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CASE REPORT

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Internet gaming disorder: A case report

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ABSTRACT

Internet use and video game playing are experiencing rapid growth among both youth and adult populations. Internet gaming is one of the most popular sources of entertainment for people in all ages, but excess playing this game causes negative consequences including video game addiction. Internet gaming disorder (IGD) is not currently a recognized diagnosis in the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5). However, IGD has been noted to warrant further research for possible future inclusion in the DSM. The excessive usage in the majority of cases was purely symptomatic and was highlighted how the subject used the Internet or computer to counteract other problems. IGD strongly resembles substance and gambling addictions. Such characteristics include tolerance, withdrawal, and social and occupational neglect resulting from increased time invested in video game use and acquisition. We report a case of 20-year old student who used to addict Internet video gaming to counteract his stress and social problem.

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Introduction

Internet addiction (IA) or Internet gaming disorder (IGD) is a lack of ability to control Internet use and involvement leading to progressive loss of control. Internet addicts use the web as a social and communication tool to counteract stressors, once they experience higher level of pleasure and satisfaction when online than in real life [1]. Social and occupational impairment resulting from excessive video game use has been frequently described "pathologic" [2–4]. The past two decades have witnessed an evolution in the use of digital technologies; the implementation of advanced hardware and software is greatly shaping modern society. Several names for IA have been proposed starting with IA, pathological Internet use, excessive Internet use, compulsive Internet, and Internet dependence. Massive multiple player online role playing games are the most used application now a days.

The Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5) first acknowledged IGD in 2013 [5]. However, it was incorporated into the appendix and not formally listed as a diagnosis since more research is needed regarding its pattern of co-morbidity, course, outcome, and treatment [6]. Under the new DSM-5 frame work, IGD refers to the "persistent and recurrent use of Internet to engage in games, often with other players, leading to clinically significant impairment or distress as indicated by five (or more) in 12-month period." Current studies suggest that multiple health and medical problems are associated with excessive video game use such as epileptic seizures, enuresis, encopresis, obesity [7,8], wrist pain, neck pain [9], tenosynovitis, sore tendons, and numbness of fingers. Sleep abnormalities [10] and repetitive strain injuries. In relation to personality traits, gaming addiction has been shown to have association with neuroticism,

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aggression and hostility [11], avoidant and schizoid interpersonal tendencies, loneliness, social inhibition, boredom inclination, diminished self-control, and low self-esteem [12]. Gaming addiction to be associated with variety of comorbid disorders these includes, attention deficit hyperactivity disorder [13], symptoms of generalized anxiety disorder, panic disorder, depression, social phobia, and various psychosomatic symptoms [14]. There are now a relatively large number of studies all indicating that excessive video game play can lead to wide variety of negative psychosocial consequences for minority affected individuals. These include sacrificing work, education, hobbies, socializing, time with partner/family, and sleep, increased stress [15], an absence of real life relationships, lower psychosocial well-being and loneliness, poorer social skills, decreased academic achievement [16], aggressive/oppositional behavior, decreased verbal memory performance, and suicidal ideation [17].

The activities such as gambling and video gaming may have internally addictive properties because of operant conditioning, operant conditioning refers to the way the consequences of our actions will either inhibit or reinforce the behaviors. If the individual feels rewarded, he or she is more likely to engage in that behavior again. B. F. Skinner's research demonstrated that when the reward becomes unpredictable but frequent enough, this has the strongest effect on increasing the behavior. This is the primary principle at work in gambling and one of the most important principles in video gaming [18]. In addicted gamblers, there is a diminished hypothalamic pituitary axis (HPA) response, implicating physiological change associated with addictive behaviors associated with the down regulation of the HPA pathway [19]. There are different type technology addiction, such as IA, media addiction, mobile addiction, and video game addiction. Addiction is defined as "a dependence, on an activity or behavior that a person has no power to stop doing it." Here video game addiction as a "real" disorder and it is not classified as a clinical disorder due to lack of researches in this field. Popularity of video games is growing in rapid way, and some anecdotal reports shows that this kind of games are highly addictive, some video game players spending more than 50 hours weekly playing video games.

Case Report

A 20-year old university student was referred by his family physician for psychiatric evaluation. He has no past or family history of psychiatric illness. His mother said that he is very bright and good student of computer programming and he used to solve their official file completion work through his computer. His parent had high expectation from him regarding his academic performance and they have always praised and encouraged him, as he is a computer perfectionist. His mother also complaining about his behavior like: decreasing in academic performance, decreasing the time which is given him for studying and doing home works, spending more time playing video games, decreasing in work performance, inability to quit playing, staying up too late night in order to play, neglecting the important responsibilities while playing, aggression toward family member who try to limit or prevent access to the video games, and other problems like: difficulties and changes in sleeping patterns, decreasing in personal hygiene, irregular or poor eating habits, headaches, red or dryness in eyes, and weight gain. Lying to other and blaming on them if they disturbing the game.

