

Forensic Evaluation of Problematic Internet Use

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Problematic Internet use appears to be a growing concern in many criminal and civil legal proceedings. Problems range from inappropriate personal use of the Internet in the workplace and excessive use of online games, pornography, and gambling, to cyberbullying among children and adolescents and numerous forms of criminal activity. Forensic psychiatric evaluations may help courts or other agencies to understand individual cases and to discern whether a psychiatric disability may be involved. Furthermore, the forensic psychiatrist may be asked to formulate a prognosis or to suggest which treatments may be helpful. Among the multiple underlying pathophysiologic mechanisms that explain problematic Internet use are: addiction, compulsion, impulse-control problems, and mood disorders. There is no definitive or standard treatment protocol for evaluation or treatment of problematic Internet use *per se*. A comprehensive evaluation should address the underlying psychopathology or personal problems that prompt or contribute to the problematic Internet use. This article suggests approaches that may help forensic psychiatrists to conduct a thorough evaluation with reasonable treatment recommendations. Different formulations of the problem and a discussion of DSM-IV factors are offered to provide starting points for the evaluation and to help psychiatrists to understand how problematic Internet use may relate to Axis I disorders or other factors.

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In the years since the widespread adoption of Internet technology, reports of problematic Internet use (PIU) have increased dramatically. Unfortunately, there is very little published research concerning diagnostic formulations and treatment options for persons with the various presentations of this emerging problem.¹ Individual cases vary considerably, ranging from teenagers whose parents or teachers are concerned about excessive online game-playing to adults who use their employers' computers or networks to access pornographic websites. In 2000, Shapira *et al.* described PIU as "(a) uncontrollable, (b) markedly distressing, time-consuming or resulting in social, occupational or financial difficulties and (c) not solely present during hypomanic or manic symptoms" (Ref. 1, p 268). For this article, I have defined PIU broadly as a problematic behavior or activity related to Internet use, even if the behavior occurs only within the context of other psychiatric symptoms. Because PIU can have a major impact on an

individual's life and may influence, or even result in, legal proceedings, forensic psychiatrists may be asked to evaluate persons alleged to have problems with their Internet use. Approaching such an evaluation may seem a daunting task, because published research on the subject is limited. In this article, I have sought to provide some starting points for consideration when evaluating an individual with PIU.

Types of Cases

PIU may play a role in legal proceedings in several different settings. Schools may suspend students who post discriminatory, harassing, or hateful messages on Internet message boards or who engage in cyberbullying (the use of websites, e-mail, instant messaging, or other technology to harass, humiliate, or intimidate another).^{2–4} Schools or parents may also consult an expert when a promising student's academic record suffers as a result of excessive online game-playing or chatting. Employers may intervene when an employee is found to be using work computers for inappropriate Internet activities, such as viewing pornography, playing games online, shopping on the web, instant-messaging with personal acquaintances, or even compulsive web surfing. In family court, online infidelity,⁵ cybersex,⁶ or other

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excessive or inappropriate computer use may factor into divorce proceedings or custody determinations. In the criminal setting, individuals may be evaluated for actions such as illegal online gambling; terrorist activities⁷; downloading child pornography or sexual solicitation of minors⁸; cyberstalking⁹; engaging in cyberharassment; committing technological crimes; posting threats online; placing postings on blogs, websites, or message boards detailing criminal intentions or confessing to crimes¹⁰; or plotting or making pacts to commit crimes.¹¹ In an extreme case, a teenager in China stabbed his parents, killing his mother, after they refused to give him money to use at an Internet café. The boy was described by press reports to be “heavily addicted” to the Internet.¹² Writing in *The Journal* in 2002, McGrath and Casey¹³ provided excellent insights and suggestions for forensic psychiatrists evaluating criminal cases related to Internet use. The following discussion provides forensic psychiatrists with general background information about PIU that may be applicable to evaluations in both criminal and civil cases, paying special attention to the application of the DSM and differential diagnosis.

