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Internet-delivered acceptance-based behavior therapy for generalized anxiety disorder: A pilot study

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ABSTRACT

Objective: Internet-delivered cognitive behavior therapy (ICBT) has been developed and tested for treating persons with generalized anxiety disorder (GAD). A new form of CBT focuses on acceptance (of internal experiences or difficult psychological content), mindfulness and valued actions. To date this form of CBT has not been delivered via the internet for persons with GAD. The aim of this study was to describe the functionality of a new internet-delivered acceptance-based behavior therapy for GAD, and to test the effect of the intervention in an open pilot trial.
Methods: Following exclusion of two patients we included 14 patients diagnosed with GAD from two primary care clinics. At 2–3 months follow-up after treatment 10 patients completed the outcome measures. The treatment lasted for an average of 15 weeks and consisted of acceptance-based techniques, behavior therapy components and homework assignments.
Results: A majority of participants completed all modules during the treatment. Findings on the Penn State Worry Questionnaire showed a within-group improvement of Cohen's $d = 2.14$ at posttreatment. At the follow-up results were maintained. Client satisfaction ratings were high.
Conclusions: We conclude that internet-delivered acceptance-based behavior therapy potentially can be a promising new treatment for GAD. A controlled trial of the program has already been completed.

1. Introduction

Generalized anxiety disorder (GAD) is a common disorder characterized by excessive and uncontrollable worry. The lifetime prevalence of GAD is estimated to between 4.3 and 5.9% (Tyrer and Baldwin, 2006), and the disorder is best described as a chronic condition if left untreated (Tyrer and Baldwin, 2006). Apart from excessive worry and anxiety GAD is associated with a number of other symptoms such as tension, difficulties in concentration and sleep problems (American Psychiatric Association, 2013). Comorbid psychiatric disorders are common with high rates of depression (Johansson et al., 2013), other anxiety disorders and substance abuse (Heimberg et al., 2004). Apart from considerable personal difficulties the disorder also leads to a high economic burden to society with high rates of health care consumption and days on sick leave (Revicki et al., 2012).

Several different psychological treatments for GAD exist, but cognitive behavioral therapy (CBT) is the most studied (Cuijpers et al., 2014). CBT targeting GAD is traditionally based on self monitoring, cognitive restructuring and relaxation (Heimberg et al., 2004). Additional interventions often used are problem solving, exposure and stimulus control. A recent meta-analysis showed moderate to large between group effects of CBT compared to no treatment control (Cuijpers et al., 2014). A relatively new form of CBT focuses on acceptance, mindfulness and valued actions, and this treatment if often but not always referred to as acceptance and commitment therapy (ACT) (Hayes et al., 2006). These approaches are about acceptance of internal experiences or difficult psychological content (Hayes et al., 2006). Acceptance-based CBT has some support as a treatment for GAD (Hayes-Skelton et al., 2013; Roemer et al., 2008), with a study indicating that ACT can be as effective as CBT (Avdagic et al., 2014).

There are now a large number of controlled trials on therapist-guided internet-based cognitive behavior therapy (ICBT) for a range of psychiatric and somatic conditions (Andersson, 2014). Indeed, a meta-analysis on direct comparisons between ICBT and face-to-face CBT showed equivalent findings (Andersson et al., 2014), but the number of trials is still small when it comes to certain specific conditions, like GAD. Previous ICBT studies on GAD indicate that ICBT can be effective. The worry program developed by Titov and colleagues was tested in a controlled trial in which 48 participants were randomized to treatment or wait list control. The treatment program included six online modules

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with homework assignments, participation in an online discussion forum and weekly contact with a therapist. The results showed large to moderate between group effect sizes on primary GAD measures as well as secondary outcomes (Titov et al., 2009). In a second controlled trial 145 participants were randomized to clinician-assisted treatment, technician-assisted treatment or wait list control (Robinson et al., 2010). The treatments lasted for eight weeks and the program was slightly modified from the first trial. Large within-group effects were found on both primary GAD measures and on secondary measures for both treatment groups and only small differences in effects were found between the two forms of assistance.

Two controlled trials have evaluated a Swedish treatment program for GAD called Origo. In the first study 89 participants were randomized to treatment or wait list control (Paxling et al., 2011). The treatment lasted for eight weeks and consisted of eight modules with homework assignments and weekly contact with a psychology student. The results showed large between-group effects on primary GAD measures and effects were maintained at three-year follow-up. In a second trial with 81 participants the same program was compared against a psychodynamic internet-based treatment (Andersson et al., 2012). At post treatment both groups showed large within-group effects that were maintained at 18 months follow-up. At post treatment and follow-up only small between-group effects were found when comparing the active treatments and the waitlist control group. These studies indicate that ICBT for GAD can be effective. The existing ICBT programs are however largely based on traditional CBT components and to our knowledge there are no previous published studies of acceptance-based behavior therapy for GAD delivered through the internet. There are however previous controlled studies on acceptance-based internet treatments, for example for depression (Carlbring et al., 2013), tinnitus (Hesser et al., 2012) and chronic pain (Buhrman et al., 2013) showing promising effects. The rationale for developing a novel acceptance-based treatment for GAD was motivated by the mixed findings of ICBT in the Swedish trials and the need for a treatment that is less based on reading long texts.

