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CHAPTER 5

c0005 Internet Addiction Disorder: Overview and Controversies

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s0010 INTRODUCTION: INTERNET ADDICTION DISORDER AND ITS TREATMENT

p0015 Problematic Internet use (PIU) or Internet Addiction Disorder (IAD) is characterized by excessive or poorly controlled preoccupations, urges, or behaviors regarding Internet use that lead to impairment or distress. Due to the increased use of the Internet over the past 15 years, IAD has attracted attention of researchers and clinicians in the field. Young (1998) and Griffiths (1998; 2000) were the first who defined IAD and have done extensive research. Internet addiction has also attracted increasing coverage in the popular media and among researchers, and this attention has paralleled the growth in computer use and Internet access (Shaw & Black, 2008). Phenomenologically, there appear to be at least three IAD subtypes: excessive gaming-gambling, sexual preoccupations (cybersex), and socializing or social networking, including e-mail and messaging. Internet addicts may use the Internet for extended periods, isolating themselves from other forms of social contact, and focus almost entirely on the Internet rather than broader life events. Adolescents with problematic Internet use showed dysfunctional coping strategies with problems in school and home and showed worse interpersonal relations (Milani, Osualdella, & Di Blasio, 2009). IAD can also be explained by a need to “escape from oneself,” which may account for the excessive playing of Internet games (Kwon, Chung, & Lee, 2011).

p0020 There are multiple proposed explanations for IAD (Dell’Osso, Altamura, Allen, Marazziti, & Hollander, 2006). Some researchers have considered IAD as part of the Impulse-Control Disorder and/or Obsessive-Compulsive Disorder models. These models are supported by brain-imaging and

pharmacological (SSRI) treatment studies. IAD was also suggested to be included in the Behavioral Addiction spectrum because it shows the features of excessive use, despite adverse consequences, withdrawal phenomena, and tolerance that characterize many substance use disorders; however, there are little data bearing on these claims. The frequent appearance of IAD in the context of numerous comorbid conditions raises complex questions of causality.

s0015 **DIAGNOSIS AND CLINICAL CRITERIA**

p0025 Four components were originally suggested as essential to the diagnosis of IAD for *DSM-5* inclusion (Block, 2008): (1) excessive Internet use, often associated with a loss of sense of time or a neglect of basic drives; (2) withdrawal, including feelings of anger, tension, and/or depression when the computer is inaccessible; (3) tolerance, including the need for better computer equipment, more software, or more hours of use; and (4) adverse consequences, including arguments, lying, poor school or vocational achievement, social isolation, and fatigue.

p0030 A major survey was conducted to develop diagnostic criteria for IAD and to evaluate its validity and reliability in the general population (Tao et al., 2010). The diagnostic criteria consisted of a symptom criterion (seven clinical symptoms of IAD), a clinically significant impairment criterion (functional and psychosocial impairments), a course criterion (duration of addiction lasting at least 3 months, with at least 6 hours of nonessential Internet usage per day), and an exclusion criterion (exclusion of dependency attributed to psychotic disorders). IAD was initially proposed for inclusion in the 2013 *DSM-5* but was not yet recognized as a disorder; however, Internet Gaming Disorder was included in the *DSM-5* appendix of disorders for further consideration and study.

s0020 **ASSESSMENT OF INTERNET ADDICTION**

p0035 The questionnaires for diagnosis of IAD have used items from substance dependence questionnaires, as well as new items related to Internet addiction. The most commonly used questionnaire is Young's Internet Addiction Test (IAT) (Young, 1998), which can be found in full in the appendix of this chapter. The IAT has been validated (Barke, Nyenhuis, & Kröner-Herwig, 2012; Bernardi & Pallanti, 2009; Chong, Isa, Hashim, Pillai, & Harbajan Singh, 2012; Ghamari, Mohammadbeigi, Mohammadsalehi, &

