cited as evidence. One of the case studies in this research described an individual in the T condition who dropped out of the study. This individual scored high on the PHQ-9, which indicates severe depressive symptomatology, and although it is unknown if FTF support would have been a more beneficial support option, Hammond et al. (2012) claim that face-to-face support is superior to telephone support in cases of severe illness. Nevertheless, more recent research indicates that low-intensity interventions are beneficial in the treatment of severe depression (Bower et al., 2013), and the present study found that six participants who were initially classified as moderately severe or severely depressed on the PHQ-9 made clinically significant improvements either by termination of the programme, or by the follow-up interval.

This study makes an important contribution to the literature as one of the first guided self-help interventions to be implemented in a New Zealand context. The results suggest that this form of treatment is acceptable to this population, and that it is a promising intervention for individuals experiencing mild, moderate and severe levels of depression. In addition, as aforementioned, it also supports the international research on the occurrence of early rapid response in the treatment of depression. Although change patterns have been identified in other clinical presentations, this study adds to the literature in terms of early rapid response pattern being demonstrated in measures of depression and quality of life.

**Limitations of the study**

Having highlighted the strengths of this research, it is important to remember that no study is without its limitations. This research did not employ a control group to compare those participants who received low-intensity treatment to those who received no treatment (control condition), which significantly limits the generalisability of the outcomes detected. Due to the lack of a control group, it is not certain whether the benefits seen across both support conditions were genuine effects of the guided self-help programme or were due to a natural resolution of symptoms and regression to the mean. Moreover, Gellatly et al. (2007) argue that the effectiveness of guided self-help
may be due to non-specific therapist factors rather than the impact of the materials themselves, and an active control condition would address this. Still, it can be argued that previous CBT self-help programmes have demonstrated efficacy (e.g., Bilich et al., 2008; Furmark et al., 2009; Ghaderi & Scott, 2003; Hirai & Clum, 2006; Palmer, 2002; Sharpe et al., 2011; Vernmark et al., 2010; Williams et al., 2013), and therefore it can reasonably be assumed that the effects demonstrated in this study are real treatment effects. Moreover, in terms of individual change, this study demonstrated reliable and clinically significant change across each of the outcome measures for the majority of the participants. This lends further support to the interpretation that the results do indeed indicate real effects from the intervention.

Secondly, the small sample size and the participants being recruited from just one geographical area in Auckland also limit the generalisability of the results. The analyses, particularly those where ANOVAs were used, should be interpreted with caution. The small sample size makes it difficult to detect assumption violations and also means there may not be sufficient power to detect significant statistical differences. The statistical analyses employed in this study were used to provide an indication of whether the intervention was effective, and it was noted that in certain analyses (such as when the participants were separated into support conditions) it was more appropriate to use non-parametric statistics which are more robust to violations when the sample size in small. Moreover, the visual analysis and use of RCSC analysis was suited to the small sample size. The results are therefore promising in terms of an initial exploration of the effectiveness of a guided self-help programme implemented in a New Zealand population. Nevertheless, further research in this area is encouraged to recruit a larger sample size so that replication of the results may be interpreted on a wider scale. In addition, with a larger sample size it would be interesting to employ other analysis methods to group and individual change trajectories, such as growth curve modelling. This is an umbrella term for a group of statistical methods that allow for the estimation of inter-individual variability in intra-individual patterns of change over time. In other words, growth models attempt to estimate between-person differences in within-person change (Curran, Obeidat, & Losardo, 2010).

While assessment of RCSC offers advantages over conventional inferential statistics in evaluating programmes, it does have a weakness when measuring progress at follow-up periods. When compared to measures of statistical significance, the results are similar in that participants demonstrated clinically significant change from baseline
to termination of the programme. However, these two types of change are unable to be directly compared when considering the follow-up period. This is due to the definition of RCSC – for clinical change to have occurred the participants’ initial scores must fall in the dysfunctional range and their end scores in the functional range. With an intervention where the aim is a reduction in distress symptoms and an increase in quality of life, it is expected that by the end of the programme these scores will be closer to the functional domain. Moreover, improvements are expected to continue in this fashion after the intervention; it is therefore unlikely that there would be scores in the dysfunctional range at termination of the programme that would fall in the functional range by follow-up. As such, the criteria for RCSC at follow-up was based on participants’ improvement from baseline scores and therefore is not directly comparable to the statistical significance of the change from baseline to follow-up. Statistically, there were no significant gains from termination to 12 weeks’ follow-up in each of the three outcomes measures, however a majority of the participants demonstrated RCSC from baseline to 12 weeks’ follow-up.

