

The Effects of Compulsive Video Game Addiction: A Review Article

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ABSTRACT

According to the Diagnostic Statistical Manual video game addiction is considered as an impulse control disorder, Diagnostic statistical manual-5 states gaming could cause major distress and impairment in personal life. The World Health Organization (WHO) acknowledged what is understood as “gaming disorder” in their 11th edition of International Classification of Diseases (ICD) in early 2018, (Sebouhian, 2021). The recent pandemic has increased online or video game addiction. The aim of this report is to highlight the psychological consequence and neurological effect associated with compulsive gaming. The underlying cause of gamers is explored in the report. The brain behaviour of the gamers and the advantages and the limitations were considered. The study explores the association of aggression, attention, personality trait of the gamers is also addressed in the report. Self-management techniques assist in managing gaming addictions.

Keywords: *Gaming, Addiction, Brain behaviour, Personality & management.*

As the pandemic hit, people tend to associate themselves with more screen time and there has been a surge in the number of people participating in online or offline video games. People have developed a dependency towards online games. Solidifying unhealthy lifestyle patterns would be a result of prolonged technology-based activities and there would be a strain in readaptation when the COVID-19 crisis passes, (King et al., 2020).

Like other addictions, the video game has replaced friends and family as the source of a person’s emotional life. Video game addiction is considered as impulse control disorder, without any drug intoxication which may lead to pathological gambling. Video game addiction has also been referred to as video game overuse, pathological or compulsive/excessive use of computer games and/or video games. People addicted to video games are likely to associate themselves with MMORPGs- massively multi-player online role-playing games, interacting with others to accomplish goals and conquer (Illinois Institute of Addiction Recovery, 2019). Addiction is often a state of physiological and psychological dependence to the object, with loss of control over behaviour, compulsive use and continued usage. Addiction towards video games is called “process addiction”

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(Gladding, 2014). Ignorance of life goals, family members, inattention and loneliness are some of the penalties of gaming (Hafeez, Idrees and Kim, 2017). According to Statista June 2019, the Battle Royale game by Blue hole, Player Unknown's Battlegrounds (PUBG) has over 50 million players.

Studies state that childhood trauma such as neglect and abuse determine the origin of addiction. The need to escape from reality and the acceptance of role of the other are the two main psychological formation mechanisms involved in computer game addiction (Ivanov, 2005). A study conducted by (Oskenbay et al., 2016) found computer game addiction among adolescents has a significant connection between computer addiction and psychological trauma. Excitatory homeostasis refers to individual's basing their media choices on optimal levels of arousal. Individuals who are highly excited tend to choose relaxing video games and people who are bored tend to choose excitatory videogames in order to attain homeostasis excitatory state (Borders, 2012).

REVIEW OF LITERATURE

Saquib et al., (2017) conducted research on Video game addiction and psychological distress among expatriate adolescents in Saudi Arabia. The research was conducted on a school among 276 students. Sixteen per cent (16%) were addicted to video games and 54% had psychological distress. The study shows association between video games and psychological distress. The proportion of students with psychological distress was high.

Ko et al., (2005) conducted research on Gender Differences and Related Factors Affecting Online Gaming Addiction Among Taiwanese Adolescents, found that boys are more addicted than girls, girls spent more time than boys, boys played for will to succeed while girls play to make friends.

Braun et al., (2016) studied about Personality and video gaming: Comparing regular gamers, non-gamers, and gaming addicts and differentiating between game genres, with 2891 participants by conducting an online survey using Big Five and they found a wide variety of personality traits and gamers are high in extraversion.

Brain Behaviour and Cognitive ability

Neurotransmitters are chemical messengers that communicate with the brain and affect bodily movement and cognitive functioning. The neurotransmitter Dopamine plays a major role within the pleasure and reward system in the brain (Moss-King, 2016). Reward-seeking is the vital component of addictions (Potenza, 2011). Excessive playing of video game is the result from excess craving of the dopamine pleasure. The gamers experience positive emotions such as rise in mood, feeling of "anticipation" of playing computer games, (Oskenbay et al., 2016). Among the gamers there is a significant change in the areas of the brain that regulate impulse control and decision making. The time spent gaming increases and various neurological changes take place (Meng et al., 2015). On the other hand, video games have some advantages, studies state, such as improved cognition by playing rigorous video games. Improved memory and control of attention are the result from playing some specific video games. A study conducted in Pakistan found that gamers have better mathematical intelligence, analogy and deductive reasoning. Video games improve children's problem-solving ability, improved attention and prosocial behaviour, (Hisam, et al., 2018). However, playing video games intensively have negative effects on cognition, with increased attention- deficit hyperactive behaviour. Playing violent video games tend to

increase aggressive thoughts, Physical stimulation and aggressive behaviour, (Bavelier et al., 2011)