Hashiani 2011; Han et al., 2009; Jelenchick, Becker, & Moreno, 2012; Korkeila, Kaarlas, Jaaskelainen, Vahlberg, & Taiminen, 2009; Widyanto & McMurrin, 2004). The Internet Addiction Scale (IAS) was developed by Griffiths (1998) and was validated by Nichols and Nicki (2004) and Canan, Ataoglu, Nichols, Yildirim, and Ozturk (2010). Other questionnaires include the Chen Internet Addiction Scale (CIAS) (Yen et al., 2012), the Questionnaire of Experiences Related to Internet (Beranuy, Chamarro, Graner, & Carbonell, 2009), the Compulsive Internet Use Scale (CIUS) (Khazaal et al., 2012; Meerkerk, Van Den Eijnden, Vermulst, & Garretsen, 2009), the Problematic Internet Use Questionnaire (PIUQ) (Demetrovics, Szeredi, Ráza, 2008), and the Internet-Related Problem Scale (IRPS) (Widyanto, Griffiths, & Brunnsden, 2011). These questionnaires have been reviewed by Beard (2005), who noted that these instruments have yielded preliminary research on IAD but are based on different theoretical underpinnings and do not agree on the underlying dimensions that make their utilization problematic.

s0025 **PREVALENCE RATES**

- p0040 International prevalence rates for Internet addiction range globally from 1.5% to 8.2% (Petersen, Weymann, Schelb, Thiel, & Thomasius, 2009), and in the United States from 0.3% to 0.7% (Shaw & Black, 2008) to 4% (Christakis, Moreno, Jelenchick, Myaing, & Zhou., 2011) to 6% (Greenfield, 1999) and 25% among Southern U.S. university students (Forston, Scotti, Chen, Malone, & Del Ben, 2007); see Moreno, Jelenchick, Cox, Young, and Christakis (2011) for review. In Europe, rates vary between 3% in Germany (Woelfling, Buhler, Lemenager, Mairsen, & Mann, 2009), 5.4% and 5% in Italy (Pallanti, Bernardi, & Quercioli, 2006; Poli & Agrimi, 2012), 10.4% in Greece (Tsitsika et al., 2009), and 18.3% in the United Kingdom (Niemz, Griffiths, & Banyard, 2005). A major survey of 11 European countries found a prevalence rate of 4.4% (Durkee et al., 2012).
- p0045 Internet addiction has been most studied in the Far East. In China, prevalence rates vary between 10.2% of moderate users and 0.6% of the severely addicted (Lam, Peng, Mai, & Jing, 2009), between 2.4% and 5.52% in Hunan province (Cao, Su, Liu, & Gao, 2007; Deng, Hu, Hu, Wang, & Sun, 2007) and 6.44% in Shaanxi Province (Ni, Yan, Chen, & Liu, 2009), 6.7% in Hong Kong (Fu, Chan, Wong, & Yip, 2010) and 8.8% in Shanghai (Xu et al., 2012). In Taiwan, 17.9% of students were addicted (Tsai et al., 2009). In South

Korean middle school students, 16% were potential at-risk users, and 3.1% were high-risk users (Seo, Kang, & Yom, 2009). Other studies in South Korea have found 1.6% (Kim et al., 2006), 3.5% (Whang, Lee, & Chang, 2003), 4.3% (Jang, Hwang, & Choi, 2008), 10.7% (Park, Kim, & Cho, 2008), and 20.3% (Ha et al., 2007) of adolescents with Internet addiction.

s0030 **PSYCHIATRIC COMORBIDITY**

p0050 Cross-sectional studies on samples of patients report high comorbidity of Internet addiction with psychiatric disorders such as affective disorders, anxiety disorders (e.g., generalized anxiety disorder, social anxiety disorder), and attention deficit hyperactivity disorder (ADHD).

p0055 See Table 5-1 for a list of studies showing Internet addiction comorbidity with other psychiatric disorders and symptoms. The table is divided between adult and adolescent studies.