PIU appears to be a growing problem in the business world. In a survey of managers, 33 percent reported that their companies had either disciplined or fired an employee as a result of PIU.¹⁴ The most frequently cited problems were inappropriate use of e-mail (31%), viewing pornographic websites on work computers (29%), use of chat rooms at work (14%), game-playing, and web surfing (each 10%). Other problematic activities included stock watching (4%), participating in e-auctions (2%), and visiting news sites or discussion groups (2%).¹⁴ In another survey, over 60 percent of employers had disciplined and over 30 percent had fired employees for PIU in the workplace; 6 of 224 employers reported having been involved in litigation related to inappropriate Internet use.¹⁵ As more members of the wired generation enter the workforce, these numbers may increase.

While PIU may occur in any setting where the Internet is accessible, misuse in a workplace or school setting is often more likely to attract attention or legal action. In such cases, a forensic psychiatric evaluation may be helpful. When IBM fired an employee for his inappropriate use at work of a pornographic chat room, the employee filed a lawsuit under the Americans with Disabilities Act (ADA), claiming that his

Internet addiction was a coping method for his combat-related post-traumatic stress and that IBM wrongfully discriminated against him on the basis of his psychiatric disability.¹⁶ Although the outcome is not yet known, this case may represent the extreme. In *Blakey v. Continental Airlines, Inc.*,¹⁷ an Internet message board was the chosen forum for hostile sexual harassment of a female pilot by male pilots employed by the airline. Forensic experts in similar cases may help courts to understand how harassing behavior, such as workplace mobbing (an organized bullying campaign against one person), may begin and escalate in cyberspace, as well as the impact that Internet harassment can have on the victim. Courts are also seeing an alarming number of child pornography cases linked to workplace,¹⁸ government,¹⁹ or university²⁰ computer networks.

Conducting the Evaluation

Performing a complete multi-axial assessment, including obtaining a complete medical and psychosocial history, is essential to understanding how an examinee's PIU may be related to underlying psychopathology or facets of the individual's personality. As noted by Simon in the context of multiple chemical sensitivity litigation:

The hallmark of a poorly performed forensic psychiatric evaluation is the failure to carefully investigate the litigant's past psychological history. Litigation can divert the examiner's clinical focus so that it becomes fixed solely on the litigant's current symptoms, as if the litigant's life began with the litigation [Ref. 21, p 364].

Simon's observation is equally applicable to forensic evaluations for PIU.

The complete, multi-axial assessment takes into account several important factors, as noted in the American Psychiatric Association's (APA) "Practice Guideline for the Psychiatric Evaluation of Adults"²²: the reason for the evaluation; the history of the present illness; psychiatric history; general medical history; history of substance use; psychosocial/developmental history (personal history); social history; occupational history; family history; review of systems; physical examination; mental status examination; functional assessment; diagnostic tests; and information derived from the interview process. During the interview, one may ask questions to explore possible causes of the examinee's PIU:

When did the Internet use begin? When did the problem develop? For how long has it been a problem?

What is the nature of the problem?

Why does he or she go online? Why the specific behavior that is causing the problem?

What are the associated feelings and fantasies?

What are the negative consequences?

Has he or she tried to stop? If so, what happened? Did he or she experience any symptoms of withdrawal?

What positive reinforcement is there for the behavior (e.g., questions of possible antisocial personality disorder if activities were designed to deceive or defraud others)?

Does the examinee feel remorse or regret about the behavior?

Has he or she taken steps to conceal the Internet activity? (e.g., minimizing the Internet window when one's spouse or coworkers walk past, secrecy about computer use, borrowing coworkers' computers so as to conceal identity, using software designed to clean hard drives or caches, stealing others' passwords, or hacking into remote computers; such actions should suggest that the individual is aware of the inappropriate nature of his or her computer use).

Has reality testing been used?

Are there other instances of repetitive or compulsive behavior?

To complete the information gathering, the APA also stresses the importance of getting information from collateral sources, such as the examinee's employer and significant others.

While the APA's recommendations are relevant to both clinical and forensic evaluations, additional investigative research may be necessary in the forensic evaluation. Consider performing a few web searches to explore the examinee's web presence, if any. A Google search of an examinee's name, alias, or e-mail address may yield information that the examinee is unwilling to disclose.²³ One might also search for the examinee's name, alias, or e-mail address at specific websites, such as MySpace.com, or blog sites such as livejournal.com. In criminal cases, and possibly also in some civil settings, the forensic psychiatrist may

request access to logs and records of the examinee's Internet activity, obtained by permission, warrant, or subpoena from the individual's personal computer, Internet service provider (ISP), or network. Employers may have such records readily available, and in many cases, employees have been forewarned that their computer activity will be monitored.