Gaming and Personality Trait

A study conducted by (Hadeed, 2015) states there is a significant relationship found between shyness and loneliness and excessive video game use. Personality traits such as extraversion, conscientiousness, agreeableness, and openness did not show any significant relationship with game addiction, whereas neuroticism increases game addiction (Jeong, 2015). Another study states that aggression and narcissistic personality traits were positively correlated with online game addiction, whereas self-control is negatively correlated with online game addiction (Kim and Namkoong, 2008). The Big five questionnaire found that individuals who prefer action games are likely to be high in extraversion and low in neuroticism (Braun et al., 2016). Violent games are now commonly found in the online platforms. Research proves that higher neuroticism scores were obtained by violent game users, (Sharma et al., 2020)

Physiological and Psychological Effects of Gaming

Just like substance abusers, even gamers experience withdrawal symptoms, which include moodiness, trembling and feeling of irritability. In addition, auditory hallucination, encopresis and enuresis are the deleterious effects of compulsive gaming (Griffith, 2008). Interpersonal and intrapersonal conflicts are predominant, intrapersonal abuse engross the misuse of the objects that were produced for one purpose, such as for entertainment (video games), but are exploited excessively to the detriment of the person involved (Gladding, 2014). American Psychiatric Association states that family members are likely to be deceived by the gamers about the amount of time spent on gaming. Relapsing of gaming addiction is likely to occur. Type A personality people, who are competitive in nature tend to play competitive video games. Individuals who lack self-control are prone to play in order to obtain emotional regulations and to purge emotions. The game preferences include racing, fighting, shooting (Borders, 2012).

Physical effects include calluses, numbness of the fingers, hands and elbows (Griffith, 2008). Change in sleeping pattern, carpal tunnel syndrome, weight gain, and headaches are the marked signs and symptoms of physical effects of gaming (Abulail, 2015).

Video Game, Aggression and Attention

There is a common assumption that lingers that violent video games can trigger violent nature in the user. According to mass communication theory violent videogames attract teenage boys, the group that spends the most on games. There is a strong link between violent video games and subsequent player aggression, (Baran, 2012). However, an analysis found violent video games do not appear to be linked to aggression in children, (APS, 2020). Moreover, video games that children indulge in all the time can lead to improvements in both sustained attention and divided attention tasks, especially when the task processing load is high, or has to be consciously processed, (Kool & Agrawal, 2016).

Management of Gaming

Compulsive gambling or gaming is treatable. A major source of help is Gamblers Anonymous which is a 12-step treatment program that follows the same pattern as Alcohol Anonymous. (Gladding, 2014). Cognitive behavioural therapy is considered to be the effective remedial measure for gaming addiction. The therapy enables the gamers to alter thoughts to healthier thinking pattern. The therapy assists in goal setting and helps overcome

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compulsive gaming (PsychGuides, 2019). Other methods include contingency management; it is a behavioural therapy in which displaying of positive behavioural change gets reinforced and rewarded (Petry, 2011). Humanistic therapies such as motivational interviewing and family and couple therapies also assist in this regard. Gamers can deliberately choose other activities such as outdoor games, reading books, chores or spending time with family. Skills training is used in treating gamers assisting in management of time, exploring the core values of life and other reinforcing activities (Griffith, 2008).

Self-management techniques: Self-control or self-regulation are commonly referred as self-management. Self-regulation includes three stages: self-observation, self-evaluation and self-reaction. Self-management includes self-assessment, monitoring behaviour (placing an accountable person to monitor), goal-setting (setting a target behaviour change) and self-monitoring. As stated in operant conditioning, reinforcement such as reward or punishment helps in behaviour modification, (Budiyani and Abdulah, 2016)

CONCLUSION

Everything considered, the above evidence proves that gaming has a major impact in personal life. The players reported that their game addiction negatively affected relationships with non-gamers (Cole and Griffiths, 2007). Gaming has adverse effect on physical and mental health including decreased social functioning (Zamani, 2009). Personality and individual differences also play a vital role in game addiction. Self-monitoring, including self-observation and self-recording should be encouraged among the gamers. The gamers should introspect the underlying cause of the gaming addiction and resolve those fixations. As stated by the Existential therapy, the addicted individuals can achieve or accomplish something by doing good deeds, by spending quality time with family (Gladding, 2014). While Gaming can serve as a mode of distraction from day to day hassle it can be destructive when it becomes compulsive.

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Conflict of Interest

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