It needs to be noted that participants who initially scored low on symptom measures (i.e., in the non-clinical range) were not able to demonstrate RCSC across time as a result of the criteria. For example, in this study there were three individuals who scored in the mild range for depression who improved over the course of the programme and although they did not meet criteria for RCSC, it is likely this change was significant on an individual level. In an RCT or research study that focused on pre-post change only, these changes would have been lost. Because this study employed visual analysis this change was recognised, though there was less emphasis on these changes compared to those who demonstrated RCSC.

Employing a sample who self-select through media advertisements has its criticisms, for example, that they report significantly higher effect sizes than those in clinical populations (Gellatly et al., 2007). Such recruitments methods rely on individuals’ motivation levels, which may correspond to a different demographic from clients who are referred from a primary care setting (Coull & Morris, 2011). On one hand, the results from this study appear to reinforce this literature, however on the other hand it can be argued that the use of a community sample reflects a “real-life” situation, and the clinically relevant results are therefore generalisable to the wider population. It would be instructive to replicate the study with the addition of participants recruited from a primary care setting to see if outcomes varied significantly.
An additional limitation is the length of the follow-up period in this study. Twelve weeks is not a substantial follow-up period, but the time restraints of this research did not allow for a longer period. It would be interesting to see if RCSC was maintained at a six-month follow-up or longer. Future research should aim to assess longer-term outcomes.

**Suggestions for further research**

This research was novel in using RCSC analyses in a LICBT intervention and the use of single-case research designs employing RCSC is encouraged in future research in this area due to their suitability for this type of investigation. Although the current study shared common aspects with the single-case design, there was no assessment of baseline stability (e.g., at least three baseline points are required). The reader is directed to Blampied (2013) for further reading on this.

In self-help interventions, it is expected that participants will engage with the materials outside of the programme. Although it was confirmed that participants in this study both read and completed the activities in the prescribed workbooks through the use of the review and planner sheets, further research might measure the amount of time spent on the materials, and moreover, the degree to which the individual felt they engaged in this process. Gould and Clum (1993) found that participants who actively interacted with self-help materials and complied with homework had a mean effect size more than three times greater than those with low compliance. Investigating the interaction between outcome measures and compliance is of interest in low-intensity studies and can be likened to the completion of homework in traditional CBT, which is also associated with enhanced outcome measures (Kazantzis, Whittington, & Dattilio, 2010).

In this study there was no measure of anxiety. Anxiety is commonly comorbid with depressive disorders and can limit the effectiveness of standard treatment for depression (Gaynes et al., 1999). Although the CORE-10 included items pertaining to anxiety, it is not a pure measure of anxiety and it is suggested that future research implementing guided self-help interventions for depression include an anxiety measure such as the Beck Anxiety Inventory (Beck & Steer, 1993) or the Generalised Anxiety Disorder Assessment (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006), which is commonly used at each session in the Improving Access to Psychological Therapies (IAPT) programme.
New Zealand is a multicultural country and it is important that psychological services are available for the whole population. For example, Māori mental health has been identified as a priority area based on observations of increasing Māori hospitalisation rates for psychiatric disorders over recent decades and increasing suicide rates among young Māori (Baxter, Kokaua, Wells, McGee, & Oakley Browne, 2006). Māori are less likely to access psychological treatment through current means (Tapsell & Mellsop, 2007) and thus a new form of therapy, such as guided self-help, might be well received by this segment of the population. Naturally, culture-specific adaptations may be required, such as the use of an Māori clinician or cultural supervisor, the adaptation/translation of materials, and delivering the intervention in a different setting (using libraries, community centres, employment settings rather than GP practices or specialist mental health settings) which provides choice and increases accessibility (Leibowitz, 2010). Further information on adapting low-intensity CBT for use with minority groups can be found in (Papworth et al., 2013). Thus there is an opportunity for future research in either the adaptation of Overcoming Depression and Low Mood or the development of a specific programme targeted for Māori or other minority groups in New Zealand.

