

Internet-Delivered Cognitive Behavioral Therapy (ICBT): A Case Study of an Early Adulthood Patient Diagnosed with Costochondritis, Anxiety and Depression

Jennifer Weniger*

PhD, Associate Faculty Department of Counselor Education and Family Studies, Liberty University, USA

*Corresponding author: Jennifer Weniger, PhD, Associate Faculty Department of Counselor Education and Family Studies, Liberty University, USA, E-mail: jweniger@liberty.edu

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1. Introduction

Anxiety disorders are one of the most well researched diagnosis treated with ICBT [1]. CBT is a very well-known and extensively researched model of therapy. There have been several research studies to demonstrate that ICBT is just as effective as face-to-face cognitive behavioral therapy [2-4]. ICBT has wide applicability to several different presenting problems and diagnoses. In a systematic review, it was found that most patients with anxiety disorders treated with CBT experienced moderate symptom relief within 12 months post treatment [5], and CBT has been shown effective to treat anxiety and depression in patients with chronic obstructive pulmonary disease [6].

The fundamental principles of CBT are to help modify dysfunctional core beliefs and automatic thoughts that underlie anxiety and depression [7]. The goals in cognitive behavioral therapy are to identify core schemas and maladaptive thoughts, and to use techniques such as identification of cognitive distortions and cognitive reframing, the downward arrow technique, and examining the evidence to help replace unrealistic automatic thoughts with more balanced and rationale thoughts. Cognitive distortions include catastrophizing, all or none thinking, should statements, negative mental filters, jumping to conclusions, mind reading, personalizing, labeling, perfectionism, and social comparisons [8].

Patients learn to replace dysfunctional thoughts with more realistic and less harmful thoughts [9]. Behavioral interventions are used to help develop healthier and more adaptive behaviors. Behavioral activation is a core element of CBT [10].

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2. Case Report

The patient was diagnosed last year by a physician with costochondritis related anxiety after experiencing sharp pains in the chest area. During intake and completion of a biopsychosocial assessment, the patient was diagnosed with Generalized Anxiety Disorder and Major Depression. The patient reported feelings of hopelessness and helplessness, a lack of motivation, and severe generalized anxiety. The patient endorsed struggling with a fear of death, excessive worry throughout the day about going outside, worry about negative evaluation from others, and worry about health-related issues (the patient had been cleared by a physician for normal physical activities). The patient denied any high-risk behaviors, and there was no substance use. The patient was not taking any medications. There was no history of psychiatric hospitalizations. The PTSD screening was negative.

The patient's mental status exam was within normal limits.

The patient participated in nine structured ICBT sessions.

Session 1: The biopsychosocial assessment was conducted during the first session, and psychoeducation was provided about cognitive behavioral therapy and the relationship between thoughts, behaviors and emotions. A mental status examination was completed which was within normal limits. (PHQ=15, GAD=12).

Session 2: The primary cognitive distortions were reviewed which included all or none thinking, magnification and minimization, catastrophizing, jumping to conclusions, overgeneralization, mental filters, disqualifying the positives, emotional reasoning, "should statements", social comparisons labeling, and personalization [8]. The patient identified all or none thinking, emotional reasoning, negative social comparisons, "should statements", jumping to conclusions and labeling as the primary cognitive distortions. This session focused on educating the patient about how to identify cognitive distortions that underlie anxious and depressive feelings.

Session 3: This session focused on cognitive reframing to challenge negative automatic thoughts and reframe them to more balanced and rationale thoughts. The patient was struggling with irrational thoughts such as "I am worried that I still might be sick" "I am useless" "I am being judged by others" "I believe that I am sick" "I compare myself to others" "I shouldn't go outside because something bad might happen" "I can't control my health, and it worries me." The cognitive distortions associated with each automatic thought were identified and then challenged. The patient was encouraged to start walking outside for 10-15 minutes per day. (PHQ=11, GAD=10).

Session 4: The patient reported feeling "better", and the patient was walking 20 minutes daily. This type of behavioral activation is a critical component of CBT treatment for depression [10]. The patient was actively using the skills from the prior session and was developing more balanced and rational thoughts. The patient reported being more goal oriented and future focused. The patient reported more motivation to "get better." The patient was asked to keep a CBT "thought record" and practice more balanced and flexible thinking. Provided psychoeducation about thought records and discussed the steps of completing a "thought record." During this session, the concepts of self-compassion and self-acceptance were discussed.

Session 5: The patient continued to walk daily and kept a thought record. The patient's CBT "thought record" was reviewed. Aafjes-Van Doorn, Bekes, & Prout, [11] found that thought records are effective in reducing anxiety and improving beliefs. Thought records are a valuable tool in CBT that empower individuals to take control of their thoughts and emotions. Further, the session expanded on the concepts of self-esteem and self-acceptance. We processed the reasons why some individuals struggle with poor self-esteem including being a victim of bullying, rejection from others, environmental and family triggers, identity issues, lack of a support system, and biological factors.

We processed the patient's inner negative self-critic and reframed it to more self-compassionate statements. The patient completed CBT exercises to improve self-acceptance. The patient created a gratitude list, and a list of positive affirmations. The patient worked on self-awareness and identified times when joyful thoughts and emotions were experienced. (PHQ=7, GAD=10)

Session 6: The patient continued with the behavioral activation activity of walking daily. Provided education to the patient about the difference between stress and anxiety, and how to practice stress management skills. Focused on identifying triggers to stress, deep breathing, and positive visualization. The patient learned to practice positive self-talk when worried about failing. We explored the anxiety regarding failing, fear of judgment from others, and becoming sick again. Utilized the CBT technique of examining the evidence for and against cognitive distortions.