p0060 The mental status of Internet addicts prior to addiction, including the pathological traits that may trigger IAD, was explored by Dong, Lu, Zhou, and Zhao (2011), who detected abnormal obsessive-compulsive measures in participants before they became addicted to the Internet. Cho et al. (2012) found a relationship between withdrawal and anxiety/depression and future Internet addiction among South Korean males. Finally, a review of 20 studies correlating problematic Internet use (PIU) and mental disorders found that 75% reported significant correlations of PIU with depression, 57% with anxiety, 100% with symptoms of ADHD, 60% with obsessive-compulsive symptoms, and 66% with hostility/aggression (Carli et al., 2013).

s0035 **RELATIONSHIP OF INTERNET ADDICTION WITH DRUG AND ALCOHOL USE**

p0065 Alcohol and drug use have been found to be associated with problematic Internet use. Cannabis use was associated with Internet addiction in Finland (Korkeila et al., 2009), and substance use among Greek adolescents was associated with problematic Internet use (Fisoun, Floros, Siomos, Geroukalis, & Navridis, 2012). Additionally, Internet addiction was associated with harmful use of alcohol among Taiwanese students (Yen, Ko, Yen, Chang, & Cheng, 2009). Parental problem drinking was also associated with Internet addiction through anxiety, depression, and aggression for boys and through family function and aggression for girls (Jang & Ji, 2012).

10010 **Table 5.1 Internet Addiction-Comorbidity with Other Psychiatric Disorders and Symptoms**

Comorbid Clinical Diagnosis	Studies	Country
	Adults	
Depression	te Wildt, Putzig, Zedler,	Germany
Depressive mood disorder	Ohlmeier (2007)	UK
	Morrison & Gore, (2010)	Puerto Rico
	Liberatore, Rosario, Colón-De	Iran
	Martí, & Martínez (2011)	South Korea
	Alavi et al., (2010)	
	Cho, Sung, Shin, Lim, & Shin	
	(2012)	
Anxiety	Kratzer & Hegerl (2008)	Germany
	Alavi et al., (2010)	Iran
	Cho et al., (2012)	South Korea
Alcohol abuse	Yen, Ko, Yen, Chen, & Chen	Taiwan
	(2009)	
Alexithymia and child maltreatment	Yates, Gregor, & Haviland (2012)	U.S.
Impulse control disorders	Mazhari (2012)	Iran
Aggression	Alavi et al., (2010)	Iran
	Adolescents	
Personality disorders: hypomania, dysthymia, obsessive-compulsive, borderline personality disorder, and avoidant personality disorder	Bernardi & Pallanti (2009)	Italy
Alexithymia, dissociative experiences, impulse dysregulation	De Berardis et al. (2009)	Italy
Alexithymia	Dalbudak et al., (2013)	Turkey
Dissociative symptoms	Canan, Ataoglu, Ozcetin, & Icmeli (2012).	Turkey
Conduct disorder and hyperactivity	Kormas, Critselis, Janikian, Kafetzis, & Tsitsika (2011)	Greece
Depression	Tsitsika et al., (2011)	Greece
	Ha et al., (2007)	South Korea
	Kim et al., (2006)	South Korea
	Park, Park, Lee, Kwon, & Kim	South Korea
	(2012)	Taiwan
	Yen, Ko, Yen, Wu, & Yang (2007)	China
	Xiuqin et al., (2010)	Hong Kong
	Cheung & Wong (2011)	Hong Kong
	Guo et al., (2012)*	UK
	Morrison & Gore (2010)	

Continued

Table 5.1 Internet Addiction-Comorbidity with Other Psychiatric Disorders and Symptoms—cont'd

