Regular outcome monitoring in a Low Intensity-Cognitive Behavioural Intervention: A case study approach

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Regular monitoring of client progress has been shown to enhance psychotherapy outcomes, yet this is not common in everyday practice. Regular monitoring allows for the examination of individual change trajectories, which provides important information about when change is occurring and can predict deterioration in outcome early in treatment. This paper presents two case studies of individuals who participated in a guided self-help low intensity cognitive behavioural intervention (LI-CBI); Overcoming Depression and Low Mood (Williams, 2012). Differing trajectories of change are demonstrated in the case studies. The outcomes are reviewed in terms of change in depression (PHQ-9), psychological distress (CORE-10), and quality of life (QLES-SF). The case studies have been anonymised to protect the identity of the individuals.

Keywords: routine outcome monitoring, session-by-session monitoring, low-intensity CBT, self-help, change trajectories, shape of change

Routine outcome monitoring and feedback on therapeutic progress has been described as an important feature of good clinical practice, with some arguing that monitoring procedures should be integrated into routine mental health care (Lambert, 2010). Monitoring of progress is integral to evidence-based therapies, and is the foundation upon which cognitive behavioural therapy (CBT) interventions lie. Routine outcome measurement promotes treatment planning and can also be used to support the clinical justifications of clinical interventions (E. A. Duncan & Murray, 2012). While routine monitoring is often associated with outcomes, it can also include the therapeutic processes that impact on outcomes. For example, monitoring client factors such as engagement and motivation to change, emotions, expectancies, self-esteem, and self-efficacy, or therapist factors such as working alliance (B. Duncan, Miller, Wampold, & Hubble, 2010; Norcross & Lambert, 2011).

Progress can be monitored at different levels; for example, treatment services, therapists, clients, session by session, and episodes within sessions, and feedback on progress can be usefully delivered to clients, therapists, managers, service designers and policy makers (Barkham, Mellor-Clark, & Stiles, 2015). The literature demonstrates the benefits of routine outcome monitoring for clients and therapists. For example, Youn, Kraus, and Castonguay (2012) noted the advantage of communicating feedback to clients. They suggested that the detection of even slight improvements can reassure skeptical clients of tangible progress, and this can further improve the therapeutic alliance. On the other side of the therapeutic relationship, Lambert, Harmon, Slade, Whipple, and Hawkins (2005) demonstrated that when therapists obtained information about their client’s progress there was a significant and substantial effect on the client’s outcome, in particular for those who had an initial poor response to treatment. That is, when therapists received feedback on such cases (poor responders), the percentage of poor responders decreased from a baseline of 21 per cent to 5 to 13 per cent. Reliable and clinically significant change rates not only reduced patient deterioration but also led to clinically meaningful outcomes when feedback conditions were compared to the no-feedback/treatment as usual control group (Lambert et al., 2005).

Unfortunately, clinicians’ views of their client’s outcome tends to be much more positive than that obtained from self-report measures. Walfish, McAlister, O’Donnell, and Lambert (2012) found that clinicians estimated 85 per cent of their clients improved or recovered from their treatment, yet this estimate far exceeds the outcomes typically found in clinical trials and routine care. The discrepancy between clinician estimates of success and measured success further indicates the importance of formally measuring and monitoring treatment response.

Despite the research, regular assessment of psychological states and processes throughout therapy is not common in everyday clinical practice (Hatfield & Ogles, 2004; Ionita & Fitzpatrick, 2014; Phelps, Eisman, & Kohout, 1998). James, Elgie, Adams, Henderson, and Salkovskis (2015) found that within a child mental health service, only 6.8 per cent of therapists reported ‘almost always’ utilising session-by-session routine outcome measures. Those who objected to session-by-session monitoring expressed concerns as to how the information would be used. For example, would it be used for performance management or to compare therapists with each other? It was also asserted that outcomes measures, viewed in isolation, did not take into account the complexity of the therapeutic relationship. In addition, clinicians noted the disadvantages of the extra work involved, such as it being time consuming to collect and score the measures, and that it used up valuable therapeutic time. Of particular concern was that getting clients to complete the measures might interfere with the development of a collaborative therapeutic relationship. Belazi, Goldfarb, and He (2002) described other potential barriers to
routine outcome measurement such as cost, practicality, clinical relevance, and a lack of knowledge over which measures to choose. Trauer, Gill, Pedwell, and Slattery (2006) suggested that routine outcome measurement had failed to become embedded in practice due to resistance to innovation and change in the health services’ routine practice. For example, in a treatment outcome research study of a brief psychological intervention in primary health locations, Fitzgerald, Galyer, and Ryan (2009) could only obtain a small proportion of the data available (12 per cent) for analysis. This was mainly because of a resistance by clinicians to collect the data on their clients’ outcome and this greatly diminished the weight of the findings about the effectiveness of the service.