Session 7: The patient's mood was noticeably improved. The patient verbalized feeling more relaxed and goal directed. The patient continued with the behavioral activation assignment of walking daily. The patient processed thoughts regarding negative feedback from friends and family in the past, and how this negatively impacted self-esteem. We focused on improving self-compassion and self-acceptance and discussed setting healthy interpersonal boundaries.

We utilized CBT to continue to challenge negative automatic thoughts and core schemas which were based on past feedback and experiences. The patient worked on identifying internal and external resources for overcoming depression and anxiety. (PHQ=6, GAD=7)

Session 8: We continued to discuss the relationship between thoughts, feelings and behaviors and the cognitive triad in CBT [7]. We processed how criticism can contribute to an individual feeling stuck in self-defeat, and how to develop more positive self-talk. Addressed the patient's "all or none" thinking and negative self-labels. The patient continued to work through the negative automatic thought of "I am a failure." The patient was able to reframe this to "I am trying my best each day to improve myself."

Session 9: The patient's mood and affect continued to improve. The patient purchased a planner and started to schedule daily activities. The patient continued to challenge negative and self-defeating thoughts and developed more positive and compassionate self-talk. The patient made substantial progress during the course of therapy and reported confidence in utilizing the CBT skills. The patient's improvement was praised, and we processed discharge from therapy and agreed to schedule follow up sessions on an as needed basis. (PHQ=4, GAD=7)

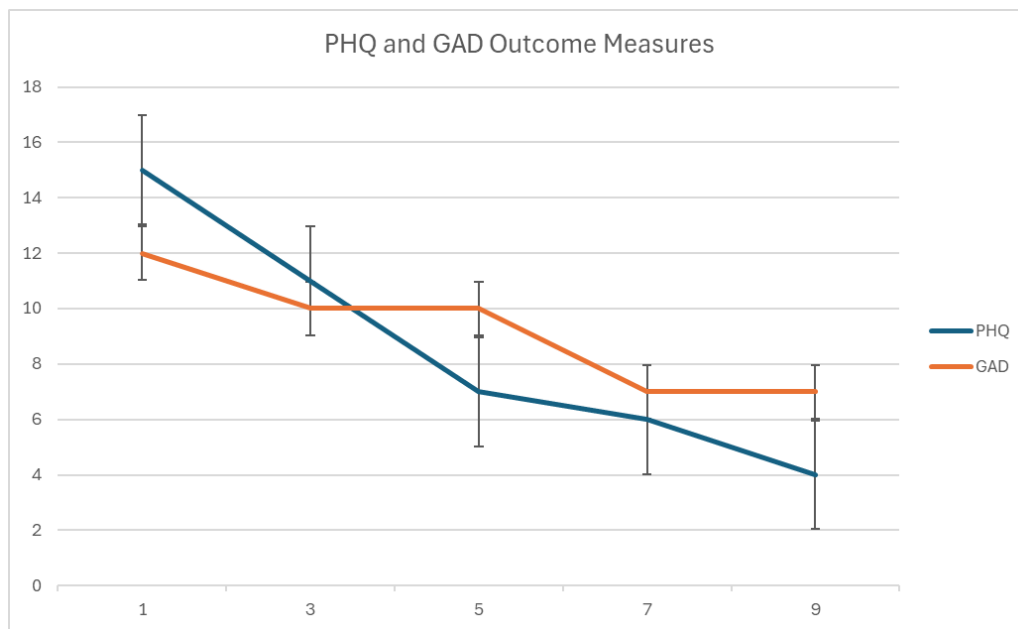


FIG. 1.

3. Discussion

The PHQ and GAD outcome measures were reviewed with the patient on a biweekly basis. There was a significant decrease from the beginning of treatment with the PHQ=15 (intake) to PHQ=4 (discharge), and GAD=12 (intake) to GAD=7 (discharge) (see FIG. 1). The results of this case study and outcome measures indicate that ICBT was a highly effective treatment for this patient. The nine sessions of ICBT included education about the CBT model of therapy, identifying dysfunctional automatic thoughts, core schemas, and underlying cognitive distortions. The CBT interventions of examining the evidence, cognitive reframing, behavioral activation, improving self-esteem and self-compassion, and keeping a thought record were utilized during treatment. The ICBT treatment demonstrated a high level of effectiveness for the patient, and no further incidences of costochondritis were reported during treatment. There was a significant decline in anxiety and depression at the time of discharge.

4. Conclusion

This case study provides valuable insights into the successful application of ICBT in addressing anxiety with comorbid costochondritis symptoms and depression. The patient demonstrated a significant decline in symptoms with nine sessions. The positive outcomes of this case align with the existing research supporting the efficacy of ICBT in the treatment of anxiety and depression [12,13]. Individual responses to ICBT may vary depending on the therapeutic alliance, the patient's severity of symptoms, mental status, medical comorbidities, and adherence to treatment. This case study demonstrates the potential benefits of ICBT; however, further research is needed to explore the potential of technology-based interventions to deliver CBT efficiently and with greater access to maximize benefits for a wide range of patients. This is particularly relevant for countries where there is limited access to mental health services.

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