Comorbid Clinical Diagnosis	Studies	Country
Social phobia	Yen et al., (2007) Wei, Chen, Huang, & Bai (2012)	Taiwan
Somatic pain	Wei et al., (2012)	Taiwan
ADHD	Yen et al., (2007) Yen, Yen, Chen, Tang, & Ko (2009)	Taiwan
OCD	Xiuqin et al., (2010)	China
Insomnia	Cheung & Wong (2011)	Hong Kong

*In children

s0040 **THE PHENOMENOLOGY OF INTERNET ADDICTION**

p0070 As addressed elsewhere in the book, many factors can contribute to Internet addiction. They include coping with stress (Grusser, Thalemann, Albrecht, & Thalemann, 2005); expanding social networks (Campbell, Cumming, & Hughes, 2006); exhibiting greater control and social anxiety (Kuss & Griffiths 2011; Lee & Stapinski 2012); coping with developmental challenges (Ko et al., 2006; Israelashvili, Kim, & Bukobza, 2012); and creating a virtual “ideal self” and escapism (Achab et al., 2011; Billieux et al., 2011; Li, Liao, & Khoo, 2011; Zanetta et al., 2011). Sex addiction may be another contributing factor, leading people to the Internet to pursue cybersex (Brand et al., 2011; Ross, Månsson, & Daneback, 2012; Southern, 2008). There is also some speculative research that there is a subset of problematic Internet users who rely on the Internet as part of their attempts of body image avoidance, including Rodgers, Melioli, Laconi, Bui, and Chabrol (2013), who found that Internet addiction symptoms and body-image avoidance were both significant predictors of disordered eating among women.

s0045 **PERSONALITY AND PSYCHOSOCIAL FACTORS ASSOCIATED WITH IAD**

p0075 Personality factors such as lack of perseverance (Mottram & Fleming, 2009); psychoticism (Tosun & Lajunen, 2009); and neuroticism, sensation seeking, and aggressiveness (Mehroof & Griffiths, 2010) have been found to be associated with Internet addiction. Sensation seeking among Chinese Internet users was reported by Shi, Chen, and Tian (2011). High harm avoidance (HA), novelty seeking (NS), reward dependence (RD), low self-directedness,

and low cooperativeness were reported in South Korean studies by [Ha et al \(2007\)](#) and [June, Sohn, So, Yi, and Park \(2007\)](#). In Taiwan, high NS, high HA, and low RD predicted a higher proportion of adolescents with IAD ([Ko et al., 2006](#)). However, one study, by [Cho, Kim, Kim, Lee, and Kim \(2008\)](#), found that low NS was associated with IAD.

p0080 Internet addiction has also been positively associated with interpersonal factors such as perceived discontentment with peer interactions ([Liu & Kuo, 2007](#)), and problems with parenting attitudes, family communication, family cohesion, and family violence ([Park et al., 2008](#)).

p0085 Additional psychosocial factors are also noted in the literature. IAD has been associated with low self-esteem ([Fioravanti, Dèttore, & Casale, 2012](#); [Stieger & Burger, 2010](#)); family dissatisfaction and recent stressful events ([Lam et al., 2009](#)); and few social friends, poor relations with teachers and students, and conflicting family relationships ([Wang et al., 2011](#)). Internet addiction has also been correlated with poor connectedness to school, high family conflict, low family function, substance and alcohol use, and living in rural areas by [Yen, Ko, Yen, Wu, and Yang \(2007\)](#) and [Yen, Ko, Yen, Chang, and Cheng \(2009\)](#) and associated with depressive symptoms, higher impulsivity, lower satisfaction with academic performance, being male, and insecure attachment style by [Lin, Ko, and Wu \(2011\)](#). [Shin, Kim, and Jang \(2011\)](#) also found that anxious and avoidant attachment styles and depression and phobias were associated with IAD.

s0050 **COGNITIVE FACTORS ASSOCIATED WITH PROBLEMATIC INTERNET USE**

p0090 Several cognitive factors have been found to be associated with problematic Internet use. [Sun et al. \(2009\)](#) found that IAD was associated with deficits in reward-based decision making. [Ko et al. \(2010\)](#) found participants had no impairments in reward-based decision making, but those with IAD had higher novelty-seeking characteristics, as noted previously.