Finally, an exciting area for future research is interventions for the prevention of depression, which could tackle the ever-increasing burden of the illness. There is encouraging evidence that psychological interventions including CBT can reduce the incidence of depression and anxiety (Barrera, Torres, & Muñoz, 2007). Such interventions are typically delivered in a group, book or Internet format (Cuijpers, 2010; Griffiths, 2010) and therefore can be viewed as low-intensity as they require low practitioner input or reduced practitioner time. Such interventions are best targeted at an indicated level (e.g., subthreshold depressive symptoms) or selective level (e.g., pregnant women, those with a physical illness, children or adolescents at risk of depression) (Clarke, 2010).

Implications for clinical practice

Despite the limitations noted above, this study contributes some important observations associated with clinical outcomes of low-intensity-delivered mental healthcare. The results provide a promising basis for the continuation of guided self-help programmes in New Zealand. This is true for those experiencing mild to moderate symptoms, but also for those with more severe levels of depressive symptoms. This is important for clinical
practice as it means that those experiencing moderate to severe levels of depression may obtain at least as much clinical benefit from a guided self-help intervention as those with mild to moderate symptoms.

As mentioned in Chapter 2, in low-intensity interventions the assessment of outcomes is emphasised, which allows for the monitoring of clients in real time throughout the treatment process. This is beneficial for both the practitioner and the client in terms of risk and tracking progress through the treatment process. In this study, weekly monitoring allowed the investigation of individual trajectories, which were then examined to determine patterns of early rapid response. This study demonstrated and replicated the finding that early rapid response is associated with better outcomes in therapy. In clinical practice, the completion of outcome measures at every session permits the identification of early responders and, more importantly, the identification of clients who are experiencing a worsening of symptoms or no change in symptoms. Further interventions such as sharing the measures with the client and discussing them to obtain their feedback on particular elements that might not be working for them in therapy, or a stepped care model with the option of stepping up to a more intensive treatment could be implemented, thereby reducing the risk of poor outcomes for clients.

There are further benefits for clinicians from administering measures and analysing individual data from each session. It is argued that the focus on individual time course data is important as it contributes to an understanding of how change occurs (Barkham et al., 1996). Analysing individual trajectories can thus help answer questions about sections of therapy that are most likely to reveal factors that inhibit or mobilise change (Hayes et al., 2007). These findings suggest that for a majority of participants, change occurs early on in the treatment process and that to help identify the mechanisms behind these changes, clinicians should focus on administration of session-by-session instruments and monitoring in early sessions of therapy.

This study enhances the literature on telephone interventions, further reinforcing their effectiveness, which was equivalent to that of face-to-face support. As matched care suggests, clients should be able to select the type of intervention and type of support that suits their requirements. This implies that in a stepped care model clients should be offered a choice of treatment when available and that comparable, if not better, outcomes can be expected for those who select telephone support.

The findings of this study indicate that Overcoming Depression and Low Mood, a guided self-help programme, is a promising intervention for New Zealanders
experiencing depression, and furthermore that it was an acceptable type of therapy for those participants. The clinical implications of this indicate the support for the use of low-intensity interventions in New Zealand and that they will likely be well received. Furthermore, these results provide support for the Ministry of Health’s (2012) proposal for the implementation of a stepped care model of service delivery in New Zealand’s mental health sector. It is likely that such a model, and the accompanying low-intensity interventions, will be positively received by both clients and clinicians.
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APPENDIX A-1

Planner and review sheets

How to use the Planner and Review Sheets

Welcome to the course. You will find lots of useful information and learn key life skills as you work through the different resources. To help you change, it will help to have a plan – so that you know exactly when you will work on the package. Please can we ask you to use the sheets that follow – the Planner sheet – and the Review sheets – to help you plan and then review your progress.

Planner sheet: Please have this to hand whenever you have a support session - so that together you can work to plan exactly what modules/workbooks to work on next. It will help you be really precise about what you will do and when you will do it. It will also help you predict what might block you and help you plan ways to react if things prove difficult.

Review sheets: Please complete this and have it ready for the support session. This will act as your own agenda so that you can make sure you get the most out of the support session.

