INTERNET ADDICTION TEST (IAT)

Dr. Kimberly S. Young
Internet Addiction Test
By Dr. Kimberly S. Young
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About The Author

Dr. Kimberly Young is a licensed psychologist and an internationally known expert on Internet addiction. She founded the Center for Internet Addiction in 1995, is a professor at St. Bonaventure University, and has published numerous articles and books, including *Caught in the Net*, the first to identify Internet addiction, *Tangled in the Web, Internet Addiction: A Handbook and Guide for Evaluation and Treatment*, and her most recent, *Internet Addiction in Children and Adolescents: Risk Factors, Treatment, and Prevention*. Her work has been featured in The New York Times, The Wall Street Journal, The London Times, USA Today, Newsweek, Time, CNN, CBS News, Fox News, Good Morning America, and ABC’s World News Tonight. She has received the Psychology in the Media Award from the Pennsylvania Psychological Association and the Alumni Ambassador Award for Outstanding Achievement from Indiana University at Pennsylvania. She serves on the advisory board for The Internet Group in Toronto and the Japanese Ministry for the prevention and treatment of Internet Addiction.

Dr. Young has testified for the Child Online Protection Act Congressional Committee and she has been a keynote speaker at the European Union of Health and Medicine, the International Conference on Digital Culture in Seoul, Korea, the US Army War College in Pennsylvania, and the First International Congress on Internet Addiction Disorders in Milan, Italy, and served on the National Academy of Sciences for the Digital Media and Developing Minds colloquia.

She is on the editorial board of the Journal of Behavioral Addictions, the American Journal of Family Therapy, Addicta: The Turkish Journal of Addiction, the International Journal of Cyber Crime and Criminal Justice, and on the advisory board of CyberPsychology: Journal for Psychosocial Research on Cyberspace, and a member of the American Psychological Association.
Introduction

The Internet Addiction Test (IAT; Young, 1998) was developed to measure the presence and severity of Internet and technology dependency among adults. As a growing cultural and clinical phenomenon, Internet Addiction is viewed as a new clinical disorder requiring assessment and treatment. While new, the IAT is the first validated test to be used in mental health settings and schools. The IAT can be administered to assess symptoms of Internet addiction in a variety of test settings, including private practice clinics, schools, hospitals, and residential programs, among other settings. The term Internet is used to refer to all contact that individuals have with web-based services, including websites, Internet-based games, social media, and online entertainment, accessed on all types of computers, screens, devices, phones, portable electronic devices, and other forms of technology.

The Internet is a relatively new technology that has impacted the world and provided many benefits to its users. At the same time, the Internet has had negative ramifications. Some people are becoming preoccupied with the Internet, are unable to control their use of electronic devices, and are jeopardizing school, employment, and relationships. The concept of “Internet addiction” has been proposed as an explanation for uncontrollable, damaging use of technology to access the Internet. Symptoms are compared to the criteria used to diagnose other addictions. The literature has characterized Internet addiction as an impulse control disorder comparable to pathological gambling because of overlapping diagnostic criteria and symptomatology.

Researchers have suggested various diagnostic criteria to examine Internet addiction from a clinical perspective and over time. Consistencies in patterns that differentiate normal from compulsive Internet use have emerged. Based on these studies, the IAT was constructed to capture the problematic behavior associated with compulsive use of technology, including online porn, Internet gambling, and compulsive use of online games and social media.

Studies on Internet addiction originated in the US. However, the problem of Internet addiction has become a global problem. Studies have documented Internet addiction in a growing number of countries such as Italy (Ferraro, Caci, D’Amico, & Di Blasi, 2007), Pakistan (Suhail & Bargees, 2006), and Czech Republic (Simkova & Cincera, 2004). Reports also indicate that Internet addiction has become a serious public health concern in China (BBC, 2007), Korea (Hur, 2006), and Taiwan (Leung, 2007). In the 1990s, studies attempting to define the prevalence of the disorder vary in their estimates from 6% (Greenfield, 1999) among the general population of Internet users to 14% among college-based populations (Scherer, 1998).

A nationwide study conducted by a team from Stanford University’s School of Medicine had estimated that nearly one in eight Americans exhibited at least one possible sign of problematic Internet use (Aboujaoude, Koran, Gamel, Large, & Serpe, 2006). The prevalence of Internet addiction in the U.S. appears to be increasing as Internet use increases (Wen et al., 2015). More recent research has estimated that as many as 6 to 11% of individuals who use the Internet can be considered to have an Internet addiction (Weinstein & Lejoyeux, 2010).
Development

In 1995, Dr. Kimberly S. Young first identified addictive use of the Internet as a distinct psychological disorder, utilizing comprehensive case studies of Internet users. Since this initial study, research from Young and others has classified various ways that Internet addiction has negatively impacted users’ lives. Early studies showed mild-to-compulsive use of the Internet can lead to social isolation and depression (Krant et al., 1998), relationship difficulties and marital discord (Cooper et al., 2000; Schneider, 2000; Young et al, 2000), academic failure among students (Anderson, 1999; Morahan-Martin, 1997), and work-related problems such as reduced productivity and job loss (Case & Young, 2001).

