Time to log off New diagnostic criteria for problematic Internet use

The MOUSE screening tool helps identify five behaviors that spell too many hours online

Dawn Heron, MD
Resident physician

Nathan A. Shapira, MD, PhD
Assistant professor

Department of Psychiatry
University of Florida, Gainesville

Many psychiatrists diagnose problematic Internet use with schemas based on substance use disorders and pathologic gambling. These predefined diagnoses, however, may lead to premature conclusions and prevent you from fully exploring other treatable diagnoses.

We propose a screening tool called "MOUSE" and diagnostic criteria for problematic Internet use, which we developed from research by our group and others. This article discusses the new criteria and answers three questions:

- How does problematic Internet use present?
- Is it an addiction or an impulse control disorder?
- How can we help those afflicted with this problem?

When Internet use goes over the line

Recognizing problematic Internet use is difficult because the Internet can serve as a tool in nearly every aspect of our lives—communication, shopping, business, travel, research, entertainment, and more. The evidence suggests that Internet use becomes a behavior disorder when:

- an individual loses the ability to control his or her use and begins to suffer distress and impaired daily function[1]

HARMFUL EFFECTS OF PROBLEMATIC INTERNET USE

Relationships—particularly marriages but also parent-child relationships, dating relationships, and close friendships—appear to suffer the greatest harm. At least one-half of "Internet addicts" (53%) report that their Internet use has caused serious relationship problems.

School. Academic problems are common; one study showed 58% of students blamed Internet use for a drop in grades, missed classes, declining study habits, or being placed on probation.

Workplace. Many executives—55% in one study—complain that time spent on the Internet for non-business purposes reduces their employees' effectiveness.

Health. Some users spend 40 to 80 hours per week online, and single sessions can last up to 20 hours. Lack of sleep results in fatigue, decreased exercise, and decreased immunity. Sitting in front of the computer for hours also increases the risk of carpal tunnel syndrome, eye strain, and back pain.

Other addictions. The more time spent on the Internet, the greater the user's risk of exposure to other addictive activities, such as online gambling and sexual solicitations. This risk is particularly concerning in children and adolescents.

Source: Young KS. *Innovations in Clin Pract* 1999;17:19-31.

- and employment and relationships are jeopardized by the hours spent online[2] (*Box*).

Case: Computer gamer out of control

Mr. A is 32 and in his fourth year of college. His psychiatric history includes obsessive-compulsive disorder (OCD), paraphilia not otherwise specified, and bipolar disorder, most recently depressed in partial remission. He has had only one manic episode 10 years ago and took lithium briefly. He experienced pleasure from masturbating in public, but his paraphilia did not meet criteria for voyeurism as he did not want to be seen. He engaged in this behavior from ages 16 to 18 and found it distressing.

He is taking no medications. The only clinically signif-

icant family history is his father's apparent OCD, undiagnosed and untreated.

Mr. A's excessive computer use started in high school, when he played computer games to the point where his grades suffered. He began using the Internet at age 28, just before starting college, and spent most of his time online playing multi-player, video/strategy games.

Mr. A underestimates the time he spends online at 24 hours per week, including 21 hours in nonessential use and 3 hours in essential use (required for job or school). His actual average is 35.9 hours per week—nearly equivalent to a full-time job. He divides his nonessential use among various online activities, mostly related to playing computer games:

- 35% in chat forums, communicating with gaming partners he has never met
- 25% in multi-player, video/strategy games
- 15% using e-mail
- and lesser times surfing the Web (5%), transferring files (5%), viewing pornography (5%), shopping (5%), listening to music (3%), and selling (2%).

He reports rising tension before logging on and relief after doing so. He admits to using the Internet for longer periods than intended and especially when emotionally stressed. He knows his behavior has hurt him academically, and he has tried unsuccessfully to cut down or stop his Internet use.

Internet overuse: An 'addiction'?

Ivan Goldberg introduced the idea of Internet addiction in 1995 by posting factitious "diagnostic criteria" on a Web site as a joke.[3] He was surprised at the overwhelming response he received from persons whose Internet use was interfering with their lives. The first case reports were soon published.[4,5]

Initially, excessive Internet use was called an "addiction"—implying a disorder similar to substance dependence. Recently, however, Internet overuse has come to be viewed as more closely resembling an impulse control disorder.[5-8] Shapira et al studied 20 subjects with problematic Internet use, and all met DSM-IV criteria for an impulse control disorder, not otherwise specified. Three also met criteria for obsessive-compulsive disorder.[1]

As with other impulse control disorders (such as eating disorders and pathologic gambling), researchers have noticed increased depression associated with pathologic Internet use.[8]

Diagnostic criteria. Although Mr. A's comorbid psychiatric illnesses complicate his presentation, his behavior clearly could be described as representing an impulse control disorder. His case also meets our proposed criteria for problematic Internet use (*Table 1*),[9] which we define as:

- uncontrollable
- markedly distressing, time-consuming, or resulting in social, occupational, or financial difficulties
- and not solely present during mania or hypomania.

Teasing out comorbid disorders

As in Mr. A's case, Internet overuse can serve as an expression of and a conduit for other psychiatric illnesses. Studies have found high rates of comorbidity with mood and anxiety disorders, social phobias, attention-deficit disorder with or without hyperactivity, paraphilias, insomnia, pathologic gambling, and substance use disorders.[10-12]

Although some researchers feel that the many comorbid and complicating factors cannot be teased out,[13] most agree that compulsive Internet use or overuse can have adverse consequences and that more research is needed.