We get information during psychiatric evaluation that he started to spend hours on his computer and began playing video games at the age of 7 years. Initially, he used to play an hour on everyday then slowly increased 3–4 hours a day and 5–6 hours or more a day at weekends. During college holidays it increases even more, because he was alone at home whilst his parents are at work. He claims that Internet is the most important things in his life. He said that the Internet can change his mood and he gets pleasure whenever he used to sit on a computer he also feels a compulsion to play video games to get rid of stress from academic study. Whenever he will not get a chance to sit on computer, he gets very irritable and starts to shake. However, he does not view as an "addict," he also said that he can't work or live without it and my social, intellectual life is linked directly to it. He has no friend outside but he made many Internet friends through online chat. He also feels that Internet has improved his level of knowledge. As result of these situations, he started suffering lack of confidence and inferiority complex when dealing with peers and school teachers and his social interaction with family members were limited as a consequences, he gets very sad. This condition worsened day by day and his academic performance declined. Whenever his parents were not allowing sit on computer he become irritable, shouting on them, arguing, not listening them, and becoming angry. He used to spend most of his time inside the house playing with video games, slowly he increased playing

Internet gaming and he used to play online video games 10 hours daily. His family became aware of his actions and stopped assisting him. Then, he started living aloof and detached from them and left university education.

He was referred to us by his family physician. His routine laboratory findings, include complete blood count, serum electrolytes, and renal and liver function test within normal range. After taking the complete history, we diagnose him IGD and we refereed him to our clinical psychologist for his behavioral therapy such as cognitive behavior therapy (CBT), habit reversal therapy (HRT), and reality therapy (RT). During his sessions, he refused to attempt abrupt and complete cessation of video game use; instead, he opted to gradually discontinue his involvement with video games by stepping down the number of hours of daily play. Motivational interviewing (MI) can be used as a part of therapeutic intervention. MI borrows strategies from cognitive therapy, client-centered counseling, and the social psychology of persuasion and contains elements of both directive and non-directive therapeutic approaches. With applied CBT and psychotherapy session for one and half year, he was identified his video game addiction, stop gaming and manage his depression without medication. Slowly, he established his routine work and his sleep and diet improved. He returned to the university, where his social life and academic performances satisfied him and his parents. Using techniques such as open-ended questions, reflective listening, affirmation, and summarization, it helps the individuals give up addictive behaviors and learn new behavioral skills to help individuals express their concerns about change. Family therapy may be necessary among addicts whose family relationships have been disrupted and negatively influenced by IA. Intervention with the family should focus on several main areas: (a) educate the family on how addictive the Internet can be, (b) reduce blame on the addict for behaviors, (c) improve open communication about the pre-morbid problems in the family which drove the addict to seek out psychological fulfillment of emotional needs on-line, and (d) encourage the family to assist with the addict's recovery such as finding new hobbies, taking a long over-do vacation, or listening to the addict's feelings. A strong sense of family support may enable the patient to recover from IA [20]. RT is also given. It is a behavior therapy, which include sessions to show clients that addiction is a choice and to give them training in time management and encourage them to change their behavior by introducing alternative activities [21]. The associations between IA and psychiatric disorders, including attention deficit hyperactive disorder, depression, social anxiety disorder, substance use disorder, and aggressive behaviors, should be thoroughly assessed and treated for cases of IA.

Discussion

This case report presented a pattern of behavior closely resembling as seen in substance and gambling addiction as they are defined in the DSM-5, such manifestation include tolerance and withdrawal and social and occupational impairment. Tolerance is the process whereby increasing amount of particular activity required to achieve the former effects, here patient used to play more video game to get pleasure and euphoric effect to get rid from stress. Withdrawal is the unpleasant feeling state or physical effects that occur when the particular activity is discontinued or suddenly reduced, here patient become irritable and starts to shake when he will not get a chance to sit on computer. Social and occupational impairment, here patient became aloof and detached from family and friends and his academic performance deteriorated and he left the university.

Our patient started spending more time in playing video games to get rid from pressure and stress of academic study, as his family member had high expectations from him regarding his bright academic performance. He appears to use the machine as "electronic friend," a behavior that has been reported with other technological products such as video games. His preoccupation with video games resulted in his poor academic performance and his attempt to conceal his gaming use and its consequences ultimately resulted in loss of family ties, but he still continue gaming. At last he gave up study. Finally, he sought help because he could not reduce gaming use on his own, due to this he struggled with anxiety, irritability, and mild depressed features. After which we referred him to our clinical psychologist for behavioral therapy such as CBT, HRT, RT and family therapy, and psycho-education. During session he opted to gradually discontinue his involvement with video games. There had been a few case reports of treatments with serotonin specific reuptake inhibitors, serotonin non-specific reuptake inhibitors, as well as anti-craving drugs and low dose antipsychotic drugs. The supporting data for use of drugs is very limited [22,23].

Conclusion

It is important to identify the potential comorbidities of IGD, such as social anxiety, depression and others, if we do not identify, it may become insidious and difficult to treat. Also, we should always examine the link between video game and other risk behaviors, such as gambling, drug and alcohol abuse, conduct problem, truancy, delinquency, violence, poor school performance, and sexual activity. Mental health professionals at college and universities should be aware of the sign and symptoms of IGD in order to identify students suffering from the problematic use of video games. With regard to psychotherapeutic intervention, there is little data available and no therapy has been suggested as the gold standard for treatment. Supportive therapy and counseling along with family intervention have helped few patients. Although recently some researchers have supported the use of cognitive behavioral therapy and MI as the most efficient treatment for IA. The supporting data for use of drugs is very limited.

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