Internet delivered Cognitive-Behavioral Therapy For Anxiety Disorders

A Thesis Submitted for the partial fulfillment of the M.D. degree in Psychiatry

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INTRODUCTION

Anxiety Disorders affect about 40 million adults age 18 years and older (about 18%) in a given year, causing them to be filled with fearfulness and uncertainty. Unlike the relatively mild, brief anxiety caused by a stressful event, anxiety disorders last at least 6 months and can get worse if they are not treated. Moreover, anxiety disorders commonly occur along with other mental or physical illnesses, including alcohol or substance abuse. Generally, each anxiety disorder has different symptoms, but all the symptoms cluster around excessive, irrational fear and dread. ***(Gorman, 2003)***

According to the DSM-IV in 1994, the anxiety disorders are:

- Panic disorder
- Obsessive-compulsive disorder (OCD),
- Post-traumatic stress disorder (PTSD),
- Social phobia (or social anxiety disorder),
- Specific phobias, and
- Generalized anxiety disorder (GAD).

Effective therapies for anxiety disorders are available, and research is uncovering new treatments that can help most people with anxiety disorders lead productive, fulfilling lives. In general, anxiety disorders are treated with medication, specific types of psychotherapy, or both. Treatment choices depend on the problem and the person's preference. ***(Edelman & Blashki, 2007)***

The most extensively studied psychotherapy for anxiety is cognitive behavioral therapy. This therapy teaches patients to substitute positive thoughts for anxiety-provoking ones. It usually involves 6 to 12 individual sessions at weekly intervals. Patients record their thoughts and feelings in diaries, noting situations in which they feel anxious and behaviors that relieve the anxiety. They also role-play scenes and rehearse responses to anxiety. An alternative approach to cognitive behavioral therapy is applied relaxation therapy, in which the patient imagines calming situations to induce muscular and mental relaxation. ***(Fricchione, 2004)***

Above all, cognitive-behavioral therapy (CBT) has proven very useful in treating anxiety disorders. The cognitive reframing part helps people change the thinking patterns that support their fears, and the behavioral part helps people change the way they react to anxiety-provoking situations. CBT is undertaken when people decide they are ready for it and with their permission and cooperation. To be effective, the therapy must be directed at the person's specific anxieties and must be tailored to his or her needs. There are no side effects other than the discomfort of temporarily increased anxiety. CBT or behavioral therapy often lasts about 12 weeks. It may be conducted individually or with a group of people who have similar problems. Often "homework" is assigned for participants to complete between sessions. Medication can be combined with psychotherapy for specific anxiety disorders, and this is the best treatment approach for many people. ***(Gorman, 2003)***

Nowadays, computer-mediated communication (CMC) offers its users a reduced-cues environment, a chosen degree of identifiably to

others, and a forum to express facets of one's self. Previous research suggests CMC is more appealing than traditional forms of communication to certain individuals whose desires to be sociable with others are prohibited by social inhibitions. ***(Zachary et al, 2007)***

The term "E-therapy", is used to describe the process of interacting with a therapist online in ongoing conversations over time when the client and counselor are in separate or remote locations and the Internet is utilized to communicate with each other. E-therapy is not considered psychotherapy or psychological counseling in the standard sense since it does not presume to diagnose or treat mental or medical disorders. ***(Manhal-Baugus, 2001)***

The computerised form of CBT in which the user interacts with computer software (either on a PC, or sometimes via a voice-activated phone service), instead of face-to-face with a therapist, is known as "Cyber counseling". Computerised CBT is not a replacement for face-to-face therapy but can provide an option for patients, especially in light of the fact that there are not always therapists available, or the cost can be prohibitive. Internet-delived CBT is clinically proven and drug-free. In this respect, CCBT (especially if delivered online) can be a good option. It has been proven to be effective in Randomised Controlled Trials, and in February 2006 the UK's National Institute of Health and Clinical Excellence (NICE) recommended that CCBT should be made available for use within the NHS across England and Wales. A new Government initiative for tackling Mental Health issues, Choices In Mental Health has recently been launched by the Care Services Improvement Partnership. This confirms Primary Care Trust (PCT) responsibilities in delivering the NICE Technology Appraisal on CCBT. National Director for Mental

