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Guided Internet-based cognitive behavioral therapy for mild and moderate depression: A benchmarking study

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ABSTRACT

Major depression is among the most common and debilitating disorders worldwide, associated with large societal and individual costs. Effective treatments exist, but accessibility is scarce. Guided Internet-Based Cognitive Behavioral Therapy (guided iCBT) is a promising approach to reach more people in need of help. In the present pilot study, we investigated the outcome of a guided iCBT program for mild and moderate depression when disseminated from Sweden to Norway. The guided iCBT intervention was implemented within a university-based outpatient clinic by six student therapists under supervision. Twenty-two participants with mild and moderate depression were included in the study. Large treatment effects were found for depressive symptoms, whereas small to medium effects were observed for anxiety symptoms. More than half (55%) of the participants were classified as recovered at post-treatment and more than a third (41%) at follow-up. No participants had a significant deterioration from pre- to post-treatment, but two reported a significant deterioration from post-treatment to 6-month follow-up. Benchmarking the present results against those reported in the four original Swedish studies, we found that the treatment effect in the Norwegian study was slightly higher at post-treatment and slightly lower at 6-month follow-up compared to the outcome in the Swedish studies. The results should be interpreted with caution, as our sample was small and had no control group.

1. Introduction

Major depression is one of the most common disorders with a lifetime prevalence of 15 to 17% (Kessler et al., 2003) and causes a considerable health problem worldwide (Ferrari et al., 2013). Major depression has detrimental consequences for both the individual and the society. The individual costs include impaired relationships, reduced quality of life, and reduced income (Ebmeier et al., 2006; Pincus and Pettit, 2001). The societal costs include losses in productivity, high rates of sick absence, and social and health care expenses (OECD, 2015).

Both psychological and pharmacological treatments have been found to be effective in treating depression (Ebmeier et al., 2006). Several psychological treatments for depression have been investigated in randomized controlled studies and have been found to be effective (Cuijpers et al., 2008; Wampold et al., 2002). Although effective treatments for depression exist, many people in need of help do not access evidence-based treatment (Collins et al., 2004; Ebmeier et al., 2006; Shafran et al., 2009). Kessler et al. (2003) reported from a US sample ($n = 9090$) that only 46–57% of the 12-month cases were receiving health care treatment for major depression, and that the treatment was evidence-based in only 18–25% of the cases. Thus, there seems to be a gap between the need for psychological therapy and the accessibility of effective therapy (Shafran et al., 2009).

Internet interventions have been developed in order to accommodate the growing demand of effective psychological treatment of depression (Andersson, 2016). In a systematic review, Hedman et al. (2012) identified 20 randomized controlled trials conducted by six independent research groups reporting on iCBT for depression and/or depressive symptoms. The outcomes reported in these studies when compared to waiting list or treatment as usual control groups have varied from strong (Andersson et al., 2005, 2013b; Christensen et al., 2004; Kessler et al., 2009; Meyer et al., 2009; Perini et al., 2009; Spek et al., 2007b; Vernmark et al., 2010), to moderate (Christensen et al., 2004) to no effect (Clarke et al., 2002, 2005; de Graaf et al., 2009; O'Kearney et al., 2006). The heterogeneity of effect across studies can partly be attributed to the varying degree of therapist support and differences in study design (Spek et al., 2007a). In an early meta-analysis of iCBT and other computerized interventions for depression,

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Andersson and Cuijpers (2009) reported that guided iCBT had stronger between-group effects ($d = 0.61$) than unguided ($d = 0.25$) treatments. This is in line with more recent reviews and meta-analyses (Johansson and Andersson, 2012; Richards and Richardson, 2012; Cowpertwait and Clarke, 2013). Moreover, a recent systematic review showed that there were no difference between face-to-face and iCBT for depression (Andersson et al., 2016), even if the number of direct comparisons was small ($n = 5$).

The research group led by Andersson et al. (Andersson et al., 2005, 2013b; Johansson et al., 2012; Vernmark et al., 2010) developed the guided iCBT for depression piloted in the present study and have conducted four randomized controlled trials on guided iCBT for depression. The within-group effect sizes on primary outcome measures of depression in these four studies have been reported to be large at both post-treatment and follow-up. Furthermore, Hedman et al. (2014) conducted an effectiveness study investigating the effects of guided iCBT for depression in a routine psychiatric care setting ($n = 1203$). The results showed that the patients had made large improvements from pre- to post-treatment on depressive symptoms ($d = 1.27$), and that the improvements were sustained at 6-month follow-up.

