



Case Report

Cyber Mania Secondary to Internet Addiction: A brief review on co-occurrence of Behavioral Addiction and Bipolar Disorder-Dual Diagnosis

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Abstract

The Internet is a widely accessible interactive medium. Statistics show significant growing Internet usage in the United States (US) from 2005 to 2018. In the most recently reported year, over 300 million internet users accessed the web from the US, and worldwide 3.17 billion. Undoubtedly the Internet has become an essential educational, recreational and communication tool; however, its excessive use may lead to negative impacts on individual psychological well-being, family relationships, emotional stability, and daily life functions. This phenomenon is defined as Internet Addiction (IA) or Problematic Internet Use and is considered to be a type of behavioral addiction. IA is an emergent disorder which poses a serious clinical threat. Surveys in the US and Europe have suggested the prevalence rate of IA between 1.5%-8.2%; some have suggested that 1 in 8 Americans suffer from IA. The figures are even higher in countries like in Korea and Taiwan, where the prevalence of IA has been reported to be greater than 31%. The principal objective of this paper is to explore the association of Cyber Disorders, e.g. Internet Addiction and psychiatric co-morbidities like mood disorders, substance abuse, ADHD, anxiety, social phobia, exemplified by this case report of bipolar disorder.

Keywords: Behavioral addiction, bipolar disorder, cyber mania, internet addiction, pathological internet use

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The Internet is a widely accessible interactive medium. Recent statistics show significant growing Internet usage in the United States from 2005 to 2018. In the most recently reported year, over 300 million internet users accessed the web from the United States, and worldwide 3.17 billion.^[1] Undoubtedly the Internet has become an essential educational, recreational and communication tool; however, excessive use of the Internet may lead to negative impacts on individual psychological well-being, family relationships, emotional stability, and daily life functions. This phenomenon is defined as Internet addiction (IA) or Problematic Internet Use (PIU) and is considered to

be a type of behavioral addiction (BA). Other terms have been used to describe the negative effects of Internet use, including 'compulsive Internet use,' 'pathological Internet use and 'Internetomania.'^[2] IA is an emergent disorder which poses a serious clinical threat. Surveys in the United States and Europe have suggested the prevalence rate of IA between 1.5% to 8.2%; some have suggested that 1 in 8 Americans suffer from IA.^[3] The figures are even higher in countries like in Korea and Taiwan, where the prevalence of IA has been reported to be greater than 31%.

IA has been classified as an obsessive-compulsive disorder, impulse-control disorder or a BA. However, the inclusion

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of Internet Gaming Disorder in the updated version of the Diagnostic and Statistical Manual of Mental Disorders (5th ed.) (DSM-5) encourages the consideration of IA as a classified behavior addiction.^[4] IA is a broader classification which should comprise Internet Gaming Disorder and other forms of pathological use of the internet.^[5] The term IA itself highlights the link between PIU and BA. The mechanisms of action behind IA are not well established. However, one of these theories suggests a cognitive behavioral model where IA may result when some psychological factor causes an individual to be vulnerable to dependence on new online content, which is followed by obsessive thoughts and then the perception that the Internet is a "friend."^[6]

Case Report

We present a case of a 46-year-old Caucasian female presented in a manic episode, as is commonly seen in psychiatric emergency rooms. The presentation, however, was unusual in that the mania was intermeshed with IA, a syndrome we propose to call "Cyber Mania." Our patient was found to have multiple accounts on social networks, including Facebook, Twitter, Myspace, and videos on YouTube. Content included falsification of educational background, depicting an Ivy League education. The patient also posted a resume on the internet portraying herself as an extraordinary espionage professional, dealing with international relations and secret services. In conjunction with her alleged profession, she revealed that she had created a dual identity, supported by numerous fabricated online identity documents. During the hospitalization, the patient had spent most of her recreational activities time using the Internet for unusual activities like ordering business cards representing herself as a security agency official, shopping online, chat rooms, and sending emails to offices of U.S. Government officials. Her symptoms included characteristics of BA similar to substance use disorders, including salience, withdrawal, loss of control, functional impairment, "lying", escape, and relapse. An important clinical aspect of this case, despite the cessation of the manic episode and the stabilization of her bipolar symptoms, was the patient's continued exhibition of symptoms of the excessive Internet use, behavior which supports the idea of IA as a distinct psychiatric disorder. In this paper, we discuss various aspects of cyber disorders, particularly IA, in association with coexisting psychiatric illnesses.