Health, Professor Louis Appleby CBE has confirmed that by 31st March 2007 PCTs should have ST Solutions' "FearFighter" and Ultrasis' "Beating the Blues" CCBT products in place and the NICE Guidelines should be met. ***(Proudfoot et al, 2003)***

As many sufferers from anxiety disorders cannot get to suitable therapists, routine aspects of therapy were delegated to internet-accessed computer-aided self-help with or without exposure instructions. Anxiety disorders referrals were randomized to computer-aided self-help via the internet at home. At the end of treatment, computer-aided CBT self-help at home via the internet plus brief live helpline support was effective with or without exposure instructions. ***(Schneider et al, 2005)***

Results demonstrate that computerized interactive multimedia cognitive-behavioural techniques under minimal clinical supervision can bring about improvements in anxiety, as well as in work and social adjustment, with and without pharmacotherapy. ***(Proudfoot et al, 2003)***

RATIONALE OF THE STUDY

- The needs demanding to widen the scope of applying cognitive-behavioral therapy techniques for anxiety disorders patients.

- The emerging of new technologies creating alternative means for providing psychotherapies for patients.

Aim of the study

1- To review the current practice of using the Internet to provide CBT for anxiety disorders.

2- To demonstrate the advantages, disadvantages & the implications of I-CBT for anxiety disorders.

3- To enlighten the necessary skills to practice I-CBT.

4- To identify a patient's suitability for I-CBT.

5- To assess the relative effectiveness of I-CBT in treating anxiety disorders.

6- To explore the feasibility of clinic & I-CBT for anxiety disorders.

7- To evaluate the potential of applying I-CBT in a sample of Egyptian patients suffering from anxiety disorders.

8- To conclude the practical, ethical, & legal issues of I-CBT.

SUBJECTS & METHODS

Pilot Study

- The study proper was preceded by a pilot study for three months duration in the period from the beginning of January 2008 to the end of March 2008.

- Objectives of the pilot study were:
  - To assess the applicability of the predetermined sample size based on:
    - Evaluation of the feasibility of the design to identify patients with anxiety disorders, the number of patients

who would fulfill the inclusion criteria and the potential selection bias during recruitment.

- Identification of the percentage of patients who are computer literate, have access to the internet and/or email and can use the internet regularly for CBT administration.
- Identification of the degree of compliance with treatment.

- To evaluate the relative ease of administration of the tools.
- To assess the applicability of administration of CBT through the internet and identify any potential limitations during its administration.

❖ Design of the pilot study:

- An initial questionnaire was carried on for patients visiting the outpatient clinic to study the degree of computer and internet literacy.
- An initial survey was then carried on to identify all patients with a primary diagnosis of anxiety disorder. These patients were further subjected to a detailed assessment to identify those who fulfill the inclusion criteria for this study. All patients suitable to be included in the study were offered the chance to participate in this study after explaining the methods of treatment in details, including the potential benefits and limitations. Those who agree to participate were asked to sign a written consent.
- All legible patients willing to participate were divided into 2 groups according to their degree of computer literacy.
  a. Group A: include patients who are more familial with computer and internet use
  b. Group B: include patients who are less computer and internet friendly.

Group A had CBT delivered through internet means.

Group B had CBT delivered through standard clinical sessions.

- The degree of compliance with treatment in both groups was evaluated. The number of patients who successively completed their CBT sessions will be calculated.
- The patients were assessed before and after completion of their CBT sessions for the degree of improvement of symptoms, quality of life as well as the standard questionnaires and inventories
- The psychometric properties of the questionnaires and inventories for the study were evaluation by measuring the reliability and the internal validity

❖ **Results of the pilot study:**

A- Applicability of the predetermined sample size:

The initial questionnaire was carried on 80 patients attending the outpatient clinic. The questionnaire identified that 45% of these patients either have a regular access to both a computer and internet connection. However, only 17.5% had basic knowledge of the use of the computer and the internet and only 15% of patients had an email account. Interestingly enough all "internet-literate" patients felt that internet therapy would be either superior or equal to standard clinical sessions and were eager enough to initiate therapy through the internet.

The mean age of the patients in the initial questionnaire was 42.5 years ± 19.3 (range, 19 – 64). The mean age of the patients who were "computer and internet literate" was much younger (25.3 ± 11.1) than

those who were “computer and internet illiterate” (49.3 ± 12.1). The difference in age between both groups was statistically significant (p = 0.001). Of the “computer literate” group, 54% were females and 46% were males. Of the “computer illiterate” group, 50% were males. The sex difference between both groups was statistically insignificant (p = 0.67).