p0095 Studies suggest that impaired executive control ability is relevant to understanding IAD. [Dong, Zhou, and Zhao \(2011\)](#) measured event-related brain potentials during a color-word Stroop task and noted that Internet-addicted individuals showed longer reaction time and more response errors on the Stroop task and reduced medial frontal negativity, indicating impaired executive control ability. [Zhou, Yuan, and Yao \(2012\)](#) found that among individuals with Internet game addiction, cognitive bias and executive function constructs involving mental flexibility and response inhibition were

worse among longer-term users. [Park et al. \(2011\)](#) also found impaired performance related to attention among individuals who had IAD for a longer period of time.

s0055 **PHYSICAL AND MENTAL HEALTH HAZARDS**

p0100 The known health hazards associated with Internet addiction appear related to sleep deprivation or disturbance. High school students with Internet addiction in South Korea showed 37.7% prevalence of excessive daytime sleepiness, compared to 13.9% and 7.4% in possible addicts and nonaddicts, respectively. The prevalence of insomnia, witnessed snoring, apnea, teeth grinding, and nightmares was also higher in Internet addicts compared with possible addicts and nonaddicts ([Choi et al., 2009](#)). An association between continued Internet use and psychotic-like experiences was described by [Mittal, Dean, and Pelletier \(2012\)](#).

p0105 Little is understood about the habit-forming nature of the Internet and its potential for abuse. As the Internet permeates life at home, school, and work, it can create marital, academic, and job-related problems ([Yellowlees & Marks, 2007](#); [Young, 2004, 2007](#)). A study of a small sample of adult Italian Internet addicts showed that it was strongly disabling, especially for family life ([Bernardi & Pallanti, 2009](#)). The Italian study shows that dissociative symptoms were prominent and strongly related with measures of IAD severity, subjective disability, and OCD symptoms.

s0060 **TREATMENT**

p0110 Treatment for IAD is mainly based on interventions and strategies previously used in the treatment of substance use disorders. For a review of treatment of Internet addiction, see [King, Delfabbro, Griffiths, and Gradisar \(2011\)](#). A meta-analysis of pharmacological and psychological treatment studies of Internet addiction by [Winkler, Dörsing, Rief, Shen, & Glombiewski \(2013\)](#), based on 16 studies, suggests that psychological and pharmacological interventions were highly effective for decreasing the amount of time Internet addicts spent online, as well as targeting symptoms of depression and anxiety.

s0065 **Psychosocial Approaches**

p0115 Psychosocial approaches are the mainstay of current treatment research, with very little study of pharmacological treatment. There is preliminary evidence for success of an “initiated abstinence” program in 12–15-year-old

students in Austria, Germany, and Italy (Kalke & Rashke, 2004) and for a counseling program in Hong Kong (Shek, Tang, & Lo, 2009). Preliminary results from a study of 114 patients receiving cognitive behavior therapy indicated that most clients were able to manage their presenting complaints by the eighth session, and symptom management was sustained at 6-month follow-up (Young, 2007).

p0120 A treatment study using group cognitive behavioral therapy (CBT) for Internet addiction in adolescents was reported by Du, Jiang, and Vance (2010). A total of 56 patients, who met Beard's diagnostic criteria for Internet addiction, aged 12–17 years, were divided randomly into an active treatment group ($n = 32$) and a clinical control group ($n = 24$). Participants in the active treatment group were treated with an eight-session multimodal school-based group CBT, whereas participants in the clinical control group received no intervention. Internet use; time management; and emotional, cognitive, and behavioral measures were assessed for both groups at baseline, immediately after the intervention and at 6-month follow-up by investigators blind to the participants' group status. Results showed that Internet use decreased in both groups while only the multimodal, school-based group CBT evidenced improved time management skills and better emotional, cognitive, and behavioral symptoms. The authors suggest that multimodal, school-based group CBT is effective for adolescents with Internet addiction, particularly in improving emotional state and regulation ability, and behavioral and self-management style. Marital and family therapy may also help in selected cases. Additionally, online self-help books and tapes are available. Lastly, self-imposed abstinence from computer use and Internet access may be necessary in some situations (Shaw & Black, 2008).