A predisposition? Are "Internet addicts" predisposed to or susceptible to Internet overuse? Researchers are exploring whether Internet overuse causes or is an effect of psychiatric illness.

Shapira et al[1,14] found at least one psychiatric condition that predated the development of Internet overuse in 20 subjects. In a similar study of 21 subjects with excessive computer use, Black[11] found:

- 33% had a mood disorder
- 38% had a substance use disorder
- 19% had an anxiety disorder
- 52% met criteria for at least one personality disorder.

On average, these 41 subjects were in their 20s and 30s and reported having problems with Internet use for about 3 years. They spent an average of 28 hours per week online for pleasure or recreation, and many experienced emotional dis-

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Table 1

PROPOSED DIAGNOSTIC CRITERIA FOR PROBLEMATIC INTERNET USE

Maladaptive preoccupation with Internet use, as indicated by at least one of the following:

- Preoccupations with Internet use that are experienced as irresistible.
- Excessive use of the Internet for longer periods of time than planned.

A. Internet use or the preoccupation with its use causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

B. Excessive Internet use does not occur exclusively during periods of hypomania or mania and is not better accounted for by other axis I disorders.

Source: Reprinted with permission from an article by Shapira et al[9] that has been accepted for publication in *Depression and Anxiety*. © Copyright 2003 John Wiley & Sons.

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tress, social impairment, and social, occupational, or financial difficulties.[1,11]

Isolation and depression. Increasing Internet use and withdrawal from family activities has been associated with increased depression and loneliness; Kraut et al[15] hypothesized that the Internet use caused the depression. Pratarelli et al[16] noted a maladaptive cycle in some persons; the more isolated they feel, the more they use the Internet and increase their social withdrawal.

In a survey of college students, individuals with "Internet addiction" were found to:

- have obsessive characteristics
- prefer online interactions to real-life interactions
- use the Internet "to feel better," alleviate depression, and become sexually aroused.[16]

Personality traits. In another study, Orzack[12] found that subjects viewed the computer as a means to satisfy, induce excitement, and reduce tension or induce relief. Six personality

5 SCREENING QUESTIONS FOR PROBLEMATIC INTERNET USE

More than intended time spent online?

Other responsibilities or activities neglected?

Unsuccessful attempts to cut down?

Significant relationship discord due to use?

Excessive thoughts or anxiety when not online?

traits were identified as strong predictors of "Internet addiction disorder:"
- boredom
- private self-consciousness
- loneliness
- social anxiety
- shyness
- and low self-esteem.

Diagnosing Internet overuse

Screening. During any psychiatric interview, ask patients how they spend their free time or what they most enjoy doing. If patients say they spend hours on the Internet or their use

appears to usurp other activities, five questions—easily recalled by the mnemonic MOUSE—can help you screen for problematic Internet use (*Table 2*).

History. Typically, persons with problematic Internet use spend time in one Internet domain, such as chat rooms, interactive games, news groups, or search engines.[17] Ask which application they use, how many hours they use it, how they rank the importance of various applications, and what they like about their preferred application.

To determine how the Internet may alter the patient's moods, ask how he or she feels while online as opposed to offline. Keeping an hourly log and a "feelings diary" may help the patient sort through his or her emotions.[17]

Often patients use the Internet to escape from dissatisfaction or disappointment or to counteract a sense of personal inadequacy.[17] They tend to take pride in their computer skills[2] and incorporate them into their daily lives in many ways, allowing them to rationalize their excessive Internet use ("I'm using it for work, academics, travel, research, etc.").

Comorbidities. Given the high incidence of psychiatric comorbidity,[1] it is important to complete a thorough psychiatric evaluation and treat any underlying illness. Whether the illness is primary or comorbid, it is likely exacerbating the symptoms of problematic Internet use.

Changing problematic behaviors

Psychotherapy. Once you find the motives and possible causes of Internet overuse, what is the best form of treatment? This question warrants further study, but cognitive-behavioral therapy (CBT) is the primary treatment at this time.

The goal of CBT is for patients to disrupt their problematic computer use and reconstruct their routines with other activities. They can:
- use external timers to keep track of time online
- set goals of brief, frequent sessions online
- carry cards listing the destructive effects of their Internet use and ranking other activities they have neglected.[17]

Using emotion journals or mood monitoring forms may help the patient discover which dysfunctional thoughts and feelings are triggering excessive Internet use.[12] Support groups and family therapy can help repair damaged relationships and engage friends and family in the treatment plan.

Specific diagnostic criteria can help clinicians identify problematic Internet use. Comorbid psychiatric disorders often contribute to patients' computer-using behavior. Cognitive-behavioral therapy can help motivated patients reduce their computer use, restructure their time, and build healthier relationships.

Bottom Line

🎁 Related resources

▶ Computer Addiction Services. Maressa Hecht Orzack, PhD.
www.computeraddiction.com; (617) 855-2908.

▶ Center for Online Addiction. Kimberly S. Young, PhD.
www.netaddiction.com; (877) 292-3737.

Drug therapy. No studies have looked at drug therapy for problematic Internet use, beyond treating comorbid psychiatric illnesses.

Treatment declined. Mr. A declined treatment for his problematic Internet use. As in many other psychiatric illnesses, insight into impulse control disorders tends to be limited. We can address the problem directly and offer to help patients change their online behaviors, but we cannot force them into treatment if they are not endangering themselves or others.

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