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Internet Gaming Disorder

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ABSTRACT

Impacts on the mental health due to ever-increasing Internet Gaming and the urgent need to understand the patterns to assist the young generation in recognizing them and making prudent choices.

Keywords: *Internet Gaming, Mental Health, Psychiatry, Gaming Industry*

Video gaming is a rapidly growing global industry that is projected to be worth more than 300 billion US dollars worldwide by 2025.^{1,2} Online gaming has become very popular in countries like India, which saw a 41.6% increase in the number of users in 2019 as compared to 2018.³ Advancement in computer technology have enhanced the quality and accessibility, mainly so with the advent of mobile gaming.

The development of internet games can be traced back to late 1960's when Ralph Baer, invented a video game system that could be played on a television. In 1972 the device was sold as a video game home console. The same year Atari released Pong, the first video arcade video game. This was followed by a few other notable developments including release of Pac man in 1980, Nintendo's Donkey Kong in 1981 and Microsoft's first Flight Simulator game in 1982.⁴

However, from 1983 to 1985 there was a major reversal in popularity, mainly fueled by the saturation in the gaming industry with over production of low quality, over hyped games like ET by Atari and the advent of personal computers in the market⁴

In 1985 Nintendo entertainment systems entered United states market and started dominating the gaming industry. They released games with improved graphics, sound systems and high quality which piqued the interest of general populace to the world of gaming again.⁴

Gaming industry changed with the meteoric advancement in computer technology and by 1995, 3D gaming entered the market with Sony Play station that dominated the gaming market and became the best-selling game console of all time.⁴

A decade later, Microsoft's Xbox 360, Sony's PlayStation3, and Nintendo's Wii introduced the modern age of high-definition gaming.⁴ The next few years saw the evolution of video games into social media platforms like Facebook, iPhone, android systems making internet games widely accessible and affordable to people of all ages including children and adolescents.

Video games are rapidly evolving and advancing with elaborate story lines based on multiple characters in an alternate reality which have garnered great interest among vulnerable children, adolescents, and young adults. It may inadvertently promote a sociality especially among introverts who may prefer playing with online line players while disguising as characters rather than physical interaction with peers. While video games offer an opportunity to enhance cognitive skills and expand imagination, it may become an addiction if a person spends most of their time playing games at the expense of their social, occupation and family commitments and responsibilities.

Internet gaming disorder has been identified by Diagnostic and Statistical Manual of Mental Disorders, the DSM-5 (1), as a condition that requires further study. It is defined as "Repetitive use of Internet-based games, often with other players, that leads to significant issues with functioning." The person usually develops preoccupation or obsession with Internet games, may experience withdrawal symptoms when not playing internet games, spends more time playing games, fails to stop or curb playing games, experience loss of interest in other life activities, continues to Internet games despite the knowledge of its impact, lies to others about his or her Internet game usage, uses it as an away to escape or has lost or put at risk an opportunity or relationship because of Internet games.⁵

A meta-analysis by Stevens et al in 2020 noted a worldwide prevalence of gaming disorder of 3.05% with males being more predisposed to develop the disorder as compared to females.⁶ Age wise comparison of the prevalence of playing video games ranges from 90-99% among very young children to 45-56% among young adults, with those younger than 35 years being most predisposed to developing a gaming disorder.^{2,7,8} As per centers of disease control and prevention, 46% of high school students in US played games or browsed computer for 3 or more

hours per day on an average school day for work other than school assignments.⁹

Gaming addiction is an emerging concern in developing countries as smart phones are now widely available and more affordable. A systematic review and metanalysis noted that 20% to 40% of college students in India are at risk for internet addiction.¹⁰

Additionally, there has been a significant increase in gaming activities worldwide in the last two years, since the Covid pandemic swept across the globe. There has been a 63% increase in sales of internet games, people are spending, 39% more-time gaming than in the past and the video gaming industry had a market value of \$180 billion in 2021 as compared to \$151 billion in 2019.¹¹

Internet is an ubiquitous medium that allows one to have friends and relationships all over the globe without physical interaction, allowing the user to retain anonymity if needed. Though youth across the board are attracted to it, certain personality traits like neuroticism and lower traits of agreeableness and conscientiousness can make them more vulnerable to develop an internet gaming addiction.^{12, 13} Studies have also showed a correlation between internet gaming disorders and psychological problems like Attention deficient and hyperactivity disorder, depression, and impulsivity. There is some evidence that those with social skill deficit, anxiety, depression, and loneliness gravitate towards internet gaming as a coping mechanism, however engaging in the activity may further exacerbate the existing symptoms. Addictive gaming behaviors are also associated with adverse health and psychosocial outcomes like worsening stress, obesity, insomnia, suboptimal job or academic performance, relationship problems etc.¹³

Though Internet gaming addiction has not been identified formally as a psychiatric disorder, it is well accepted that there are far reaching consequences in severe cases that affect multiple facets of life. Some treatment modalities have been explored and they mainly include cognitive behavioral therapy and pharmacotherapy to treat underlying psychiatric symptoms if any. Other therapeutic modalities that may be useful includes family therapy, motivation interviewing, and other evidence based therapeutic approaches.

The concept of internet gaming disorder is relatively new and there is a lot that needs to be learned and understood about this condition. A few studies have been conducted worldwide however there is lack of consensus in methodological approaches and diagnostic tools used to determine the prevalence of the disorder. Epidemiology, etiology, and treatment of internet gaming is an area with ample scope of research, growth. Also, as Internet gaming is a relatively new concept, we need to have a better understanding of the risk factors, ramifications, consequences, and natural progression of this condition.

An improved understanding of internet gaming patterns and behaviors is paramount to establishing treatment options and guidelines that can help us identify and address this condition and

assist the younger generation in recognizing their behaviors and making more prudent choices.

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