If you are receiving support by telephone: Please send an email or letter with a copy of your Planner and Review sheets to your supporter so they have a chance to respond to it. It can sometimes feel very hard to change things. We can have all sorts of good intentions- but change will take time and there may be ups and downs. Using the Planner and Review sheets- and receiving helpful support and encouragement from your support worker will really help you to stay on track.

Here are 15 more top hints on how to get the most from the course.

1. Set aside a time and place to work on your project every day.
2. Don’t drink alcohol or nibble while working on your plan. Tea, coffee or juice are OK though.
3. Get energised before sitting down to work. Anything that uses your muscles for a couple of minutes is OK
4. Read your work book over and over till you know it by heart. Write in the margin. Think about what it’s saying.
5. Make a plan and write it down, step by step. Be sure to make them small, simple steps that you will be able to do.
6. Think about eating an elephant. You can do it if you take lots of little mouthfuls
7. You WILL get stuck from time to time, so work out what to do about it in advance
8. Your plan is like a new year resolution so don’t let it fade away. Check your progress every week
9. Get a lot of help. The more people know about your plan, the more help you’ll get and the more likely you are to succeed
10. Write yourself a letter from 10 years in the future – “Thanks for being strong all those years ago”
11. Pepper your fridge with post-its. Write I CAN DO IT on the mirror
12. Imagine you are your own best friend and give yourself some good advice
13. Think like an athlete and get coaching and support from anywhere and everywhere you can
14. Plan your support sessions in advance – know what you want to say or write to a friend, a group, a counsellor or a doctor
15. Write an agenda and use it in support sessions.
## Planner Sheet

<table>
<thead>
<tr>
<th>My Notes</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Which workbook/module/task will I work on next?

### Plan to take things forwards

1). What **am I going to do?**

2). When **am I going to do it?**

**Is my planned task one that:**

- Q). Will be useful for understanding or changing how I am?  
  - Yes
  - No

- Q). Is a specific task so that I will know when I have done it?  
  - Yes
  - No

- Q). Is realistic: is it practical and achievable?  
  - Yes
  - No

3). What problems/difficulties could arise, and how can I overcome this?

**My next contact time ......................**

**Re-arrangement details:** Remember – if you know in advance you can’t make the session, please let me know by contacting me on 022 371 4003 or helpyourselftocbt@gmail.com

**PLEASE NOTE:** If you are struggling/feel worse, or if at any time you feel suicidal please visit your doctor or you can call the Crisis assessment and Treatment team on (09) 486 1419 or after hours on (09) 486 8900
Review Sheet

For discussion dated:

What workbook/module/task(s) had you planned to do?
Write it here

Did you attempt the task? Yes    No

If yes:
• What went well?

• What didn’t go so well?

• What have you learned about from what happened?

• How are you going to apply what you have learned?
If not:
What stopped you?
• My internal factors (e.g., forgot, not enough time, put it off, concerns I couldn’t do it, I couldn’t see the point of it etc.).

• External factors (events that happened, work/home issues, etc.).

• How could you have planned to tackle these blocks?
APPENDIX A-2

Additional qualitative feedback questions

1. Since the programme ended have you begun any other forms of treatment or therapy (e.g. medication or psychotherapy)? If yes please detail.

2. Have you used the book since the programme finished? Yes/No

3. If yes could you describe how you are using the self-help book?

4. Which skills learnt during the Overcoming Depression and Low Mood programme are you still using?

5. Describe any of the skills that you find particularly helpful.

6. What are the effects of the programme on your present life situation?

7. How satisfied were you with how much you improved over treatment?

8. Could you describe anything from the programme or book that has not been helpful?

9. Any other comments about the programme or book?
APPENDIX B

Examples of advertisements

‘Help Yourself to CBT’
FREE Individual and Group programmes

Want to feel happier, become more active, sleep better, and generally feel more in control of your life?

We are running two CBT-based guided self-help programmes as part of our doctoral research. These will teach key life skills to help overcome low mood and other common difficulties.

Both programmes run for eight weeks beginning February/March 2013 and are free of charge for participants.

For more information and to register go to cbthelp.massey.ac.nz

For other enquires please contact Amy Montagu and Inga Forman at helpyourselftoCBT@gmail.com
Free Group and Individual Programmes for Low Mood!

Want to feel happier, become more active, sleep better, and generally feel more in control of your life?