s0070 **Pharmacological Treatment**

p0125 Pharmacological studies for IAD treatment used agents that were previously used for treatment of disorders such as ADHD and OCD and mainly address the Online Gaming Addiction subtype of IAD. A pharmacological open-label treatment study using extended release methylphenidate in Korean children with Internet video game addiction and comorbid ADHD found that, after 8 weeks of treatment, measures of Internet use and Internet use duration were significantly reduced, and this improvement was positively correlated with improvement in measures of attention (Han et al., 2009).

p0130 Another study identified the comorbidity of impulsive-compulsive Internet use with OCD to examine whether selective serotonin reuptake inhibitors (SSRIs) such as escitalopram can be useful for treatment of

Internet addiction. A pharmacological open-label treatment study using escitalopram with impulsive-compulsive Internet users showed significant decrease in the number of hours spent on the Internet during the first phase of treatment but not later (Dell’Osso, Altamura, Hadley, Baker, & Hollander, 2007).

p0135 Finally, bupropion, a dopamine and norepinephrine inhibitor medication used for treating nicotine and substance dependence, was used for the treatment of Internet videogame addiction (Han, Hwang, & Renshaw, 2010). After a 6-week period of bupropion SR, craving for Internet video game play, total game play time, and cue-induced brain activity were decreased in the Internet videogame-addicted players. A later study by Han and Renshaw (2012) showed that bupropion reduced Internet addiction scores, mean time of online game playing, and Beck Depression Inventory (BDI) scores in a group with comorbid excessive online videogame playing (EOP) and Major Depressive Disorder (MDD). For review of existing pharmacological treatment for IAD, see Camardese, De Risio, Di Nicola, Pizi, and Janiri (2012).

s0075 **Other Treatments**

p0140 A treatment study combining electro-acupuncture with psychological intervention on cognitive function and event-related potentials, in patients with Internet addiction (IA), was described by Zhu et al. (2012). After treatment, in all groups, the IA score was lowered significantly, and scores of short-term memory capacity and short-term memory span increased significantly while the decreased IA score in the comprehensive therapy group was more significant than that in the other two groups.

s0080 **CONCLUSIONS**

p0145 At least three subtypes of Internet addiction have been identified: excessive gaming, sexual preoccupations, and socializing (i.e., e-mail or text messaging). All the variants share the following four components: (1) excessive use, often associated with a loss of sense of time or a neglect of basic drives; (2) withdrawal, including feelings of anger, tension, and/or depression when the computer is inaccessible; (3) tolerance, including the need for better computer equipment, more software, or more hours of use; and (4) adverse consequences, including arguments, lying, poor achievement, social isolation, and fatigue. There is debate as to whether IAD stands as its own diagnosis or is more a product of other existing disorders such as anxiety,

depression, ADHD, or impulse-control disorders. There is growing evidence that Internet addiction is a behavioral addiction, yet the patho-physiological mechanisms underlying Internet addiction remain under investigation. The few published treatment studies for IAD are based on interventions and strategies used in the treatment of substance use disorders adapted to this population. Although it is premature to recommend any evidence-based treatment of Internet addiction, preliminary studies suggest that psychological treatment such as cognitive behavior therapy and pharmacological interventions such as bupropion or SSRIs seem promising, and the field of behavioral addictions will benefit from current and future research in this area.