The Improving Access to Psychological Therapies (IAPT) initiative has seen the large-scale prioritisation of routine outcome measurement in England so that it has become a fundamental component of clinical practice (Fonagy, Matthews, & Pilling, 2005). The evaluation of two pilot IAPT services highlighted the significance of regular outcome monitoring by comparing pre- and post-treatment data (Clark, 2011). The results indicated that those individuals who had missing post-treatment data (that is, their outcomes were not regularly measured) were significantly less likely to show improvement from treatment. Furthermore, the services ran the risk of overestimating their effectiveness when these cases were eliminated for evaluation (Clark, 2011).

In general, measurement of the clients’ mental health condition before treatment establishes their current and baseline situation, and assists in the identification of the goals for treatment. For low intensity interventions with people experiencing mild to moderate psychological conditions, this is even more important. Ongoing monitoring before and during therapy ensures that the most appropriate evidence-based intervention is matched to the client’s mental health state, and that the intervention provided will be the least burdensome in order to maximise the client’s recovery. It also enables continual monitoring of risk, whether to self or others, the reviewing of the individual’s progress (which overcomes the potential problem of the therapist becoming distanced from the client; and so that the intervention can be adjusted to the client’s progress, or the client stepped up to the next level of care if needed), and for the evaluation of the service’s effectiveness and quality (Proudfoot & Nicholas, 2010).

Session by session assessment can provide important information about the individual nature of change in a client’s condition. For example, knowing the ‘shape’ or nature of change during treatment can provide the therapist with a more accurate understanding of when most of the change is occurring for the client. This 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.

Researchers have described three distinct shapes of change or patterns that can predict symptom improvement in CBT for depression: early rapid response, sudden gains, and the depression spike (Hayes, Laurenceau, Feldman, Strauss, & Cardaciotti, 2007). (As this article is concerned with early rapid responding, see Tang & DeRubeis (1999) and Hayes, Beever, Feldman, Laurenceau, & Perlman (2005) for further information on sudden gains and depression spikes, respectively). Early rapid response patterns are shown by “early responders” in which clients show significant positive change within a small number of sessions (Lambert, 2013). Ilardi and Craighead (1994) characterise early rapid response as a substantial decrease in depressive symptoms by the third week of therapy, with 60-80 percent of total decrease in depression occurring by week four (note: they had two sessions per week so this would be in the eighth session), with a subsequent levelling off in change. An early response to therapy was also positively related to better intermediate and long-term outcomes (Lambert, 2005; Renaud et al., 1998). However, at present there is a lack of agreement on what is an early responder, as it may be based on clinician ratings, reduction of symptoms, deviation from expected rates of improvement, or other methods (Haas, Hill, Lambert, & Morrell, 2002).