Inspecting personal computers and activity logs may yield more information about an examinee's PIU, but may require consultation with information technology (IT) specialists. With individuals who deny PIU despite evidence that PIU has occurred, it is possible that Trojan horses or other software may have automatically accessed websites without the user's participation or knowledge. Special caution may be warranted when accessing unfamiliar websites. University and employer computer networks typically "flag" any user who attempts to access content deemed inappropriate by IT policies, such as pornographic or gambling websites. In addition, the forensic psychiatrist should ensure that he or she has consent or permission to conduct research involving nonpublic records, such as search logs and chat logs.

There are already some scales available by which one might assess the extent and impact of an individual's PIU. The Internet Consequences Scale (ICONS), for example, is designed to assess numerous aspects of an individual's Internet use, including physical, behavioral, economic, and psychosocial consequences of use.²⁴ Beard²⁵ has also published a helpful set of sample questions to assist evaluations of persons with suspected Internet addiction. Shepherd and Edelmann²⁶ tested a questionnaire to determine reasons for Internet use in evaluating a possible link between Internet use and social anxiety. Charlton and Danforth²⁷ conducted a study of online game players and concluded that standard criteria for diagnosing addiction may not be appropriate for distinguishing addictive computer use from mere high engagement. Questioning the examinee about the Internet behavior and observing the examinee may be more instructive than reviewing the individual's results on standardized screening measures. For example, a young woman with anorexia nervosa who has been visiting pro-ana (pro-anorexia) websites or blog rings may have been coached by her peers in ways to avoid detection by health professionals and family members.

During the evaluation, questions may focus on areas to address in therapy. For example, if John Doe

was referred for evaluation after his employer's discovery of pornography on his work computer, one might ask whether he has access to appropriate outlets for his sexuality outside the office. If his home computer is shared with his young children, he may have avoided accessing pornography at home to protect his children. It may be helpful to explore psychodynamic issues. Bergner,²⁸ reporting on the etiology and treatment of compulsive sexual behavior, posits a theory of sexual compulsion as attempted recovery from degradation and offers a case study of a man whose compulsive use of Internet pornography was found to be related to his feelings of inadequacy and degradation. Once the man's feelings of degradation were addressed in therapy, his PIU resolved. Bergner's report is relevant not only for cases of online porn addiction, but also for other forms of PIU. The adolescent who spends hours playing games online, role-playing as a powerful wizard, may be attempting to resolve feelings of helplessness and frustration provoked by Axis IV psychosocial factors.

Developing a prognosis may be especially challenging due to the dearth of longitudinal and treatment-related studies. With respect to specific activities, some trends have been noted that may be helpful. Researchers in The Netherlands determined that online game-playing and viewing online erotica predicted later development of PIU at one-year follow-ups,²⁹ suggesting that for some examinees, treatment may indeed be necessary to address the problem. Age and other demographic variables factor into the problem as well, and patterns of use may change over time. Online gaming sites, many of which are designed to appeal to teenagers, often have promotional links to Internet gambling sites³⁰; what starts as a gaming hobby could turn quickly into a gambling problem. For some individuals, however, PIU may eventually resolve without treatment. Predicting whether PIU will resolve on its own is extremely difficult, as many variables are involved. While there are some case reports in the literature,³¹⁻³⁴ there is currently a need for more empirical research into PIU.

Diagnostic Formulation

Much of the available literature on PIU focuses on the notion of Internet addiction and whether problematic or excessive Internet use can or should be classified as an addiction, an impulse control disorder (ICD), or a compulsive behavior. The American

Medical Association (AMA) has recently debated whether to recommend including video game addiction in the DSM-V, for example.^{35,36} While overall, East Asian research tends to formulate the problem as an addictive disorder (i.e., Internet addiction disorder,³⁷ or IAD), particularly in the context of excessive online game-playing among adolescents,³⁸ Western research in recent years has questioned this diagnostic label for PIU.²⁷ As Mitchell³⁹ noted in *The Lancet*, a study published by Young⁴⁰ fueled the controversy by noting that most regular Internet users were dependent on the medium. Yellowlees and Marks⁴¹ provide a helpful review of research on the Internet addiction debate, concluding that the limited evidence suggests that, rather than being a disorder in its own right, Internet addiction seems more likely a problem that emerges through specific activities online, frequently related to pre-existing problems.

