

Cyber self-help

Computer-based therapy can be a valuable addition to traditional therapy.

John Luo, MD

Assistant professor of psychiatry UCLA Neuropsychiatric Institute Los Angeles, CA

Patients who dread the stigma of in-person psychotherapy are substituting traditional “couch trips” with computer sessions.

Computer-based therapy programs, either online or on CD-ROM or DVD, have become popular adjuncts to traditional therapy for patients with mild depression or anxiety. For example, more than 17,000 users visited the [MoodGYM](#) site within 6 months, and more than 20% of these users stayed on the site for 16 minutes or more.¹

Computerized psychotherapy has demonstrated numerous benefits in clinical studies and may reduce the time a therapist needs to spend with the patient.

How computer therapy works

Computer-based psychotherapy has its roots in the ELIZA² program developed in 1966 to study natural language communication between man and machine.³ Users simply write a normal sentence, and ELIZA responds appropriately.

The original ELIZA program, which works via text parsing, is limited in its ability to respond. For example, a user who types in “I feel depressed every day” may repeatedly get a response such as “Are you sure?”

Today’s programs are more sophisticated, utilizing specialized heuristic techniques and semantic databases to produce more natural responses to various expressions. Some programs even have audio and video features.

Most computer-based therapy programs employ a cognitive-behavioral treatment model, similar to that used in print workbooks. Several key concepts are presented, such as the relationship between automatic thoughts and feelings; techniques to control these thoughts are highlighted.

Many programs also use common scales to determine depression or anxiety ratings, thus helping the user choose an appropriate module.

ADVANTAGES OF COMPUTER PSYCHOTHERAPY

Computer-based programs offer patients advantages such as:

- **Increased comfort.** Without the social cues and dynamics that characterize traditional psychotherapy, some patients may disclose feelings online they would feel uncomfortable sharing in person. Online therapy also is immune to the fatigue, illness, boredom, or exploitation that may occur in a relationship with a therapist.
- **Flexibility.** Users can work the program at home, at their convenience and pace. Responses to exercises also can be stored for future reference.
- **Speed of care.** Treatment is accessed with minimal delay.
- **A greater sense of empowerment.** Whereas patients in traditional therapy often feel dependent upon their therapist for direction, computer-based therapy encourages users to take a more active learning role by choosing

where to click and how to respond. Patients feel more in control because they are helping themselves.

- **Cost-effectiveness.** Although price varies, some programs cost about the same as one in-person session. Most programs are sold directly to medical practices.

DISADVANTAGES

Some patients will not benefit from self-help. Those with moderate to severe depression or anxiety may be unable to focus on the material, and inability to navigate the program can increase the patient's despondency or anxiety. Personality type also may predict lack of response to self-help treatment.⁴

Patients with poor eyesight, deficient reading skills, and limited computer proficiency are not good candidates for online or CD-ROM-based therapy. Also, some computers may not be sufficiently powerful to run some programs, and not all Internet connections are fast enough to post multimedia features.

CLINICAL EFFECTIVENESS

In 1990, Selmi et al⁵ compared a six-session, cognitive-behavioral therapy (CBT) course in CD-ROM with six therapist-administered CBT sessions and a control group. An experimenter assisted with computer operation, and both courses followed an identical treatment model and required homework. Patients in both treatment groups demonstrated significant improvement based on Beck Depression Inventory and Automatic Thoughts Questionnaire scores.

Each group comprised only 12 patients, most of whom were young and well-educated. Still, Selmi et al provided initial evidence of computer-based therapy's effectiveness and these findings have been replicated in subsequent studies. A meta-analysis of 16 studies⁶ found that CD-ROM-based and therapist-administered CBT work equally well in clinically depressed and anxious outpatients. More studies are needed to determine optimal levels of therapist involvement.

More research also is needed to gauge the effectiveness of Internet-based therapy programs (Table). Clarke et al randomized 144 out of 299 patients in a nonprofit health maintenance organization to online therapy with the Overcoming Depression on the Internet (ODIN) program or to treatment as usual. The study demonstrated no effect for ODIN, perhaps because of severity of depression or infrequent access to the site.⁷

Table
Samples of computer-based psychotherapy programs

Beating the Blues http://www.ultrasis.co.uk/products/btb/btb.html
BT STEPS http://www.healthtechsys.com/ivr/btsteps/btsteps.html
Behavioral Self-Control
Program for Windows http://www.behaviortherapy.com/software.htm#software
Calipso http://www.calipso.co.uk/mainframe.htm
FearFighter http://www.fearfighter.com
Good Days Ahead http://www.mindstreet.com
MoodGYM http://moodgym.anu.edu.au
Overcoming Depression http://www.maiw.com/main.html
Overcoming Depression on the Internet (ODIN) https://www.kpchr.org/feelbetter/

If you have any questions about these products or comments about Psyber Psychiatry, click here to contact Dr. Luo or send an e-mail to Current.Psychiatry@dowdenhealth.com.

Disclosure

Dr. Luo reports no financial relationship with any company whose products are mentioned in this article. The opinions expressed by Dr. Luo in this column are his own and do not necessarily reflect those of CURRENT PSYCHIATRY.

REFERENCES

1. Christensen H, Griffiths K, Korten A. Web-based cognitive behavior therapy: analysis of site usage and changes in depression and anxiety scores. *J Med Internet Res* 2002;4(1):e3. Available at: <http://www.jmir.org/2002/1/e3/index.htm>. Accessed July 1, 2003.
2. ELIZA. Available at: <http://www-ai.ijs.si/eliza/eliza.html>. Accessed July 1, 2003.
3. ELIZA- a computer program for the study of natural language communication between man and machine. *Communications of the Association for Computing Machinery* 1966;9(1):35–6. Available at: <http://i5.nyu.edu/~mm64/x52.9265/january1966.html>. Accessed July 1, 2003.
4. Beutler LE, Engle D, Mohr D, et al. Predictors of differential response to cognitive, experiential, and self-directed psychotherapeutic procedures. *J Consult Clin Psychol* 1991;59:333–40.
5. Selmi PM, Klein MH, Greist JH, et al. Computer-administered cognitive-behavioral therapy for depression. *Am J Psychiatry* 1990;147:51–6.
6. Kaltenthaler E, Shackley P, Stevens K, et al. A systematic review and economic evaluation of computerised cognitive behaviour therapy for depression and anxiety. *Health Technol Assess* 2002;6(22):1–89.
7. Clarke G, Reid E, Eubanks D, et al. Overcoming Depression on the Internet (ODIN): a randomized trial of an Internet depression skills intervention program. *J Med Internet Res* 2002;4(3):e14. Available at: <http://www.jmir.org/2002/3/e14/index.htm>. Accessed July 1, 2003.