Internet Addiction & Psychiatric Disorders

People with IA clinically can present with obsessive/compulsive behaviors, social withdrawal, increased restlessness, irritability, low self-esteem, anxiety, self-injurious behavior, problematic alcohol use, insomnia, even psychosis, or with-

drawal when access to the Internet is limited or denied. Numerous studies have demonstrated strong associations between "Cyber Addiction" and coexisting psychiatric disorders like mood disorders, anxiety disorders, ADHD and substance abuse. Carli et al.^[7] published a systemic review of 22 articles that reported that 75% of pathological internet users suffer from depression, 66% from hostility or aggression, 60% from OCD, 57% from anxiety, and 100% from ADHD. Another study reported 26.3% of patients with IA suffer from depression, 23.3% from anxiety and 21.7% from ADHD.^[5] Bozkurt et al. studied 60 subjects with IA, ages 10–18 years; the study found 100% of subjects had at least one and 88.3% had at least two comorbid psychiatric disorders. The most common psychiatric disorders were ADHD 83.3%, social phobia 35.0%, and major depressive disorder 30.0%.^[8] Given the high rate of coexisting mood disorders, suicidal ideation and suicidal attempts may be another grave concern regarding persons with IA. Depression, low-income, low family support, and low self-esteem are all associated with both suicidality and suicide attempts, but rates of suicidal ideation and suicide attempts persist significantly in internet addicts even after controlling for confounding effects of depression, family support, and self-esteem.^[9] This persistence supports the idea that IA is a distinct, primary addictive disorder, as consequential as other substance abuse disorders and psychiatric illnesses. However, most of these studies fail to establish if the psychiatric illness is the cause leading to the effect of IA or vice-versa. We have limited evidence from longitudinal studies that suggest that some psychiatric disorders may occur before the development of IA, and others may result from IA. More research with larger samples and more systematic evaluation of psychiatric conditions is necessary to confirm the complex transactional relationship between cyber addiction and mood disorders and suicidal ideation.

Various studies have focused on IA and psychiatric comorbidities such as depression, anxiety, ADHD, and alcohol use disorder, and associations between BA and BD have been studied, however, there is not much emphasis on the association between IA and BD. The prevalence's rate of comorbidity between BD from PIU to IA among BD was 1–7%.^[10–12] In 2000, Shapira et al.^[13] reported that 55% of participants with IA met criteria for BD. In 2015, Wolfing reported a relationship between BD and IA with the use of the Mood Disorders Questionnaire. They found high frequent usage of social networking sites to be predictive for BD in IA. Their study showed high rates of comorbidity between BDs and IA.^[14] Sevelko found that participants with IA were more likely to have substance-use disorders, mood disorders, and eating disorders compared to participants without IA.^[15] In 2018, Farahani showed that BD increased the odds of IA by

1.1-fold.^[16] Wolfling et al. suggested excessive internet use in the setting of BD may be explained by a manic episode and in this case, BD should be the primary diagnosis. However, for this to be true the excessive internet use has to cease with the end of the short time period of the manic episode. As with our model case, if the patient's excessive internet use continues with the stabilization of the BD and therefore the manic episode, the preoccupation of internet activities during the manic episode should be thought of as a separate entity we proposed to be called Cyber Mania. In Cyber Mania, the patient has chronic IA with comorbid BD but the preoccupation in the manic episode is focused on internet activities.

Discussion

Addictive tendencies are evoked by our evolving relationships with digital social media. People who suffer from cyber addiction decrease their interest in face-to-face relations and diminish their connections in the real-place world. These "connection addicts" prefer to stay online and isolate themselves, choosing "tele-cocooning," making all connections without face-to-face contact, which is further described as a feeling of being so satisfied that one hardly ever goes out into the world, even for vital needs of daily life.^[17] Current evidence is limited that confirms cyber addiction as a unique mental health diagnosis, but it strongly fits into the category of behavioral addictions. Cyber addiction shares all the characteristics of other forms of addictive dependence, including loss of control, inability to reduce addictive consumption, the phenomenon of tolerance, feelings of craving, withdrawal symptoms, and relapse. This perspective on behavioral addictions is supported by the DSM-5, which formally recognizes gambling disorder as a behavioral addiction. Our case report adds another disorder, either a form of behavioral addiction or a separate mental health diagnosis. The patient in this case report continued to show addictive characteristics even after cessation of her manic episode and remission of her symptoms of BD. The patient continued to demonstrate excessive concern and increased restlessness when denied access to the internet, compulsive motivation to use the Internet, obsessive anticipation and frequent inquiry about pending computer access hours, and willingness to promise medication compliance in exchange for Internet access. We propose to call this patient's mixture of addictive and manic features "Cyber Mania."

A growing literature strongly suggests that cyber addiction is associated with severe psychological impairment. In light of this growing evidence, WHO task force is considering the integration of behavioral addiction as a new diagnostic category, with computer and IA as a subcategory. New areas

of research should include the development of standard diagnostic instruments to assess cyber-disorders in order to better understand the role of the compulsive use of the Internet in other established addictions and psychiatric conditions like major depression, ADD, and BD.

Limitations

The limitations of current case report is lack of methodological rigor. Single case study may stuffer to provide a basis for generalization of findings; however, the findings of indexed case could be applicable to larger patient populations in similar circumstances.

Disclosures

Informed consent: Written informed consent was obtained from the patient for the publication of the case report.

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