Other change trajectories have also been identified for different clinical presentations (e.g., Heimberg & Becker, 2002; Stulz, Lutz, Leach, Luccock, & Barkham, 2007). Stulz et al., (2007) found five different slopes of change in a sample of 192 outpatients receiving psychotherapy for anxiety and depression. The shapes of change were associated with different treatment outcomes and duration of treatment. For instance, two groups who demonstrated initial medium impairment (one showed continuous improvement, the other discontinuous improvement), the discontinuous change group showed more reliable improvement than the continuous change group (44 vs 19 per cent, respectively). This indicates that a discontinuous pattern of change did not necessarily predict poorer outcome. Furthermore, of the, the researchers recommended the ‘early improvers’ group would not require a large number of sessions or long-term therapy. Overall, the study indicated 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 important to note that the patterns of change described above are discontinuous and non-linear, and as a result would not be apparent in just a post-treatment analysis of group data (Laurenceau, Hayes, & Feldman, 2007). Session-by-session assessments provide information on important transition points that can reveal what it is therapists are doing that facilitate change in clients at this time (Hayes et al., 2007).

The purpose of this article is to demonstrate the importance of session-by-session monitoring in a low intensity cognitive behavioural intervention. Two case studies are described to demonstrate two differing trajectories of change – a successful response to LI-CBT and a poorly responding client. These case studies serve to highlight how regular monitoring can inform a practitioner’s decision making for clinical interventions.
Background to the study

The two case studies were part of a larger study that investigated the effectiveness of a low intensity support self-help programme using the book Overcoming Depression and Low Mood (ODLM): A Five Areas Approach (Williams, 2012). It is important to recognise that as this article was part of a larger study which was designed to be an effectiveness study, regular outcome monitoring was retrospective. Thus in this article, clients were not given feedback as to their progress during the study, nor was adjustment made to the intervention dependent on clients outcome. Rather, regular outcome monitoring allowed tracking of individual progress and was in line with the low intensity premise of monitoring and evaluation.

The ODLM book is designed to be used either in a pure self-help format or as a ‘guided’ self-help intervention, where support is provided by a practitioner as the individual completes the intervention. The ODLM book is the main component of the intervention and is made up of smaller workbooks, which were used in what is termed a “learner-led” approach, where the workbooks can be completed in any order after an initial module helping the client identify their particular problem areas. Each workbook includes a “Putting into Practice” (homework) plan to encourage application in everyday life, and is supported by the practitioner to do this. For the study the first author (AM) provided the support and clinical supervision was provided by the second author (MW). As the study is described in more detail in the Montagu and Williams (2017) article in this Special Series, only a brief outline of the recruitment, procedures, and measures will be given here.

Recruitment

The two participants were volunteers from the general community who responded to an advertisement about the study, and fulfilled the criteria of the study (i.e., be experiencing low mood, have no major mental health diagnosis (such as substance dependency, psychosis), and have no imminent risk of harm to self or others).

Procedure

The two individuals were given a choice on the type of support they wanted to receive (face-to-face or telephone) when applying for the study. They were given a total of four support sessions (30-40 minutes each) over a six-week period. Regardless of the support condition, the first support session was carried out face-to-face, at the Centre for Psychology in Albany, Auckland. For the face-to-face individual, the three remaining support sessions were carried out at the Centre; whereas for the telephone support individual, the remaining sessions were carried out over the phone. At the initial session they were oriented to the ‘five areas model’ and the ODLM workbooks. In conjunction with the practitioner, the individuals chose the problem areas they wished to work on. The workbooks most relevant to these problems were identified and the individuals worked on these during the six weeks of the study. In the support sessions, the practitioner reviewed the homework, addressed possible difficulties in using the workbooks, provided support and encouragement, and set the pace for the workbook use. The final session focused on relapse prevention strategies.

The outcome measures (see below) were emailed to the individuals to complete one week before the initial session, and again at the beginning of the initial session; providing two baseline data. The measures were emailed every week over the six-week programme via a link that was active for that week only. Two follow-up points at six and 12 weeks’ post-intervention were included to investigate if the changes were sustained over time.

Early rapid response analysis

An early rapid response to the low intensity intervention was deemed to have occurred if there was reliable and clinically significant change (Jacobson & Truax, 1991) in depression severity by week three of the programme. (For further information on how reliable and clinically significant change was calculated please see Montagu & Williams, 2017; this issue). Week three was chosen due to the evidence from previous studies that saw change by this time period (Delgadillo et al., 2013; Vaz, Conceição, & Machado, 2013).