The initial survey identified 24 patients with a primary diagnosis of anxiety disorder. Of the 24 patients, only 19 fulfilled the inclusion criteria for the study. All 19 patients were offered the chance to participate in this pilot study. Only 10 patients agreed to participate in the study. Of the 10 patients, 6 patients had CBT done through standard clinical sessions. The remaining 4 patients had CBT delivered through the internet sessions.

B- Administration of CBT

CBT sessions were successively done in both groups. Of the 10 patients, one patient in each group did not complete his CBT sessions. All remaining 8 patients received their full course of CBT.

C- Psychometric properties

Analyses were conducted after the CBT and the questionnaire had been completed for 10 study patients; data from both treatment groups were combined for analysis. With a sample of 10 and an assumed internal consistency reliability coefficient of 0.70, the 2-sided 95% CI for Cronbach α would range from 0.56 to 0.79, demonstrating adequate precision. The internal-consistency reliability for the subscales was estimated by Cronbach α. There were no obvious differences when the

analyses were conducted stratified by treatment group in this small sample.

The study proper

1- Participants:

a. Participants are to be recruited via the Centre for Psychiatric Disorders at Ain Shams Hospitals.
b. Participants should meet DSM-IV (APA 1994) criteria for Anxiety Disorders.
c. *Inclusion criteria for the study included:*
    i. Adults ages 18 & over with a primary diagnosis of Anxiety disorder.
    ii. Written consent to participate.
    iii. Baseline knowledge of computer & internet usage.
d. *Exclusion criteria included:*
    i. A primary diagnosis of any disorder other than Anxiety disorders.
    ii. Diagnosis of Mental Retardation or a Pervasive Developmental Disorder.
    iii. Diagnosis of a psychiatric disorder due to a medical condition.
    iv. Current diagnosis of substance dependency (within the past 6 months).
    v. Acute suicidal potential.
e. The study will be performed on 40 patients.

2- Procedure:

a. Participants will be classified as group A & group B.
b. Each group will consist of 20 patients.
c. Participants of group A should receive eight sessions for 45 minutes over 8 week's duration in the form of cognitive-behavioral treatment including techniques specific & suitable to each particular diagnosis.
d. Participants of group B will receive similar techniques over the same duration specified for their diagnosis via the means of internet & emails. Support via telephone will be added when needed.
e. Inventories & scales for anxiety symptoms & disorders will be used as measures for both groups' pre & post study to assess reduction of symptoms & criteria of improvement.

3- Treatment:

Various techniques of Cognitive-Behavioral therapy will be implemented according to each specific diagnosis of anxiety disorders. Examples include:

a. Self monitoring.
b. Challenging irrational beliefs.
c. Thought stopping techniques.
d. Cognitive rehearsal.
e. Homework assignments.
f. Breathing & muscle relaxation training.
g. Assertiveness training.
h. Behavioral experiments.
i. Exposure therapy (in-vivo, imaginable).

4- Measures for outcome variables:

a. Beck Depression Inventory (BDI-II).
b. Hamilton Anxiety Rating Scale (HAM-A)
c. Quality of life questionnaire (QLQ).
d. Beck Anxiety Inventory (BAI).
e. Penn State Worry Questionnaire (PSWQ).
f. Liebowitz Social Anxiety Scale (LSAS).
g. Yale-Brown Obsessive Compulsive Scale (Y-BOCS)

5- Study Design:

a. The study will be performed as a prospective randomized controlled interventional study.
b. The outcome variables as defined by reduction of anxiety symptoms & improvement of the quality of life for the patients will be analyzed statistically using paired *t*-test & analysis of variants (ANOVA).
c. The statistical differences between both groups will be calculated.

6- **Follow up:**

a. For reduction of anxiety symptoms & improved quality of life.
b. Will be conducted 6 months after the last session of CBT.
c. Using outcome inventories & scales.

References

1- **Schneider AJ, Mataix-Cols D, and Marks MI, (2005):**
Internet-guided self-help with or without exposure therapy for phobic and panic disorders. *Psychotherapy and Psychosomatics J* 74(2):154-164.