Historically, according to Dr. Maressa Hecht Orzack, the director of the Computer Addiction Services at McLean Hospital, a Harvard Medical School affiliate, and another pioneer in the study of Internet addiction, individuals with Internet addiction demonstrate a loss of impulse control. Life becomes unmanageable for the online user, yet despite these problems, the addict cannot give up the Internet. The computer becomes the primary relationship in the addict’s life (Orzack, 1999).

While diagnosing Internet addiction is not a direct function of time spent using the Internet, early studies suggested that those classified as dependent or addicted online users were generally excessive about their online usage, spending anywhere from forty to eighty hours per week using the Internet, with sessions that could last up to twenty hours (Young, 1998, Greenfield 1999). Sleep patterns were disrupted due to late night log-ins; addicts generally stayed up surfing until late in the night, with the reality of having to wake up early for work or school. In extreme cases, caffeine pills were used to facilitate longer Internet sessions. Such sleep deprivation caused excessive fatigue, impairing academic or occupational performance that also increased the risk of poor diet and exercise.

Researchers have likened Internet addiction to addictive syndromes similar to impulse-control disorders on the Axis I Scale in the DSM and utilized various forms of DSM-IV based criteria to define Internet addiction. Of all the references in the DSM, Pathological Gambling was viewed as most akin to this phenomenon. The Internet Addiction Diagnostic Questionnaire (IADQ) was developed as an initial screening instrument utilized for diagnosis (Young, 1998). The following questionnaire conceptualized patterns associated with Internet Addiction Disorder:

<table>
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<tr>
<th>Young- Internet Addiction Diagnostic Questionnaire</th>
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<tr>
<td>1. Do you feel preoccupied with the Internet (think about previous online activity or anticipate next online session)?</td>
</tr>
<tr>
<td>2. Do you feel the need to use the Internet with increasing amounts of time in order to achieve satisfaction?</td>
</tr>
<tr>
<td>3. Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use?</td>
</tr>
<tr>
<td>4. Do you feel restless, moody, depressed, or irritable when attempting to cut down or stop Internet use?</td>
</tr>
<tr>
<td>5. Do you stay online longer than originally intended?</td>
</tr>
<tr>
<td>6. Have you jeopardized or risked the loss of significant relationship, job, educational or career opportunity because of the Internet?</td>
</tr>
<tr>
<td>7. Have you lied to family members, therapist, or others to conceal the extent of involvement with the Internet?</td>
</tr>
<tr>
<td>8. Do you use the Internet as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression)?</td>
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Test-takers were to consider non-essential computer/Internet usage, such as for non-business or non-academically related use, over a six-month period. Subjects were considered ‘dependent’ when endorsing five or more of the questions and at-risk for dependence when endorsing 3 – 4 questions (Durkee et al., 2012). The IADQ was used in research examining prevalence of Internet addiction across cultures. Researchers found
Cronbach alpha measures of internal consistency of between .60 (Li, O’Brien, Snyder, & Howard, 2001) and .72 (Dowling & Quirk, 2009)

Associated features of Internet addiction, beyond those included in the IADQ, include regular excessive Internet use, neglect of routine duties or life responsibilities, social isolation, and being secretive about online activities, or suddenly demanding privacy from friends or family when online. While the IADQ provides a means to conceptualize pathological or addictive use of the Internet, these warning signs can often be masked by cultural norms that encourage and reinforce online use. Even if a client meets all the criteria, signs of abuse can be rationalized as, “I need this for my job” or “It’s just a machine” when in reality the Internet is causing significant problems in a user’s life. Thus, evaluations which focus on the negative impact Internet use is causing to the user are more indicative of problematic use than those that focus strictly on overall Internet use.

Beard and Wolf (2001) further modified Young’s diagnostic criteria, recommending that all of the first five criteria be required for diagnosis of Internet addiction, since these criteria could be met without any impairment in the person’s daily functioning. It was also recommended that at least one of the last three criteria (e.g., criteria 6, 7, and 8) be required in diagnosing Internet addiction. The reason the last three were separated from the others is because of the fact that these criteria impact the pathological Internet user’s ability to cope and function (representing depressed, anxious, and escaping problems respectively), and also impact interaction with others (e.g., significant relationships, jobs, being dishonest with others).

Shapiro et al., (2003) put forth a more comprehensive approach to diagnosing Internet addiction under the general style of impulse control disorders per the DSM-IV-TR that further broadened the diagnostic criteria for problematic Internet use. These criteria included:

1. Having a maladaptive preoccupation with Internet use, as indicated by at least one of the following:
   A) Preoccupations with use of the Internet that are experienced as irresistible.
   B) Excessive use of the Internet for periods of time longer than planned.