Measures used were

Patient Health Questionnaire Depression Scale (PHQ-9)

The PHQ-9 (Kroenke, Spitzer, & Williams, 2001) is a nine-item self-report measure of depression that assesses both diagnostic criteria and severity of depression. Participants are asked to identify how often they have been troubled by these 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”) with a maximum score of 27.

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) and measures ‘psychological distress’. The CORE-10 (Barham et al., 2012) is recommended for use session-by-session to monitor change in the domains of depression, anxiety, general and social functioning, physical symptoms, trauma and risk to self. 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).

Quality of Life Enjoyment and Satisfaction Questionnaire-Short Form (Q-LES-SF)

This is a 16-item short form of the Q-LES 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 domains. Participants are asked to rate how satisfied they have been over the last week on a five-point scale from 1 (very poor”) to 5 (“very good”).

All participants agreed to the weekly administration of the measures and took approximately six minutes to complete the measures.

Data analysis

For each case study, the data were standardised and averages calculated at each time point on each of the three measures, and then converted to z-scores so that the relationship between the outcome measures across time on the same scale can be viewed.
Case studies

Case study 1: John (Face-to-face support condition)

John was a 33-year-old New Zealand European male who had recently returned to New Zealand after 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 had a familial history of depression and had previously experienced depressive episodes in which treatment consisted of medication and cognitive behavioural therapy (CBT). He was not using medication at the time of the study. In addition to low mood, John reported feeling anxious when he was alone, which was often during the week while he was between jobs. John stated he was interested in participating in the programme to “learn skills to deal with his depression”. At the first face-to-face assessment session, John explained his current situation and his concerns that depression would be a “normal” part of his life. He spent a lot of time alone, and experienced negative thoughts about himself as being “useless”. A collaborative five areas summary was completed (see Procedure), and previous and current coping strategies were identified.

At the second support session, John had completed two workbooks as well as reading 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 was unable to relate to. John reported being aware of most of the concepts in the workbooks (due to previous CBT), but was not currently putting them into practise. 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 my 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 for him, but was keen to practise articulating his opinions in order to apply in a real-life situation what he had learnt. At the fourth and final support session, John had completed two more workbooks; “Relationships” and “Noticing and Challenging Unhelpful Thinking”. Reviewing the “Relapse Prevention” workbook was particularly helpful for John; in particular identifying early warning signs, which he and the practitioner collaboratively identified and listed.

Case study 1 results

The results for John on the PHQ-9, CORE-10, and QLES-SF are shown in Figure 1. Figure 1 shows John’s depression trajectory from baseline to 12 weeks’ follow-up on the PHQ-9. John’s initial depression was defined as Moderate on the PHQ-9. His depression score demonstrated an early rapid response pattern (reliable and clinically significant change by week three). By the end of the programme (and the 12 week follow up point) his depression was in the Mild range, despite a slight increase in the last week of the programme. This increase continued until the 12 weeks’ follow-up period but was still lower than his baseline score.

John’s score for psychological distress, as measured by the CORE-10 was in the Clinical (versus Non-clinical) category at baseline (see Figure 1). His psychological distress was similar to his depression trajectory; that is, a decrease over the duration of the programme, then increased at six week follow up and continued to increase at the 12-week follow up point. John’s CORE-10 scores at the end of the intervention and at 12 weeks’ follow up were in the Non-clinical range.

Quality of life was measured by the QLES-SF (Figure 1). At baseline, John’s quality of life was deemed to be in the Impaired range, though at the end of the programme (and again, at 12 weeks’ follow up) it was in the Functional range. John’s quality of life scores over the programme mimic that of the other outcome measures, that is, his quality of life scores steadily increased over the duration of the programme, but then declined post-intervention. However, overall his scores on the outcome measures at the follow-up were reliable and clinically significant.

Case study 2

Tom (Telephone support condition)

Tom was a 51-year-old New Zealand European male who was unemployed at the time of the intervention. He reported a history of depression and had received previous treatment in the form of medication and CBT. He was interested in participating in the study so he could learn further skills to “move forward in my life”. At the first assessment session, Tom was initially reluctant to speak about his current difficulties. However he soon opened up and described symptoms including low mood, anhedonia, low motivation, increased appetite, and hopelessness; being unable to foresee any future for himself. Completing the five areas summary revealed he had 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 (i.e., LI-CBT, telephone support).

