Introduction

A video game is any software program that can be played on a computing device, such as a personal computer, gaming console or mobile phone. Video games have been in existence since the early 1970s and have become increasingly popular, spanning different mobile (smart phones, tablets) and stationary (computer or console) platforms. Advances, particularly in mobile devices, have given birth to social networks and group gaming.

Although the nature of gaming does not require physical stamina and therefore is not limited by factors such as age, gender or fitness, it is most popular with adolescents. In 2018, the World Health Organization (WHO) classified gaming disorder in their International Classification of Diseases (ICD-11). The ICD-11 is a list of diseases and medical conditions that aids health professionals in making diagnoses and treatment plans for patients having various disorders. It should be noted that, the inclusion of gaming disorder in the ICD-11 by WHO has generated vigorous and sometimes contentious debate and discussion within the medical and mental health community. Although recognized as an area of clinical interest, the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) published by the American Psychiatric Association suggests that more clinical research is required before Gaming Disorder is formally considered as a psychiatric disorder. Similarly, the WHO notes the inclusion of gaming disorder in ICD-11, to encourage more research into excessive gaming behavior, including its prevention and treatment.

What is gaming disorder?

The 2018 WHO draft 11th Revision of the ICD-11 denotes
the disorder as a pattern of “digital–gaming” or “video–

gaming” behavior characterized by impaired control over

 gaming activity, increasing priority given to gaming over other

 activities to the extent that gaming takes precedence over other

 interests and daily activities, and the continuation or escalation

 of gaming despite the occurrence of negative consequences [1].

 Gaming disorder has the same similarities with Internet

gaming disorder (IGD), which is a condition that the American

 Psychiatric Association (APA) noted in DSM-5 as an area

 in need of additional study. The APA does not currently

 recognize IGD as an official condition. For gaming disorder to

 be diagnosed, the WHO criteria requires that the behavioural

 pattern of the gamer must be of sufficient severity that major

 and noticeable impairment and deterioration in personal,

 family, social, educational, occupational or other important

 areas of functioning is present for a minimum of 12 months [1].

 Signs and symptoms of gaming disorder

 According to the WHO definition, a person with gaming

 disorder will demonstrate the following characteristics for at

 least 12 months; problems controlling control their gaming

 habits, seeing gaming as more important over other necessities

 and daily activities or work, continuing to engage in gaming

 even after its negative health and social problems has been

 identified or are evident. Further research shows that gaming

 disorders can also be linked with anxiety, depression, obesity,

 sleeping disorders, and stress. People who remain physically

 inactive for long periods because of gaming may also be at

 higher risk of obesity, sleep disorders, and other health–related

 issues, according to WHO [1].

 Health consequences of video gaming

 Video game–related health problems can cause continuous

 strain injuries, skin disorders and other health issues. Other

 problems according to Shoja et al. (2007) [2], include a

 condition that could be termed video game–provoked seizures

 in patients with pre–existing epilepsy. The following health

 consequences of video gaming have been reported.

 Vision issues

 Video game playing is associated with eye problems

 [3]. Extensive and fixed staring at a video game screen

 causes eyestrain because the cornea, pupil, and iris are not

 biologically equipped for chronic heavy viewing of digital

 images from electronic devices. The visual system strain from

 frequent video game use over extended periods may result in

 headaches, dizziness and in some cases, nausea and vomiting.

 Interestingly, there is some research that shows that gamers

 have an enhancement of spatial distribution of attention,

 compared with non–gamers. This somewhat predictable

 practice effect occurs with both peripheral and central visual

 attention [4]. For sufferers of amblyopia (dimness or blurring

 of the eyesight due to a fault in transmission from the eye to the

 brain) video games may be helpful. Li, et al. (2011) [5] reported

 that combination of video game therapy with occlusion therapy

 would enhance the recovery of visual acuity in gamers with

 amblyopia [5].