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

3. The excessive Internet use does not occur exclusively during periods of hypomania or mania and is not better accounted for by other Axis I disorders.

Most recently, the American Psychiatric Association has included Internet Gaming Disorder (APA, 2013) in the most recent revision of the DSM (DSM-5) as a condition for further study.

Diagnosing Internet addiction is often complex. Unlike chemical dependency and substance abuse, the Internet offers several direct benefits, as a technological advancement, to our society, not only as a device to be criticized as addictive. Individuals can conduct research, perform business transactions, access libraries, communicate, and make vacation plans. Books have been written outlining the psychological, as well as functional, benefits of the Internet in our lives. By comparison, alcohol or drugs are not an integral or necessary part of our personal and professional lives, nor do these substances offer any health benefit. With so many practical uses of the Internet, signs of addiction can easily be masked or justified. Further, clinical assessments often assess for the presence of psychiatric and addictive disorders. However, given its newness, symptoms of Internet addiction may not be revealed in an initial clinical interview. While self-referrals for Internet addiction are becoming more common, often the client does not present with complaints of computer addiction. People
may initially present with signs of depression, bi-polar disorder, anxiety, or obsessive-compulsive tendencies, only for the treating professional to discover signs of Internet abuse upon further examination. Thus, diagnosing Internet addiction at an initial clinical interview can be challenging. It is important for treating professionals to routinely screen compulsive use of the Internet as part of the assessment process.

The IAT was constructed to measure symptoms of Internet addiction which are mutually shared with other established compulsions, such as those involving gambling, food, and sex; and to also evaluate specific symptoms unique to this client population. The IAT provides an assessment tool for clinicians to measure the severity of Internet addiction among their clients. Furthermore, given corporate reliance upon this technology to support multiple business applications, the IAT serves as a useful pre-employment screening device for managers to detect the presence for Internet addiction among job candidates to improve productivity and reduce corporate liability.

Expanding upon the IADQ, the items for the IAT were drawn from earlier research that explored various aspects of online behavior and profiled characteristics that differentiate ‘normal’ online users from compulsive online users (e.g., Greenfield, 1999; Griffiths, 1996; Morahan-Martin, 1997; Young, 1997a, 1997b, 1998, 1999). Characteristics of compulsive online users include: a preoccupation with the Internet, lying about their Internet-related behavior, a loss of interest in other interests and/or people only to prefer more time online, using the Internet as a form of escape, an inability to control Internet-using behavior, and impairment in functioning. Compulsive Internet users also reported frequent time distortion, sleep deprivation, increased social isolation, being secretive about online activities or a sudden demand for privacy when online, and persona development when online. Studies typically evaluated non-essential Internet usage (i.e., non-business or academically related use) over a six-month period, when not better accounted for by a manic episode.

Studies have found that the IAT is a reliable measure that covers the key characteristics of problematic Internet use (see Validation section). The test measures the extent of a client's involvement with the computer and classifies the addictive behavior in terms of mild, moderate, or severe impairment. The IAT is a worldwide accepted and validated testing instrument, and it can be utilized within outpatient and inpatient settings and adapted accordingly to fit the needs of the particular clinical setting.

**Appropriate Uses**

The IAT measures the severity of self-reported compulsive use of the Internet for adults and adolescents. The IAT is designed to be administered to the experienced Internet user who utilizes this technology on a frequent basis. As it may be difficult for individuals to accurately self-reflect on their Internet use with general questions, it would be appropriate to administer the IAT to anyone who has indicated that they’ve used the Internet within the past week, to screen for the presence of addictive Internet behaviors.

Results from the IAT should be interpreted with caution among clinical populations that suffer from psychiatric conditions concurrent with compulsive syndromes, as indications of addictive Internet-related behavior may be better attributed to other psychiatric disorders.

**Examiner Qualifications**

The IAT may be administered and scored by paraprofessionals, but it should be used and interpreted best by professionals with appropriate clinical training and experience. Clients with Internet addiction frequently have co-morbid mood disorders; some clients with mood disorders, in turn, may report suicidal ideation. Therefore, the clinician reviewing the IAT data must be able to respond to a client’s addictive disorder as well as the client’s depression or suicidal ideation.
Description and Content of Scale

The 20-item IAT questionnaire measures characteristics and behaviors associated with compulsive use of the Internet that include compulsivity, escapism, and dependency. Questions also assess problems related to personal, occupational, and social functioning stemming from Internet use. Examinees respond to each statement with a number between 1 and 5, representing a Likert-scale continuum, indicating the extent to which they endorse that particular behavior.

The scale was created by adapting DSM-IV criteria for pathological gambling to pertain to Internet use and is a modification of the earlier 8-item scale, Young’s Internet Addiction Diagnostic Questionnaire (IADQ). The IAT views Internet addiction as an impulse-control disorder and the term Internet refers to all types of online activity. The IAT is the most widely used Internet addiction scale in the world, and has been translated into several languages including English, Chinese, French, Italian, Turkish, and Korean.