s0085 **DECLARATION OF INTEREST**

p0150 The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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s0090 **APPENDIX 5-1 INTERNET ADDICTION TEST (IAT)**

p0155 *Dr. Kimberly Young*

p0160 Internet Addiction Test (IAT) is a reliable and valid measure of addictive use of Internet, developed by Dr. Kimberly Young. It consists of 20 items that measures mild, moderate, and severe level of Internet addiction.

p0165 To begin, answer the following questions by using this scale:

0	Does not apply
1	Rarely
2	Occasionally
3	Frequently
4	Often
5	Always

	Question	Scale					
	1 How often do you find that you stay on-line longer than you intended?	1	2	3	4	5	0
	2 How often do you neglect household chores to spend more time on-line?	1	2	3	4	5	0
	3 How often do you prefer the excitement of the Internet to intimacy with your partner?	1	2	3	4	5	0
	4 How often do you form new relationships with fellow on-line users?	1	2	3	4	5	0
	5 How often do others in your life complain to you about the amount of time you spend on-line?	1	2	3	4	5	0
	6 How often do your grades or school work suffers because of the amount of time you spend on-line?	1	2	3	4	5	0
	7 How often do you check your email before something else that you need to do?	1	2	3	4	5	0
	8 How often does your job performance or productivity suffer because of the Internet?	1	2	3	4	5	0
	9 How often do you become defensive or secretive when anyone asks you what you do on-line?	1	2	3	4	5	0
	10 How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?	1	2	3	4	5	0
	11 How often do you find yourself anticipating when you will go on-line again?	1	2	3	4	5	0
	12 How often do you fear that life without the Internet would be boring, empty, and joyless?	1	2	3	4	5	0
f0010	13 How often do you snap, yell, or act annoyed if someone bothers you while you are on-line?	1	2	3	4	5	0
	14 How often do you lose sleep due to late-night log-ins?	1	2	3	4	5	0
	15 How often do you feel preoccupied with the Internet when off-line, or fantasize about being on-line?	1	2	3	4	5	0
	16 How often do you find yourself saying "just a few more minutes" when on-line?	1	2	3	4	5	0
	17 How often do you try to cut down the amount of time you spend on-line and fail?	1	2	3	4	5	0
	18 How often do you try to hide how long you've been on-line?	1	2	3	4	5	0
	19 How often do you choose to spend more time on-line over going out with others?	1	2	3	4	5	0
f0015	20 How often do you feel depressed, moody or nervous when you are off-line, which goes away once you are back on-line?	1	2	3	4	5	0

- p0170 Total the scores for each item. The higher your score, the greater level of addiction is.
- p0175 20–49 points:
- p0180 You are an average online user. You may surf the Web a bit too long at times, but you have control over your usage.
- p0185 50–79 points:
- p0190 You are experiencing occasional or frequent problems because of the Internet. You should consider their full impact on your life.
- p0195 80–100 points:
- p0200 Your Internet usage is causing significant problems in your life. You should elevate the impact of the Internet on your life and address the problems directly caused by your Internet usage.
- p0205 Prepared and posted by Dayu Internet Overuse Solution, the solution for Internet overuse and online addiction. An online version is available at <http://www.internetoveruse.com/?p=171>



ROSENBERG: 05

Non-Print Items

Abstract

Problematic Internet use (PIU) or Internet Addiction Disorder (IAD) is characterized by excessive or poorly controlled preoccupations, urges, or behaviors regarding computer use and Internet access that lead to impairment or distress. Surveys in the United States and Europe have indicated prevalence of between 1.5% and 8.2%, with varying diagnostic methods between countries. Cross-sectional studies on samples of patients report high comorbidity of Internet addiction with psychiatric disorders. Several factors are predictive of problematic Internet use, including personality traits, parenting and familial factors, alcohol use, and social anxiety. This chapter describes IAD in terms of proposed diagnostic criteria and reviews existing literature, treatment recommendations, and controversies

Keywords: Internet addiction; Internet addiction disorder; problematic Internet use; behavioral addiction.