2- **Edelman S, & Blashki G, (2007):**
Managing anxious patients: cognitive behavior therapy in general practice. *Aust Fam Physician J* 36(4):212-4.

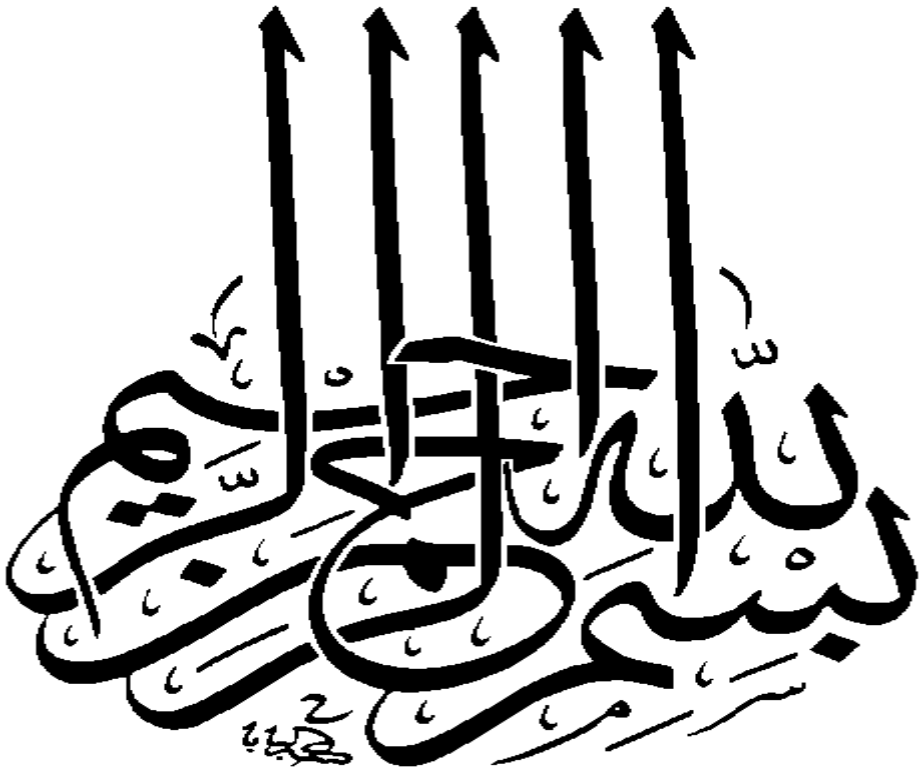
3- **Gorman JM, (2003):**
Treating generalized anxiety disorder. *J Clin Psychiatry,* 64(1): 2:24.

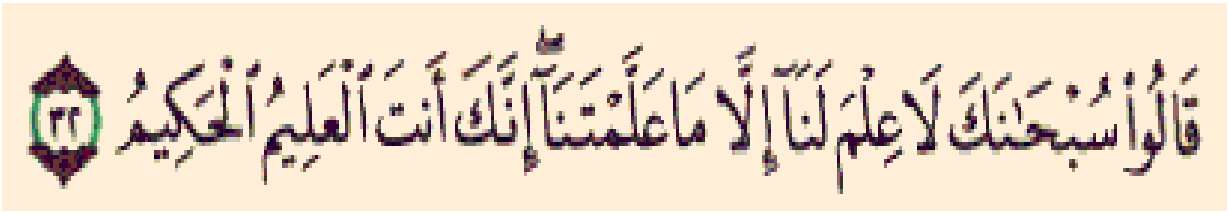
4- **Fricchione G, (2004):**
Generalized Anxiety Disorder**.** *New Eng Med J* (7)351: 675-682**.**

5- **Manhal-Baugus M, (2001):**
E-Therapy: Practical, Ethical, and Legal Issues. *CyberPsychology & Behavior J* 4(5): 551 -563**.**

6- **Proudfoot J, Goldberg D, Mann A, Everitt B, Marks I, & Gray JA, (2003):**
Computerized, interactive, multimedia cognitive-behavioral program for anxiety and depression in general practice*. Psychol Med J* 33(2):191-6.

7- **Zachary PB, Miranda S, & Sheeks BA, (2007):**
Shyness, Sociability, and the Use of Computer-Mediated Communication in Relationship Development. *CyberPsychology & Behavior J* 10(1): 64 -70.





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