The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) sets forth the criteria for diagnosing and distinguishing between substance abuse (Ref. 42, p 182) and dependence (Ref. 42, p 184), but does not elaborate on the nature of an addiction, which is often characterized by a pattern of potentially problematic behavior performed to gain or maintain access to a substance of abuse. Of note, problems associated with PIU closely resemble those seen in patients with substance use disorders (SUDs): social problems, including divorce; personal distress over substance abuse; school or job problems resulting from use; debt or other financial consequences of use; and legal problems related to the substance or activity of abuse.⁴³ Scientific research has contributed significantly to the understanding of how pathways, systems, and structures in the brain are involved in the development and persistence of substance-based addictions⁴⁴; future studies may help to clarify how PIU is related to SUDs and ICDs. For PIU, abuse may be common, but dependence and withdrawal may be rare. Forensic evaluators are urged to consult the wording of the DSM's descriptions of substance abuse and dependence before deciding whether to classify an examinee's behavior as an Internet addiction.

Another term that has been used in the literature is compulsive computer use or compulsive Internet use. The DSM-IV defines a compulsion as "repetitive behaviors (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating

words silently) the goal of which is to prevent or reduce anxiety or distress, not to provide pleasure or gratification” (Ref. 42, p 418). For most individuals with PIU, the problematic behavior provides some type of intrinsic pleasure or gratification. Examples of obsessive–compulsive behavior on the Internet may involve excessive drafting and redrafting of e-mails or excessive checking of weather websites to ensure that one’s home is safe from a tornado or hurricane, where the reward for such behavior is the decrease of internal anxiety. The DSM-IV cautions diagnosticians to avoid mislabeling a repetitive or excessive behavior as compulsive:

Some activities, such as eating (e.g., Eating Disorders), sexual behavior (e.g., Paraphilias), gambling (e.g., Pathological Gambling), or substance use (e.g., Alcohol Dependence or Abuse), when engaged in excessively, have been referred to as “compulsive.” However, these activities are not considered to be compulsions as defined in this manual because the person usually derives pleasure from the activity and may wish to resist it only because of its deleterious consequences [Ref. 42, p 422].

PIU may fall into such a category for some users.

An important diagnostic category that has received attention in the recognition and treatment of PIU is that of impulse control disorders (ICDs). According to the DSM-IV:

The essential feature of [ICDs] is the failure to resist an impulse, drive, or temptation to perform an act that is harmful to the person or to others. . . . The individual feels an increasing sense of tension or arousal before committing the act and then experiences pleasure, gratification, or relief at the time of committing the act. Following the act there may or may not be regret, self-reproach, or guilt [Ref. 42, p 609].

Several researchers have noted that a diagnosis of impulse control disorder, not otherwise specified (ICD-NOS), may be appropriate in many cases of PIU⁴⁵ and that other ICDs, such as compulsive shopping, frequently co-occur in persons with PIU.⁴⁶ Shapira *et al.*¹ found that every subject (100%) in a study of persons with PIU met DSM-IV diagnostic criteria for ICD-NOS. Grant *et al.*, in describing some types of ICDs as “behavioral addictions,” note that “[b]iochemical, functional neuroimaging, genetic studies, and treatment research have all suggested a strong neurobiological link between pathological gambling [which is classified as an ICD] and substance use disorders” (Ref. 47, p 929). During the evaluation, it may be advisable to screen for other ICDs, such as pathological gambling, as well as SUDs, since these disorders frequently co-occur and share many clinical features.⁴⁸

