

# Assessing Behavioral Patterns for Online Gaming Addiction: A Study Among Indian Youth

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## ABSTRACT

The purpose of the study is to identify the risk factors that predict online gaming addiction based on psychological factors. A sample of 150 respondents, who play online games or played in the past, were the respondents. Structured questionnaire is used to understand gaming behavior and other psychological factors. The following factors were found to be a predictor of online gaming addiction: emotional dependence, social withdrawal, detachment from other activities, and long hours spent playing games. Confirmatory factors analysis was used to identify critical factors and discriminant analysis was used to classify respondents as active and non-active online gamer based on their level of addiction and time spent in playing. The result shows a significant gap in the perception of active and non-active gamers with respect to the above-mentioned factors. The study brings valuable insights to medical practitioners and researchers in the context of defining problematic gaming behaviour.

## 1. INTRODUCTION

Online games are becoming popular across ages and socio-economic groups (Singh, 2019). Multiplayer games have the additional benefit of socially engaging as the players need to collaborate and form associations to achieve specific goals. They keep players more engrossed resulting in spending more time in gaming activities (Ng & Hastings, 2005). India is among top five markets worldwide and is expected to reach revenue target of \$ 1.1 billion by 2020 (DCI, 2019). This generates a huge opportunity for both local and foreign game app developers to target Indian market for gaming applications. The exponential growth in the industry is fueled by drivers like growing internet density, low-cost smart phones, digital literacy, digital payments, availability of affordable data plans, and options of interesting and affordable games in the market (DCI, 2019). Games such as Clash of Clans, Candy Crush and PUBG, are among the most popular with young Indians, who devote long hours in gaming interface (Dataquest, 2019). Although gaming industry growth in India is phenomenal, it comes with its own share of negative features (Thomas & Martin, 2010). In India, gaming sector is regulated by The Public Gaming Act, 1857. Although there is no formal legal framework to regulate the predatory effect of online games, the online Gaming & Prevention of Fraud Bill, 2018 was aimed at gambling; under this umbrella, the Gaming Commission can make sure that all requisites are met by online game developers. Various studies by medical professional, researchers, practitioners revealed the negative aspects of mobile gaming in terms of extreme and negative consequence on health, particularly

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among children (Shaffer, Squire, Halverson, & Gee, 2005; Sung, 2009; Kiraly et al., 2014). Some studies even led to banning of games by a few countries (Thomas & Martin, 2010; Kiss et al. 2012).

Gaming addiction is delineated as behavioral addiction and has been found to be associated with a number of psychological and health problems (Billieux, Schimmenti, Khazaal, Maurage & Heeren, 2015; Cho, 2010, Mehroof, & Griffiths, 2010, Winther, 2014) including depression (Kuss, Louws & Wiers, 2012), social anxiety (Wan & Chiou, 2006a), fatigue (Griffiths, 2010) and loneliness (Caplan, 2007). Addictive gamers confine themselves to their homes and for them, gaming is an easy way of emotional escape (Leung, 2004). Zimbardo & Coulombe (2015), in their book 'Man Disconnected', elucidates the negative consequences of online games and gadgets on the young generation. Extreme gaming has negative consequences on the mental and physical condition of an individual. Gaming addiction refers to reiterating a gaming activity to an extent of self-harm (Sung, 2009). Self-harm is defined as purposely inflicting harm to their body (mhanational.org), also called as self-hurting. People with anxiety, depression, disorders etc. may try to self-harm (Hoon, Park, Yul, Moon & Chun, 2002). Engrossment of youth in online games has increased to such an extent that players overlook basic needs of the human body i.e., they do not take out time to eat, bath or change clothes (Shaffer, Squire, Halverson & Gee, 2005). There exists a noteworthy and direct association between students' obsession with computer games and their physical and mental health (Cho, 2010). Significant and positive relationship also exists between obsession with computer games and impaired social functioning (Thomas & Martin, 2010). Risked relationships denote another trait of impaired social functioning where a game obsessed person may drift away from close friends and family, to enjoy the virtual world. Teenagers often avoid family functions to play online games (Thomas & Martin, 2010). Gamers derive more pleasure from success in virtual games as compared to real life achievements such as academics, meeting with family and friends, or doing well in sports. In South Korea, there were multiple incidents of negligence due to uncontrolled involvement in online gaming which resulted in extreme situations (Cho, 2010). There were reports of child death due to negligence of the parents engrossed in gaming. To handle such adverse situations, Government of South Korea formulated legislated policies against computer addiction (Cho, 2010). China has also endorsed policies that comprise treatment centers and mandate adolescents to use government ID's, to keep track of gaming usage, and further minimizing it (Sung, 2009).

Many studies also suggest that engaging with games in a balanced way may have encouraging effects on players such as eye hand co-ordination, and shapes intelligence and critical skills. Online/video games are an important component of information and communication technology in education and it is perceived that games are not only regarded as a source of entertainment, they are also considered as an effective pedagogical tool (Shaffer, Squire, Halverson & Gee, 2005). Simulation and other games are very effective in experiencing real world problems and enhance student's understanding. Talking about multiplayer online games, internet has changed the complete experience and techniques of gaming for youths (Griffiths, 2003; Williams and Skoric, 2005). Users have more options and can be connected to various players around the world. This could also be one of the reasons of mounting addiction and can lead to various problematic situations (Kiraly et al., 2014).

Excessive involvement of youth in online gaming is a growing concern and various researches have been taken up in the past to know the motives/factors behind excessive involvement of youth in playing online games (Lo, Wang & Fang, 2005; Hoon, Park, Yul, Moon & Chun, 2002; Chen, Chen, Sing, Yee & Kobra, 2005). Kuss, Louws & Wiers (2012) have found in their study that high levels of engagement in multiplayer online gaming can be problematic. In recent years, menace linked with online gaming has grabbed attention and causes concern for many including media, psychologists, psychiatrists and mental health organizations. As per a study done by NIMHANS on Generation X, excessive use of technology is a reason for psychiatric distress for approximately seventy-one percent of the urban population in India. Involvement of youth in online gaming is gradually developing into a social problem; around seven to eleven percent of addicted gamers are being labeled as pathological gamers. Therefore, it is critical to understand factors leading to addiction behavior of users in the

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