![Figure 1: John’s standardised scores on the PHQ-9, CORE-10 and QLES-SF across baseline, the programme, and follow-up](image-url)
Discussion

These case studies demonstrated two different trajectories of change to the same programme, with support provided over two modalities (face-to-face and telephone support). John’s nature of change over the programme showed an early positive response, and he demonstrated reliable and clinically significant change at the end of the intervention. The second at the first meeting where the client completed treatment of points. John’s response to the face-to-face support programme initially reduced his depression and psychological distress, and improved his quality of life scores. Although this was evident over the duration of the programme, there was some deterioration on all the outcome measures at follow-up. This phenomenon could be explained by a regression to the mean (Barnett, van der Pols, & Dobson, 2004). Its occurrence is commonly observed when repeated measurements are used on the same individual or group. Extreme scores at the beginning of treatment will generally reduce to less extreme ones that are closer to the true mean for the individual or group. In the case for John, it would be expected his scores would be high for depression and distress at the beginning of treatment, hence his seeking help. However, to control for regression to the mean it is recommended that two or more baseline scores prior to treatment will get a better estimate of the client’s functioning prior to treatment, and therefore a better estimate of the true impact of the intervention (Barnett, van der Pols, & Dobson, 2004).

In the study, two baseline measures were obtained; one a week prior to the intervention and the second at the first meeting where the client completed a more intensive level of treatment (as in a stepped model of care) and this may have resulted in a more positive outcome for Tom.
the measures before the introduction of the ODLM programme. Observation of John’s trajectory of change showed that at baseline and at week one there was little change on all the outcome measures, and that significant changes started occurring after the first week when the programme started. Thus despite the deterioration of John’s scores on each of the measures at the follow up stage, his non-clinical outcomes at week six (i.e., end of treatment) were in the same non-clinical range. This supports the literature on maintenance of gains on LI-CBT, which found improvements in depression and secondary outcome measures were maintained at 12 and 30 months’ post-intervention (e.g., Carlbring, Nordgren, Furmark, & Andersson, 2009; Williams et al., 2013).

For the second case study, Tom unfortunately experienced a worsening of symptoms during the guided self-help programme. Tom started the programme with more severe symptoms at the two baseline measures, and there was minimal change in his scores for all the outcome measures throughout the programme. Furthermore, his reported low motivation to complete the self-help books is a common experience in depression, and would not be ideal in a self-help programme. There has been mixed reviews in the literature with regards to the suitability of LI-CBT interventions for people with severe mental illness. Initially it was suggested that self-help interventions may be more appropriate for mild to moderate problems (Cuijpers, 1997) and unsuitable for the more serious disorders (Gregory, Schwer Canning, Lee, & Wise, 2004). On the other hand, more recent research indicates that low-intensity interventions are beneficial in the treatment of severe depression (Bower et al., 2013) but further studies would need to be done to identify whether severity of symptoms or some other factors, such as motivation, self-efficacy, or the modality of the programme, impacted on outcome. Because of Tom’s current unemployment, it is likely that the programme being free appealed but on the otherhand, it may be his unemployment exacerbated his condition by giving him more time to dwell on his unfortunate situation, leading to a lack of motivation. Although Tom was initially eager to try something different when the self-help component of the programme was explained, he may have benefited from a more intensive level of intervention.

The results of these case studies reinforce the importance and value of routine, regular and specifically focused monitoring to improve satisfactory outcomes. Utilising reliable and valid outcome measures weekly or at every session would provide information about the nature of the client’s change and assist clinician’s to see if treatment is working or not, in particular for the early recognition of potential treatment failure. Thus improvements in clinical practice will be enhanced by understanding the nature of change, by improved treatment outcomes, and contribute to research as to how different disorders demonstrate change, and what the impact of different treatment components have for the change process.

References


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