Internet use affords an outlet for various behaviors in different individuals, or even seemingly conflicting behaviors in a single individual. The real or perceived anonymity of Internet communication can fuel behaviors less likely to occur offline,⁴⁹ such as confessions to socially unacceptable or stigmatized activities or experiences,⁵⁰ discussion of personal mental health difficulties,⁵¹ sexual solicitation of strangers,⁵² and rude, insulting, or harassing behavior known online as flaming. In a letter published in the *American Journal of Psychiatry* in September, 2006, Howes³¹ reports a case of a depressed woman, with no personal or family history of psychiatric illness or substance abuse, who compulsively stalked her ex-boyfriend via text messages on his cell phone. While cell phone text messages differ slightly from Internet communication, similar cases may appear in PIU, such as stalking by e-mail or instant-messaging technology. The Internet’s tendency to elicit disinhibited behavior, termed the online disinhibition effect,⁵³ is an important factor to consider when conducting a psychiatric evaluation. This effect, combined with the vast number of individuals online and the ease of information transmission, plays a role in the spread of activities or ideologies otherwise proscribed or marginalized by society. Examples include pro-pedophilia groups⁵⁴ or other paraphilia identity groups, hate groups, pro-suicide or pro-self-injury groups, cults, websites containing gruesome images of injuries and death, pro-eating-disorders communities, terrorist groups, and so forth.

Not all socially stigmatized behaviors online represent an underlying psychopathology. Behaviors often considered pathological or deviant in the real world, may be common in Internet activities, particularly in online role-playing games. Furthermore, for some individuals, seemingly excessive Internet use may serve as a tool to help increase confidence and may even play a therapeutic role in some cases.⁵⁵ Allison and colleagues³² report a case of an 18-year-old man whose obsession with playing games online, while causing significant impairment in his daily life, provided a necessary reprieve from the distressing symptoms of his anxiety disorder. Some online games and role-playing communities, such as Second Life, even involve the exchange of real currency; for some skilled gamers and programmers, online game-playing can be a *bona fide* means of generating income.⁵⁶ Similarly, use of online pornography or cybersex, while defying social norms, should not

automatically be viewed as evidence of psychopathology. For some individuals (e.g., hypersexual manic patients), the Internet offers a safe forum in which to explore fantasies without the risk of contracting sexually transmitted diseases or other potentially negative consequences associated with offline experimentation.

However, excessive use of the Internet should arouse suspicion of an underlying psychopathology, particularly if marked by sleep deprivation, a decreased need for sleep, or an impairment in psychosocial or general functioning, such as poor job performance, problems at school, interpersonal difficulties, and neglecting personal hygiene or nutritional needs. Some individuals may become so engrossed in a fantasy reality online that real-world needs and responsibilities are neglected. Some behaviors, although occurring only online, may have real, deleterious consequences in the person's life. Online infidelity and cybersex addictions, for example, frequently result in severe marital difficulties similar to those associated with offline affairs, often leading to separation and divorce.⁵⁷

Discussions about the classification of PIU often seek to identify Internet-related problematic behaviors as distinct from related psychiatric conditions. However, psychiatric comorbidity appears to be highly prevalent in subjects with problematic computer use.⁴⁶ Data concerning epidemiology and prevalence rates of psychiatric comorbidity in subjects with PIU are limited, and most of the published research involves small sample sizes. However, researchers have noted that excessive Internet use over time is often linked with increased depression and social isolation.⁵⁸ One study found a surprisingly high prevalence (70%) of bipolar disorder among subjects with PIU.¹ In another sample, slightly over half of individuals with compulsive computer use met criteria for at least one Axis II personality disorder, most frequently Cluster B types.⁴⁶ One should consider the possibility that the examinee's Internet use is "simply a symptom of other disorders such as pathological gambling, a paraphilia, or bipolar disorder" (Ref. 43, p 208). The clinician may screen for symptoms of mania, such as pressured speech or flight of ideas. Bizarre delusions, in conjunction with excessive use of conspiracy theory websites, may lead to a suspicion of schizophrenia or other schizophreniform disorders.

Almost any Axis I or Axis II condition may manifest in the form of PIU, and the person's behavior

may be maladaptive or, possibly, therapeutic. Consider several examples:

Depressed persons may use the Internet to isolate themselves further or to research suicide methods online (maladaptive), or they may use chat rooms or message boards to obtain support and encouragement from others (therapeutic).

Manic individuals may use Internet chat rooms to engage in sexually explicit chat with strangers, to share excessive personal information about themselves, or even to meet sex partners. They may engage in excessive chatting or blogging; may spend enormous amounts of money at online auction, shopping, or gambling sites; or may use the Internet as a forum for increased goal-directed behavior.

Individuals with substance-abuse problems may use the Internet to purchase drugs online⁵⁹ or to chat with others who either encourage their drug use or urge them to get treatment.