The aim of the present study was to describe the appearance and functionality of a new acceptance-based internet-based treatment program for GAD and to conduct a pilot study. The study was part of a larger project ending up in a controlled trial that was performed after this study but published before (Dahlin et al., 2016). In contrast to the previous Swedish ICBT program Origo the internet-delivered acceptance-based behavior therapy program makes more use of the possibilities of modern technology including animations, audio and video to enhance the ways to present the treatment material.

2. Material and methods

2.1. Recruitment and inclusion

Participants were recruited and treated at two separate primary care clinics in Linköping, Sweden. Each primary care clinic had a licensed psychologist working at the clinic. The psychologists worked with face-to-face CBT as well as ICBT on daily basis and asked a selection of their patients if they were willing to take part in a pilot study. No advertising or other arrangements were made to recruit participants for the study. All were patients who had contacted the primary care clinic to get help with concerns regarding their psychological wellbeing and had an initial appointment with a physician. Following usual practice at the clinic, the general practitioner seeing patients presenting with anxiety or mood disorders did an initial clinical evaluation and referred the patient to the psychologist at the primary care clinic to work with the problems. At the first session the psychologist did a clinical diagnostic interview based on DSM-IV (American Psychiatric Association, 2000) to establish a primary diagnosis and discuss treatment options. During these initial sessions participants meeting the inclusion criteria were given the option to go through an internet-based treatment program for worry or receive face-to-face treatment. A total of 16 individuals expressed their interest to participate in the study and receive the internet based treatment and gave informed consent. None of the participants had actively asked for this form of treatment before the psychologist brought up that treatment option.

Inclusion criteria used in the study were: (a) a primary diagnosis of GAD, (b) a minimum age of 18 years, (c) no other ongoing psychological treatment, (d) if medication were used, a stable use of the medication during treatment, (e) no use of benzodiazepines, (f) no alcohol or drug abuse, (g) a computer with internet connection. A written informed consent form was signed by all participants, stating that they agreed to take part in the study and that data was collected and used in publications. The study was part of a larger project that was approved by the local ethics committee.

2.2. Participants

Sixteen participants were initially recruited to the study. Two of these were later excluded. One was excluded because of use of benzodiazepines during treatment and the other did not start treatment. Of the fourteen participants finally included eleven were female (78.6%) and three male (21.4%). Mean age was 32 years (SD = 10.0, range 21 to 59 years).

2.3. Measures

The 16-item Penn State Worry Questionnaire (PSWQ; Meyer et al., 1990) was used as the main outcome measure. PSWQ is a questionnaire specifically developed to measure worry and has high internal consistency and good test–retest reliability. The 8-item Client Satisfaction Questionnaire (CSQ-8; Larsen et al., 1979) is a questionnaire designed to measure client satisfaction with the service given and hence gives an understanding of how satisfied the person is with the treatment received rather than treatment gains. CSQ-8 was used as a way to collect information regarding satisfaction with the treatment format.

2.4. Treatment

2.4.1. Description of the treatment program and online platform

The worry help program consists of seven episodes outlined in Table 1. The treatment is primarily based on functional analysis, acceptance, mindfulness and valued action and ultimately aims to help people take a more accepting approach to anxiety and worry as well as living in accordance to one's values instead of reacting with avoidance. Each episode consists of approximately 10 slides. A specific chapter in a workbook accompanies each online episode. The user is encouraged to use the workbook to write down how the work progresses and do specific exercises that are presented in the online episode. Some of the work in the workbook is done in front of the computer and other exercises are done in daily life. At the completion of the treatment the user will have the main components of his or her own treatment written down in the workbook and can go back to their treatment anytime he or she wants to regardless of whether or not they have an active code to the online program. An audio CD accompanies the workbook. The audio files are five exercises in mindfulness and acceptance. The use of an audio CD is based on the assumption that the user should be able to continue to work with the treatment even after the active online treatment program has ended.

Psychologists and web-developers worked together to develop the online treatment platform. The technical framework is based on knowledge and research on how people in general use websites provided by the web-developers, together with knowledge and research on behavioral principles for learning (operant and respondent conditioning) provided by clinical psychologist.

From the start two main concerns guided the development of the platform and the treatment program - usability and information delivery. Regarding the design of the platform we wanted it to be easily accessible,