Guided iCBT for depression has been implemented in the public mental health care systems in several countries, for instance in England (https://www.england.nhs.uk/mentalhealth/adults/iapt/) and Sweden (http://web.internetpsykiatri.se/). In Norway, treatment of depression based on the Internet has not been available in the public mental health clinics. Furthermore, no studies have been conducted on guided iCBT for mild and moderate depression in Norway. This is somewhat surprising as the clinical guideline on mild to moderate depression, published by The Norwegian Directorate of Health in 2009, recommended guided CBT for depression, exemplified with MoodGym (https://moodgym.anu.edu.au/welcome) (Helsedirektoratet, 2009). It is important to document the effects of guided iCBT for depression before implementation in the Norwegian mental health care services. There is a lack of knowledge in regard to dissemination effects across countries, subcultures, research groups, and clinical settings (Andrews and Williams, 2015), which makes this study a useful contribution to the generalization of iCBT effects into new settings.

Thus, we had two aims in the present study: First, to investigate the effects of guided iCBT on depressive and common comorbid symptoms and complaints at post-treatment and 6-month follow-up. Second, to compare the effects of the iCBT program in the present study to the effects reported in the Swedish studies (Andersson et al., 2005, 2013b; Johansson et al., 2012; Vernmark et al., 2010).

2. Method

The present study was an open pilot with assessments at pre-treatment, post-treatment and at 6-month follow-up. Preliminary results from the study including post-treatment outcome, but not the follow-up results, have been published previously in Norwegian (Nordgreen et al., 2015). In the present study, we present both post-treatment and follow-up outcome.

2.1. Translation and adaption

Modules were received from Gerhard Andersson as word.doc documents, all text-based content. As the first step we translated the text from Swedish to Norwegian using psychology students and clinical psychologists. The cultural adaptation was minimal as Norway and Sweden have large cultural overlap. The second step was to implement the text in a web platform. Pictures and illustrations were included in order to make the text more readable. Due to limited funding for this project the text was implemented in a web-platform without the highest security level. The patients and therapist dialogs were therefore conducted via telephone.

2.2. Therapists

All clinical contact was conducted by 6 student therapists at the psychological outpatients clinics, University of Bergen, under the supervision of a certified clinical psychologist (TN). The students had completed at least one year of standard clinical internship. They were in addition trained and supervised in conducting diagnostic assessments with Mini-International Neuropsychiatric Interview (MINI; Sheehan et al., 1998), and guided iCBT through seminars and weekly supervision by a certified clinical psychologist (TN).

2.3. Recruitment

Participants were recruited via two press announcements in a local newspaper, one in September 2013 and the other in February 2014. The announcements included information about the treatment program and contact information. In total, 57 persons responded and were screened in a telephone interview.

2.4. Screening and inclusion

The screening comprised information about the treatment program, and assessment of the fulfillment of the inclusion criteria: 1) aged 18 to 65 years, 2) presenting a major depressive episode according to the criteria in Mini-International Neuropsychiatric Interview (MINI; Sheehan et al., 1998), 3) if usage of anti-depressants, the dosage had to be stabile for 4 weeks, 4) no current or previous treatment with CBT for depression, 5) access to internet, 6) no substance abuse, and 7) not in need of treatment for more acute problems. The latter was based on information from the MINI interview and from the screening interview. After the screening, a total of 19 persons were not further assessed for eligibility due to: no current depressive episode ($n = 7$), currently receiving or previously received CBT ($n = 6$), suicidal thoughts ($n = 3$), use of medication less than 4 weeks ($n = 2$), and substance abuse ($n = 1$).

Diagnostic interviews were conducted using MINI in order to assess the diagnostic criteria for DSM-IV: A. Major depressive episode, C. Suicidality, D: Manic episode, E: Panic disorder, F: Agoraphobia, G: Social phobia, H: Obsessive-Compulsive disorder, O: Generalized anxiety disorder, L: Psychotic disorders, and M: Anorexia nervosa. Suicidality, Manic episode and psychotic disorders were exclusion criteria.

The 38 individuals who met the inclusion criteria were invited to a face-to-face interview assessing the exclusion criteria and the additional inclusion criteria: 1) a total score between 15 and 30 on the Montgomery-Åsberg Depression Rating Scale Self-Report (MADRS-S; Svanborg and Ekselius, 2003; Svanborg and Åsberg, 1994), as used in the four original benchmarking studies (Andersson et al., 2005, 2013b; Johansson et al., 2012; Vernmark et al., 2010) and 2) a score of less than 4 on item 9 on MADRS-S (zest for life). The following exclusion criteria were used: 1) severe depression (a score of 31 or higher on MADRS-S), 2) bipolar disorder, 3) suicidal thoughts or plans, 4) psychosis, and 5) substance use assessed by The Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993) and The Drug Use Disorders Identification Test (DUDIT; Berman et al., 2007).

The participants were informed about the purpose of the study, and that they were expected to work actively with the program 4–6 hours each week. In total, 16 of the 38 persons who were invited to the face-to-face interview were not included in the study, due to the following reasons: did not meet the criteria of mild or moderate depression ($n = 5$), did not attend the interview ($n = 4$), did not have time to work on the program ($n = 4$), did not want to participate without any given reason ($n = 3$). Included participants provided their informed consent, and were informed that they could withdraw from the study without giving any reason. Out of the 22 participants, 7 qualified for mild depression (MADRS-S >13) and 15 moderate depression