Two guided self-help programmes are being run as part of our doctoral research. These will teach key life skills to help overcome low mood and other common difficulties.

Both programmes run for 6-8 weeks beginning April 2013 and are free of charge for participants.

For more information and to register go to cbthelp.massey.ac.nz
APPENDIX C
Recruitment screening questions

1. Do you currently have a serious problem with alcohol or drugs?

2. Do you have a current mental health diagnosis for bipolar disorder, schizophrenia or other psychotic disorder?

3. Are you currently receiving mental health support for any mental health problem? (If yes, please specify).

4. It important that we make sure that you and the other participants remain safe throughout these programmes with regards to possible self-harm or harm of others. Do you think this will be a problem for you?

5. Please select your programme preference
   a. I would like to be considered for an individual based programme with face-to-face contact with a support worker.
   b. I would like to be considered for an individual based programme with telephone support with a support worker.
   c. I would like to be considered for a group-based programme in which a support worker leads the session

6. I have read and understood the information sheet for this study and consent to collection of my responses.

7. Please enter your name and contact details below.
   First name
   Family name
   Email address
   Phone number (land line, including area code)
   Mobile number

8. Have you had any prior treatment for this complaint?

9. Are you currently taking any medication?

10. What is your expectation of this treatment?
You are invited to take part in research involving group and individual therapy for the treatment of depression and/or anxiety. Before deciding whether you wish to be involved in the research, please read the following information carefully to ensure you fully understand the nature of the research project and your rights should you choose to participate.

What is the study about?
The Centre for Psychology currently runs group and individual therapy for anxiety, depression and stress based on Cognitive Behaviour Therapy (CBT). CBT is a talking psychotherapy that research has shown to be effective for many different problems, such as anxiety, depression, and stress. CBT emphasises the importance of how you think about yourself, situations, the world and other people.

During times of distress, people think differently about themselves, others and the world. CBT practitioners help each person identify and change their unhelpful thinking and behaviour. The end result is often that the person feels better about themselves, for example less anxious and less depressed. Low intensity CBT and the use of CBT self-help materials, is an innovative and evidence-based intervention that is being used with successful results in England, Scotland and Canada. It is different to traditional CBT as the emphasis is on the self-help materials themselves, and support for working through the materials is provided by a ‘paraprofessional’ or Psychological Wellness Professional. Low intensity CBT provides helpful strategies, which can be used by most people to help them overcome their difficulties with symptoms of mild anxiety and depression.

This research aims to examine the effectiveness of CBT guided self-help. In particular we are interested in knowing if peoples’ thoughts, feelings, and behaviours change as a result of participating in a low intensity CBT intervention. In addition, we would like to know if these changes impact on your quality of life, and if they are maintained over time.
Who is able to take part?
To participate in this research, you need to be 18 or over, and be experiencing symptoms of depression or anxiety. You will need to have sufficient skills in reading, writing and speaking English and must not meet diagnostic criteria for substance abuse, psychosis or borderline personality disorder. You must also be able to keep yourself safe from harm.

What would I have to do?
If you agree to participate you will receive a specific low-intensity CBT programme for depression or anxiety within a group or individual context, dependent on your preference. Therapy will be provided within the clinic with one of two facilitators who are trained low-intensity practitioners and clinical psychology trainees in the Doctoral programme working under supervision. The group format will involve up to 20 participants and will run for 8 weeks. The individual format will have two options: face-to-face contact (where there will be four face-to-face sessions of support); or telephone contact (support is provided via telephone, apart from the initial face-to-face session). Follow-up will occur at 6 and 12 weeks to help us understand the long-term effects of the low-intensity therapy process, and at these times you will be asked to complete some questionnaires should you choose to take part. Questionnaires will be completed each week and should take no longer than 7 minutes. The follow up sessions are expected to take approximately 7 minutes for completing measures, and these may be completed online. At some of the sessions, videotaping may take place. This is to make sure that the practitioners are adhering to our protocol and doing the best we can for you. There will be no charge involved.

How will the study benefit you?
CBT is an effective therapy for individuals with anxiety and depression, because it teaches you how your thoughts affect your behaviours, and how some simple techniques can help you gain control over these issues. One of the main benefits for you is a greater self-awareness of how to deal with issues that may lead to anxiety and depression and how to deal with them more effectively.