Hypersexual disorder may manifest as excessive consumption of Internet pornography.³³

People with psychotic symptoms may become so immersed in the virtual reality of online role-playing games (RPGs) or conspiracy-theory websites that they may exacerbate psychotic symptoms and reality distortion. Adolescents with schizotypal personality disorder (SPD), who spent less time socializing in real life than control subjects, were found to spend more time in online social activities than their non-SPD peers.⁶⁰

A person with schizophrenia, schizoaffective disorder, or schizotypal personality disorder may develop delusions about thought insertion, monitoring, or persecution via the Internet, particularly if the person is not very familiar with the Internet.^{61,62}

Anxious persons worried about their health, or individuals with somatization or somatoform disorders, may research medical conditions or symptoms online, perhaps excessively or compulsively.

Individuals with avoidant personality disorder or social phobia may be drawn to the anonymity the Internet seems to offer; for some, Internet-based socializing may become problematic (e.g., worsening of avoidant coping behaviors, disinhibited

rage or hostility toward others online, abuse of blogs or websites for cyberharassment or libel, and overidentification with Internet hate groups or cult message boards).

Attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD) may prompt PIU, as forums such as chat rooms are rarely governed by the rules of face-to-face social conduct. In children, attention deficit hyperactivity disorder has been suggested as a risk factor for the development of Internet addiction.⁶³

Someone with an ICD or borderline personality disorder may spend hours engaged in online gambling⁶⁴ or online game-playing. He or she may access neutral materials in an inappropriate setting—for example, perusing eBay listings or shopping websites on an employer's computer.

People with histrionic or narcissistic personality disorders may spend excessive amounts of time creating personal web pages or blogs, or they may post inappropriately revealing photos of themselves online.

A usually mild-mannered person may express disinhibited rage while online and shielded from face-to-face personal contact. If this rage is excessive, threats may be grounds for a restraining order. Although disinhibition may have unmasked the rage, the individual may be expressing a serious psychiatric symptom, such as manic grandiosity.

The use of cyberspace avatars, role-playing, controlled self-presentation online (e.g., through blogs, homepages, and social networking sites), or the formation of an online persona distinct from the individual's personality or behavior offline may have implications for the treatment of patients with borderline personality disorder or other patients with identity-related problems (e.g., adolescents, victims of trauma, gender identity disorder, and dissociative identity disorder). For example, overidentification with a cyberspace persona may promote confusion about one's real-life identity.

The phenomenon of self-diagnosing and even self-prescribing and purchasing medicines online⁶⁵ has important implications for the evaluation and treatment of individuals with hypochondriasis, somatoform disorders, delusional

disorders, Munchausen syndrome,⁶⁶ factitious disorders, and malingering.

Underlying brain damage or other medical or neurological conditions may also provoke PIU, such as excessive use of religious or prayer websites in temporal lobe epilepsy.

Internet use may have special implications for individuals with dissociative symptoms or fugue states. Distinguishing dissociation from mere disinhibition online may be an important task for the forensic psychiatrist in such a case, as this distinction may influence judgments of culpability in criminal cases (e.g., an insanity plea for criminal activity that occurred online such as sexual solicitation of minors or threats against the president).

An important question is whether a psychiatric problem, such as depression, prompted the Internet problem, or whether the psychiatric symptoms may have been, at least in part, precipitated by the Internet use or its negative consequences.

Suggesting Treatment Recommendations

Because PIU can mean something different for each person, there is no single prognosis, nor any single recommended treatment model for PIU *per se*. PIU is often a secondary manifestation of an underlying problem, whether a full-blown Axis I disorder or simply a dynamic problem to be explored in therapy. Treatment recommendations should focus on addressing the primary problem that prompted the Internet behavior. If the PIU appears to be triggered by depressive symptoms, for example, treatment recommendations might focus on addressing the depression. The examinee may suffer from comorbid illnesses (for example, ICD-NOS with a co-occurring SUD), which may complicate treatment recommendations. As PIU is a newly emerging problem, empirical research on treatments is limited to case reports and small studies. Young⁶⁷ conducted a survey of Internet addicts who received cognitive behavioral therapy (CBT) to address their PIU; most had made significant progress on clinical benchmarks by the eighth session, and results were maintained at six-month follow-up. A small, 16-week trial of group treatment incorporating CBT, motivational interviewing (MI), and readiness-to-change interventions found improvements in quality-of-life and depres-

sion scores, but not in measures of PIU, in men with problematic Internet-enabled sexual behavior.⁶⁸ Until the literature features more large-scale clinical trials of treatments for PIU, determining the best treatment for a particular individual may be challenging.

