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Predicting Response to Therapist-Assisted Internet-Delivered Cognitive Behavior Therapy for Depression or Anxiety Within an Open Dissemination Trial

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Therapist-assisted Internet-delivered cognitive behavior therapy (ICBT) is efficacious for treating anxiety and depression, but predictors of response to treatment when delivered in clinical practice are not well understood. In this study, we explored demographic, clinical, and program variables that predicted modules started and symptom improvement (i.e., Generalized Anxiety Disorder-7 or Patient Health Questionnaire-9 total scores over pre-, mid-, and posttreatment) within a previously published open dissemination trial (Hadjistavropoulos et al., 2014). The sample consisted of 195 patients offered 12 modules of therapist-assisted ICBT for depression or generalized anxiety; ICBT was delivered by therapists working in six geographically dispersed clinics. Consistent across ICBT for depression or generalized anxiety, starting fewer modules was associated with more phone calls from therapists reflecting that therapists tended to call patients who did not start modules as scheduled. Also consistent for both ICBT programs, greater pretreatment condition severity and completion of more modules was associated with superior ICBT-derived benefit. Other predictors of response to treatment varied across the two programs. Younger age, lower education, taking psychotropic medication, being in receipt of psychiatric care and lower comfort with written communication were associated with either fewer program starts or lower symptom improvement in one of the two programs. It is concluded that monitoring response to ICBT may be particularly important in patients with these characteristics. Research directions for identifying patients who are less likely to benefit from ICBT are discussed.

Keywords: depression; generalized anxiety; Internet-delivered; cognitive behavior therapy

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While depression and anxiety are prevalent mental health concerns, only a minority of individuals receive adequate treatment (Wang et al., 2007). With this in mind, researchers have focused on novel and cost-effective strategies to improve access to cognitive behavior therapy (CBT), an evidenced-based form of treatment. Therapist-assisted (also known as guided) Internet-delivered CBT (ICBT) has shown particular promise in this regard (Andersson, Cuijpers, Carlbring, Riper, & Hedman, 2014; Hedman, Ljotsson, & Lindefors, 2012). For example, in a systematic review of therapist-assisted ICBT,

effect sizes were found to be large for the treatment of depression and anxiety disorders (Hedman et al., 2012). Moreover, in a recent systematic review and meta-analysis, guided ICBT was compared to face-to-face CBT for a number of psychiatric (primarily depression and anxiety disorders) and somatic conditions, and it was concluded that the two approaches produce equivalent effects (Andersson et al., 2014). Importantly, several long-term follow-up studies have found that effects are maintained at follow-up, even when measured 3 to 5 years post-treatment (e.g., Andersson et al., 2013; Hedman et al., 2011; Paxling et al., 2011).

Despite the promising evidence in support of therapist-assisted ICBT, the treatment is not suited for everyone. A recent meta-analysis compared adherence in guided ICBT to that of face-to-face CBT for depression (van Ballegooijen et al., 2014). The authors identified that while approximately 85% of patients completed all sessions of face-to-face CBT, only 65% of patients completed all modules of guided ICBT. Noncompleters of face-to-face CBT, however, completed on average 25% of their treatment, while noncompleters of guided ICBT completed on average 42% of their treatment. These findings indicate that individuals differ in their response to ICBT and that some individuals may be better suited for this form of therapy. By understanding patient characteristics and symptoms that predict response to ICBT, clinicians may be better equipped to identify and monitor individuals less likely to benefit from this novel approach; consequently, they then may be able to modify treatment to improve patient outcomes (e.g., combining ICBT with face-to-face sessions, providing additional email or telephone support, tailoring ICBT content to a greater degree, referring patients for face-to-face CBT if they are not responding). Moreover, with increased knowledge of predictors of response to ICBT, researchers may be better able to investigate how ICBT could be matched to patient characteristics to reduce attrition and improve patient engagement and outcome.

Given the importance of this line of study, research has emerged on various predictors of response to therapist-assisted ICBT. Of particular interest to clinicians are studies that focus on predictors of response to therapist-assisted ICBT, when the treatment is delivered in clinical practice. Research on this topic has been conducted in a psychiatric outpatient setting in Sweden. In this setting, it was found that low symptom severity and work impairment were associated with a positive treatment response to therapist-assisted ICBT for panic disorder (El Alaoui et al., 2013). When examining therapist-assisted ICBT for social anxiety in this same setting, lower overall functioning was associated with a higher rate of improvement, as were higher ratings of treatment credibility and greater program adherence (El Alaoui et al., 2015). Adding to this research in the same psychiatric outpatient setting, when examining therapist-assisted ICBT for health anxiety, higher health anxiety at baseline was positively associated with symptom improvement, while higher depression was negatively associated with symptom improvement (Hedman et al., 2013). Of note, these studies examined predictors of response to therapist-assisted ICBT within randomized controlled trials (RCTs) conducted in a clinical setting. This could limit generalizability to clinical practice as stricter inclusion and exclusion criteria in RCTs may limit variability in the sample. It is possible that predictors may differ if examined as part of an RCT as compared to an open trial in clinical practice.

The aim of this study was to contribute to the literature and explore predictors of response to therapist-assisted ICBT within the context of an open dissemination trial. More specifically, in this study, a centralized unit was responsible for screening self- and provider-referred patients for ICBT and assigning them to support provided by a community therapist or supervised graduate student working in one of six geographically dispersed clinics. The main findings from this registered trial (ISRCTN48160673) have been previously published (Hadjistavropoulos et al., 2014). In the present study, similar to the ICBT studies described above (e.g., El Alaoui et al., 2015; Hedman, Andersson, Lekander, & Ljotsson, 2015), we examined if demographic, clinical, and program variables predicted number of modules started and symptom improvement associated with therapist-assisted ICBT for generalized anxiety or ICBT for depression. Given the limited research on this topic, this study was considered exploratory in nature and no specific hypotheses were formulated.

Methods

PARTICIPANTS

The study was approved by all research ethics boards of the institutions involved. Patients provided electronic informed consent that their pooled data could be used for research purposes. Patients learned of the unit through community mental health clinics, family physicians, media attention (e.g., radio, television, newspaper), Internet-based advertisements, and word of mouth.

Interested patients first underwent a centralized prescreening telephone interview which included the MINI International Neuropsychiatric Interview (MINI; Sheehan et al., 1998) conducted by staff at the Online Therapy Unit for Service, Education, and Research. Inclusion criteria included (a) being at least 18 years of age; (b) residing in the province