Will my information remain confidential?
Yes. All your information will remain confidential at all times as part of standard procedures within the Centre for Psychology.

- Research data will only be accessed by researchers and clinical supervisors directly related to this study.
- Clinical data will only be available to those involved in your therapy.
- No material which could personally identify you will be used in any reports on this study.
- All data will be kept locked.
• Files will be stored in a separate location from both the identifying information and the DVD archive.
• You will not be personally identifiable in any research publications (e.g., in scientific journals) that result from this research.

Your rights as a participant:
If you choose to take part in the research, you have the right to:
• Withdraw from the study at any time;
• Decline to take part in this study, knowing this will not have any impact on what services you receive;
• Decline to answer any particular question;
• Ask any question about the study at any time during participation;
• Be given a summary of the findings of the study once it has been completed if you request it.

Questions or concerns:
If at any time you have questions or concerns about this study, you are welcome to contact Dr Mei Williams, Phone (09) 414 0800, extension 41222.
If you have any questions about any issues pertaining to Maori in this study, regardless of your own ethnicity, you are welcome to contact Dr Lily George, Postdoctoral Research Fellow at the Research Centre for Maori Health and Development, phone (09) 414 0800 extension 41594.
If you have any queries or concerns regarding your rights as a participant in this study you may wish to contact a Health and Disability Advocate, telephone 0800 555 050 Northland to Franklin.

What happens from here:
You will have the opportunity to ask us any questions when you come in before you agree to take part and before you begin your assessment session. If you do not wish to take part then you will still be able to receive therapy in a non-researched group or an individual format.

This study has received ethical approval from the Multi-Region Ethics Committee, Ref # CEN/11/09/051 (June 2012).

Thank you for reading this information sheet.
‘Help Yourself to CBT’ Research Study

Participant Consent Form

This consent form will be held for a period of ten (10) years.

I have read the information sheet for this study and have had the details explained to me. My questions about the research have been answered to my satisfaction, and I understand that I may ask further questions at any time. I have been given contact details to use in case I have future questions about the study. I have also had the opportunity to use whanau / family support or a friend to help me ask questions and understand the study.

I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time.

I agree to provide information to the researchers and I agree to my sessions being videotaped for research purposes on the understanding that this will be confidential. The information I supply will only be used for the purpose of the study. All information will be treated confidentially within the Centre, subject to the ethical guidelines on the limits of confidentiality provided by the Psychological Society of New Zealand’s Code of Ethics, as per the Privacy Act (1993).

I have had adequate time to consider whether or not to take part in this study. I agree to participate in this study under the conditions set out in the Information Sheet.

Signature........................................................................................................ Date .................

Full Name (printed)
........................................................................................................................................
APPENDIX E
Risk protocol

This risk protocol has been developed for reference during the running of the ‘Overcoming Depression and Low Mood’ guided self-help programme (Chris Williams, 2008, 2009). This document also details steps that have been taken to ensure the smooth running of this programme, including an account of the training that low-intensity practitioners will receive regarding management of risk. It also documents possible sources of risk, which may arise throughout the running of the programme and how these will be managed. A list has been compiled containing a list of alternative services, which may be more applicable to individuals with certain problems. A list of such services will be presented to individuals after failure of the screening process, and may also be presented to individuals partaking in the programmes if they become increasingly ill throughout the treatment process.

Training and Supervision
The practitioner (Amy Montagu) running the programme will receive training in the delivery of their respective guided self-help programmes. This training will be delivered by two registered clinical psychologists (Dr Beverly Haarhoff and Dr Mei Williams). Extensive face-to-face weekly supervision will also be provided by these psychologists, and with the permission of participants, sessions may be videotaped or observed by supervisors to aid in thorough supervision. Participant outcome measures will also be viewed by supervisors to ensure that any significant negative changes that may occur throughout treatment are followed up.

Participants will be fully informed of the fact that the individual running the self-help programme is a low-intensity practitioner, not a trained clinician, and has been trained only in the administration of the particular programme they are administering. This fact will again be emphasised in the initial intake session when clients are being briefed regarding informed consent.