Although this article offers several suggestions as starting points for forensic evaluators to consider when formulating treatment recommendations, readers are cautioned to conduct their own analyses, as emerging research may shed light on which treatments are most effective in reducing or eliminating PIU. Until further research is available, evaluators may nonetheless draw upon an understanding of the examinee's underlying illness or pathology to help inform treatment decisions. The following suggestions are drawn from clinical experience.

CBT may be helpful for many individuals with PIU, particularly when the Internet use is characterized by ego-dystonic behaviors. If the use is addictive, then therapies helpful in the addictions setting, such as MI, supportive psychotherapy, 12-step facilitation, and relapse prevention, may be helpful. Behavioral interventions may call for restricting computer or Internet access or installing Internet filtering software or blocking programs that prevent the user from accessing particular websites or types of websites. Recommendations about software or technological measures may require consultation with an IT specialist. For long-term management, self-help support groups may be useful. One might recommend Gamblers Anonymous for online gambling problems; Sexaholics Anonymous for cybersex addictions; or even On-Line Gamers Anonymous (OLGA), a 12-step group to help those who engage in problematic online gaming.⁶⁹ If the individual needs help with emotion regulation and impulse control, methods such as dialectical behavior therapy (DBT) may be helpful. Interpersonal therapy (IPT) and family therapy may be beneficial if an individual has suffered social problems as a result of PIU (e.g., marital difficulties from cyberaffairs or conflict with parents and siblings over excessive online gaming). Vocational counseling and referral to employee assistance programs (EAPs) may be appropriate if the individual's PIU has adversely affected his or her employment or professional standing. Because little or no empirical research is currently available to support treatment recommendations for PIU *per se*, the forensic psychiatrist may choose to recommend periodic monitoring or re-evaluation to determine whether a chosen

treatment has been helpful or whether the person might benefit from trying a different therapy.

Special caution is warranted when making recommendations about particular pharmacotherapies. While PIU often shares many features with problematic sexual behavior, psychotropic medications that have shown some efficacy in treating sexual behavior problems, such as selective serotonin reuptake inhibitor (SSRI)-based antidepressants, may not be as effective in addressing PIU. There are little to no scientific data supporting the use of antidepressant pharmacotherapy in the treatment of PIU in general. Contrary to an initial hypothesis that individuals with PIU would have a high prevalence of depression and would respond well to antidepressant pharmacotherapy, Shapira and colleagues¹ found that study subjects responded better to mood-stabilizing pharmacotherapy than to antidepressants and that bipolar disorder was more common in the sample than unipolar depression. While it may seem logical to recommend an SSRI for an examinee whose Internet use centers on sexual interests (e.g., excessive web surfing for pornographic images or soliciting sex partners in chat rooms), the psychiatrist should consider that such behavior may be symptomatic of mania or hypomania and that antidepressant therapy may have the undesired effect of worsening manic symptoms. Above all, forensic evaluators should resist the temptation to apply a one-size-fits-all approach to the evaluation, diagnosis, or treatment of individuals with PIU. The evaluation may necessitate a substantial investment of time and careful analysis, but the reward may be significant, as this is a newly and rapidly developing field in which the forensic psychiatrists' expertise may be especially valuable.

Conclusion

Forensic psychiatrists can help employers, schools, parents, and courts to understand the implications of PIU. The forensic evaluation should focus on obtaining a complete history, screening for any Axis I or Axis II symptoms that may relate to the individual's Internet use, and attempting to uncover any related dynamic problems to address in therapy. Not all individuals with PIU necessarily have a diagnosable Axis I or Axis II psychiatric disorder, and in some, the problems resolve on their own over time. Prognosis and treatment recommendations vary from case to case, and, like any psychiatric evaluation, depend on

a variety of factors, including Axis I disorders, Axis II traits or tendencies, and Axis IV stressors and triggers. An Axis I disorder may be a precipitant or a consequence of PIU, and, therefore, treatment must focus on the primary problem for successful resolution. Some trial-and-error and monitoring or re-evaluation may be necessary until further research on treatments becomes available.

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