 Musculoskeletal problems

 Persistent gamers may also suffer from musculoskeletal

 problems. A survey of children indicated increased physical

 complaints associated with video game playing. Such complaints

 range from pain in the hands and wrists to back and neck [6,7]. Furthermore, a case report involving a nine–

 year–old teenager referenced Playstation thumb. Playstation

 thumb is, characterized by numbness and a blister is caused by

 friction between the thumb and the controller from rapid and

 persistent game play [8]. Using dermoscopy, dermatologists

 discovered hemorrhages and onycholysis (the loosening or

 separation of a fingernail) in a patient who presented with

 hyperkeratosis [9]. Also, tendon injuries (tenosynovitis) of the

 hands and wrists from tendon overuse, is another health

 problem associated with video game playing [10]. Furthermore,

 another case report in the New England Journal of Medicine

 reported a fracture of the base of the fifth metatarsal from

 people who play Wii video games. This condition has been

 termed (perhaps sarcastically), a Wii fracture [11]. There are

 also postural problems associated with persistent playing of

 video games, although [12], ergonomic measures (including

 chair to monitor position) could potentially improve postural

 problems associated with video game playing.

 Obesity and overweight

 Playing of video games consistently has been associated

 with obesity. This is may be related to the lack of physical

 activity in players. Alternatively, it could be that those who

 are less physically fit because of obesity gravitate towards less

 physically demanding activities, such as gaming. In either

 case, several studies have linked television and video games

 and increased Body Mass Index (BMI). It has been estimated

 that children in the United States spend 25% of their waking

 hours watching either television or playing of video games [13].

 Furthermore, children who watch the most hours of television

 or play video games have the highest incidence of obesity. If

 video games are replacing physical activities and young people

 do not participate in physical recreation or see playing of video

 games as a form of recreation, this may be part of the link

 between times spent while playing video games and rise in BMI

 in teenagers [13]. Evidence for this potential link gains some

 support from a German study reporting that boys who spend

 no more than 1.5 hours per day engaged in television watching

 or playing video games, were 75.4% less likely to be overweight

 than those who spend more than 1.5 hours engaged in the same

 activity [14].

 In a 2011 study, an association between video game activi-

 ty and an increase of (mostly junk) food intake was reported.

 Specifically, single video game sessions caused an increase in

 food intake, regardless of appetite [15]. It has also been sug-

 gested that active video game play using two popular gaming

 platforms (Wii, Xbox Kinect) has the opposite effect [16]. Other

 researchers found no evidence that more active video games

 would result in a beneficial outcome although the study did

 demonstrate an increase in the amount of physical activity

 within the children receiving the active video games [17].
Seizures (Epileptic)

Health concerns that video games may cause an epileptic seizure started in the early 1980s. The first medically documented case of a video game-induced seizure was reported in 1981. In 1993, a study in the popular press (Sun newspaper) reported that a boy choked to death on his own vomit during a seizure triggered by playing a video game. Similar but less serious incidents were subsequently reported by news media around the world, ultimately motivating video game console manufacturers to include that epilepsy warnings in the instruction manuals for their gaming products. In 1994 it was reported that video games only cause seizures in people already predisposed to epilepsy and advised that people with a predisposition to epilepsy can greatly reduce the risk of a seizure by staying 10 feet or more away from the TV set and wearing sunglasses while playing video games [17]. This is clearly an area in need of additional research.

Prevention and treatment of gaming disorder

The cost: benefit value of prevention versus treatment of addiction disorders has been known for many years [18]. It is important and beneficial to make use of several types of strategies in combating gaming addiction or disorder. Effective strategies include: educating gamers about gaming behaviors and consequences on their mental health; treatment geared towards helping the gamer to control his/her urge for video games, recognizing and dealing with disturbing thoughts and learning how to cope without video games; intrapersonal and interpersonal counseling to help gamers to explore their identity, build self-esteem, and enhance their emotional intelligence outside the fictional world of gaming and learning communication and assertiveness skills needed in social interactions; family involvement, including counseling and discussion family and other relationships; and developing new lifestyles. The latter is particularly important and to paraphrase the well-known mantra of Alcoholics Anonymous, it's all about, people, places and things. To prevent persistent playing of video games, people need to explore new activities, set new goals and metrics of achievements beyond video game scores.

References


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