Instances of Risk

Screening
The purpose of this research is to make this programme accessible to as many applicants as possible. Thus, there are few exceptions to partaking in this programme. Applicants must be over the age of 18 and report confidence in their ability to partake in a programme which is reading and writing based. Those who report substance abuse or dependence, a current diagnosis of psychosis, or active or previous suicidality will be screened from the programme during online registration. Other than this there are no restrictions on participant characteristics.
If an individual is excluded from partaking in these research programmes, they will receive information regarding services that may be of more use to them (see below).

**Risk during the programme**

All registered participants will be provided with a list of services prior to the onset of the first session (see below). If the low-intensity practitioner perceive a worsening of symptoms for any participant, either through observation or as demonstrated in outcome measures, the practitioner will report this situation to at least one supervisor immediately, and the participant in question will be asked to attend a supervisory meeting with both the practitioner and the supervisor. Supervisors will recommend actions to take from this point onwards. This will include offering access to services that may better suit their needs. For serious cases, where suicidal ideation or intent is evident, the individual will be referred to the Crisis Assessment and Treatment Team (CATT).

**Services**

1. If there is an emergency and you feel like you or someone else is at risk of harm call 111 immediately, or go to your nearest emergency room.
2. Crisis assessment and treatment team (CATT) (09) 486 1419 or after hours (09) 486 8900.
3. Suicide Prevention Helpline 0508 TAUTOKO (82 88 65) (open 8pm-12am, 7 days).
4. Alcohol Drug Helpline 0800 787 797 – Free, confidential advice and support.
5. Other mental health problems, call to make an appointment at the Massey Centre for Psychology. Ph (09) 441-8175 or (09) 414-0800 Ext 41242. Email centerforpsychology@massey.ac.nz
APPENDIX F

Reliable Change and Clinical Change

Table F.1 Reliable change and clinical change in completers on the PHQ-9 at termination and 12 weeks’ follow-up

<table>
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<th>Participant</th>
<th>Baseline</th>
<th>Termination</th>
<th>RC Y/N</th>
<th>CC Y/N</th>
<th>FU 12W RC Y/N</th>
<th>CC Y/N</th>
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<td>N</td>
<td>Non-clinical</td>
<td>Y</td>
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</tbody>
</table>

*Note. *indicates scores from 6 weeks’ follow-up. RC=reliable change, CC=clinical change, Y=yes, N=no, FU 12W=follow up 12 weeks’ post-intervention.
Table F.2 Reliable change and clinical change in completers on the CORE-10 at termination and 12 weeks’ follow-up

<table>
<thead>
<tr>
<th>Participant</th>
<th>Baseline</th>
<th>Termination</th>
<th>RC</th>
<th>CC</th>
<th>FU 12W</th>
<th>RC</th>
<th>CC</th>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>Y</td>
<td>Y</td>
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<td>Y</td>
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</tr>
<tr>
<td>4</td>
<td>Clinical</td>
<td>Non-clinical</td>
<td>Y</td>
<td>Y</td>
<td>Non-clinical</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>6</td>
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<td>Non-clinical</td>
<td>N</td>
<td>N</td>
<td>Non-clinical</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>8</td>
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<td>Y</td>
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</tr>
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</tr>
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<td>N</td>
</tr>
<tr>
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<td>N</td>
<td>N</td>
<td>Clinical</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

Note. *indicates scores from 6 weeks’ follow-up. RC=reliable change, CC=clinical change, Y=yes, N=no, FU 12W=follow up 12 weeks’ post-intervention.

Table F.3 Reliable change and clinical change in completers on the QLES-SF at termination and 12 weeks’ follow-up

<table>
<thead>
<tr>
<th>Participant</th>
<th>Baseline</th>
<th>Termination</th>
<th>RC</th>
<th>CC</th>
<th>FU 12W</th>
<th>RC</th>
<th>CC</th>
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<tr>
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<td>Y</td>
<td>Functional</td>
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<td>Y</td>
</tr>
<tr>
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<td>Functional</td>
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<td>Y</td>
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<td>N</td>
</tr>
<tr>
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<td>Y</td>
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<tr>
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<td>Y</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
</tr>
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<td>Y</td>
<td>N</td>
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<tr>
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<td>N</td>
<td>N</td>
<td>Functional</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

Note. *indicates scores from 6 weeks’ follow-up. RC=reliable change, CC=clinical change, Y=yes, N=no, FU 12W=follow up 12 weeks’ post-intervention.