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Psyber Psychiatry

In a virtual world, games can be therapeutic

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Starting this month, *Current Psychiatry's* Web site **(http://www.currentpsychiatry.com)** will feature "Psyber Psychiatry," a monthly column by John Luo, MD. From personal digital assistants to voice-recognition software, Dr. Luo will get you up-to-speed on cyber technologies of growing importance in psychiatric practice.

Dr. Luo's first column is published here and on our Web site. For future columns, visit www.currentpsychiatry.com.

At UC Davis, Dr. Luo is assistant clinical professor of psychiatry and director of psychiatric informatics, a new specialty that functions at the crossroads of clinical medicine and computer science. If you have questions or comments about "Psyber Psychiatry," you can contact Dr. Luo c/o pete.kelly@dowdenhealth.com

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Many of us—and our patients—enjoy computer games, and at first glance computer gaming and psychiatry appear to have little in common. Yet computer gaming has spurred the growth of cyber technology by demanding high-level capabilities in computer hardware and software. Games initially were developed and played in two dimensions, but—with improved graphic cards and software rendering engines—they can now be three-dimensional. Some games are realistic enough to stimulate nausea and vertigo.

Overexposure to especially graphic computer games has been blamed for causing violent behavior in some individuals.[1] Jeanne B. Funk, PhD, of the University of Toledo department of psychology, testified before the U.S. Senate Commerce Committee regarding the impact of interactive violence on children.[2]

Avatar psychotherapy. Some computer games also have therapeutic properties, however. John Suler, PhD, of the psychology department at Rider University (Lawrenceville, NJ), writes about "Avatar psychotherapy," in which an avatar—a personal manifestation in a virtual world—can be used to facilitate psychotherapy.[3] Such an environment can permit role-playing, enable fantasies, and allow psychiatrists to explore transference and countertransference issues.

"The Sims," a popular people simulator game (http://thesims.ea.com/), has also been considered useful for therapy as a "technology of self."[4] One resident physician at the UC Davis psychiatry department uses this game in therapy with adolescents to facilitate expression of family dynamics. Although this technology does not replace traditional psychotherapy, it clearly augments and provides unique benefits.

Virtual fears. In 1995, members of the Georgia Tech computer science department and Emory University department of psychiatry in Atlanta created the Graphics Visualization & Usability Center,[5] a project using virtual reality and exposure therapy. Patients wear a head-mounted display and other devices to track their movements in the virtual world. With virtual reality technology, patients can be exposed to a feared stimulus in a safe, computer-generated environment.

This technology has been used to treat acrophobia, fear of flying, and posttraumatic stress disorder. Its benefits include cost effectiveness, high patient acceptance, and effective therapy for patients with imagination deficits.

The developers of virtrual reality therapy have now formed a company called Virtually Better to provide this technology to other therapists.[6] Although the technology currently is not applicable to the individual psychiatrist, this tool is expected to be widely available in the coming years with ever-improving and more affordable computing power.

Telemedicine. Virtual reality is also being used to link providers and patients through telemedicine or video conferencing. In clinical practice, telemedicine offers many advantages, such as the ability to reach patients in wide geographic areas, cost effectiveness, and linking of specialists to primary providers.[7] Patients appreciate traveling less and are quite satisfied with their virtual visits. In fact, patients with schizophrenia prefer telemedicine to real office visits.[8]

One of telemedicine's downsides has been its expense, requiring dedicated ISDN lines and specialized equipment. Other issues include licensing, confidentiality, reimbursement, and adherence to practice guidelines.[9] For readers interested in this technology, the American Telemedicine Association Web site (www.americantelemed.org) is a good starting point. As high-speed Internet access becomes more widely available, telemedicine is poised to overtake e-mail as the next communication tool.

> Virtual reality technology is rapidly improving with new hardware and software, and its cost is diminishing fast

Summary. These virtual methods are still considered quite novel and are not yet part of mainstream psychiatry. The technology is not quite mature but is rapidly improving with new hardware and software developments. Its cost, although a barrier today, is diminishing fast. Patient acceptance is likely to grow over time among our increasingly technology-savvy public. With Internet connectivity and improved visual and audio capabilities of computers at affordable prices, virtual reality could soon play a significant new role in psychiatric care.

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