

Behavioral Addiction to Video Games: A Very Real Concern for Parents
By Dr. Laura Fadell

When the term “addiction” comes up, most of us think of addiction to substances such as alcohol, illicit or prescription drugs, even gambling and sex. Recently, several researchers have begun to scientifically test the concept of pathological video game use. In my practice, this is commonly called video game “addiction” by many frustrated and exhausted parents who must deal with their children’s angry reaction when they attempt to limit the use of these games. Unfortunately, to date, there are very few legitimate empirically validated studies that agree on how to diagnose and to treat excessive reward-seeking behaviors (i.e., video game addiction). The American Medical Association recognizes that the problem is worthy of study, and the American Psychiatric Association had considered it for inclusion in the upcoming *Diagnostical and Statistical Manual of Mental Disorders, Fifth Edition*, but has since decided more research is needed.

What’s the Big Deal About Video Games? Individuals (both children and adults) play video games for many reasons, including relaxation, competence (making it to the highest level), autonomy, and escape from daily concerns (Ryan, Rigby, Przybylski, 2006). Playing these games can produce “flow” states in which the player is focused, has a sense of control, may lose a sense of time and place, and finds playing intrinsically (i.e., internally) rewarding. Most parents whose children play video games are more than familiar with the pleading from their child to just let them finish “this next level” or who, despite being told repeatedly that its time to get off the game, continue to play, regardless of consequences.

How Video Games (or more appropriately, the *makers of video games*) Influence Players. What many parents don’t know is that excessive video game playing behavior may be influenced by a variety of factors, including the structural characteristics of the video games. What parents also don’t know is that these characteristics are intensely researched and chosen based on psychological principles that ensure their appeal to the consumer (your child). Structural characteristics refer to those features inherent within the video game itself that facilitate initiation, development, and maintenance of video game playing over time. A recent study (King, Delfabbro, & Griffiths, 2010) identified a new group of video game features that influence the intensity and frequency these games are played. These features include:

- ***Social Features*** – Social features refer to the socializing aspects of video games, such as how players can communicate with other players in both online and offline games and the features that create a cooperative and competitive community of players.
- ***Manipulation and Control Features*** – Manipulation and control features refer to the ways in which a player can interact with and control in-game properties using a physical control scheme. This also considers various functions in the video game that directly relate to the player’s sense of mastery and control over the

game, such as being able to save progress in order to correct mistakes, and the ability to simultaneously manage numerous resources in the game.

- ***Narrative and Identity Features*** – Narrative and identity features refer to the ways in which the player can take on another identity in the game (as a fictional character or a construction of the self). This section also considers the role of storytelling as a means of immersing the player in the video game.
- ***Reward and Punishment Features*** – Reward and punishment features refer to the ways in which players are reinforced for skillful play (i.e., winning) and punished for losing. This section covers the many types of rewards in video games, and explains that these rewards are often delivered intermittently on random and fixed ratio schedules (THINK SLOT MACHINES PARENTS!).
- ***Presentation Features*** – Presentation features refer to the aesthetic qualities of a video game, such as how the game looks and sounds to the player. Included in this category are explicit content and in-game advertising that also influence the presentation of the video game. Some video game properties may be considered as “franchises”, and the psychology of familiarity may explain the broad appeal of these games.

It is important to note that playing video games in and of themselves is not pathological. In fact, it can be fun, entertaining, and depending on the game, promote a sense of teamwork. I am in no way shunning the use of video games as a source of enjoyment. Playing becomes pathological for some individuals when the activity becomes dysfunctional – meaning it harms the person’s social, occupational, family, school, and psychological functioning.

Research Outcomes of Excessive Gaming. Gentile et al. (2011) conducted a two-year longitudinal study on pathological video game use by 3034 youths in grades 3 through 8. The authors found that the average amount of time playing video games was 20.5 hours per week, with boys playing more than girls. The more time spent playing video games, the more pathological symptoms were observed in the children. These included: poor social skills, impulsivity, social phobia, depression, anxiety, poorer quality of parent-child relationship, and lower school performance. Once players became pathological gamers, their tolerance for violence increased, which is of great concern given that several studies have demonstrated both short-term and long-term effects of violent games on aggression (Anderson & Dill, 2000; Anderson, Gentile, & Buckley, 2007; Bartholow, Bushman, Sestir, 2006).

Most epidemiological studies indicate that the onset of addictive disorders is primarily concentrated in adolescence and young adulthood. This is due to the overwhelming amount of evidence that supports adolescent neurodevelopment as a biologically critical period of greater vulnerability. Just as there is a critical period for learning specific aspects of language and a critical period for certain visual acuities, there is a critical period for the neurodevelopment occurring in an adolescent’s brain region associated

with motivation, impulsivity, and addiction. I cannot stress enough the importance of this critical period for adolescents. In my practice, I often treat low academic achieving adolescents and the first questions I ask are about video game playing history (e.g., how old were they when they started, how many hours a day, what is their current level of involvement with video games, etc.).

Criteria for Gaming Addiction: Mark Griffiths (2010) recently published case study evidence that examined the role of gaming excess and addiction and has suggested that any behavior that fulfills the six criteria listed below can be operationally defined as an addiction:

1. *Saliency* – This occurs when gaming becomes the most important activity in the person’s life and dominates their thinking (e.g., preoccupations and cravings for the activity) and behavior (e.g., forsaking other activities to game).
2. *Mood Modification* – This refers to the subjective experiences that people report as a consequence of playing video games and can be seen as a coping strategy (i.e., they experience arousal, escape, numbing, etc.).
3. *Tolerance* – This is where increasing amounts of gaming are required to achieve the former mood modifying effects. This basically means that for someone playing online video games, they gradually build up the amount of time they spend engaged in the behavior.
4. *Withdrawal Symptoms* – These are unpleasant feeling states and/or physical effects that occur when gaming is discontinued or suddenly reduced (e.g., usually in children and adolescents this equates to “meltdowns”, arguing, crying, irritability, oppositional behaviors, etc).
5. *Conflict* – This refers to the gamer and those around them (interpersonal conflict with family), conflicts with other activities (not completing chores or homework, not engaging in family social activities).
6. *Relapse* – The tendency for repeated reversions to earlier patterns of gaming to recur and for even the most extreme patterns typical of the height of excessive gaming be quickly restored after periods of abstinence or control.

Using the above criteria, Lemmens, Valkenburg, and Peter (2009) recently developed and validated a 21-item video game addiction scale that has very good psychometric properties (i.e., well validated and researched).

Game Addiction Scale Items (from Lemmens et al., 2009)

How often in the last six months...

(Saliency)

Did you think about playing a game all day long?

Did you spend much free time on games?

Have you felt (or have your parents felt) you were addicted to a game?

(Tolerance)

Did you play longer than intended?
Did you spend increasing amounts of time on games?
Were you unable to stop once you started playing?

(Mood Modification)

Did you play games to forget about real life?
Have you played games to release stress?
Have you played games to feel better?

(Relapse)

Were you unable to reduce your game time?
Have others (parents or spouse) unsuccessfully tried to reduce your game time?
Have you failed when trying to reduce game time?

(Withdrawal)

Have you felt bad when you were unable to play?
Have you become angry when unable to play?
Have you become stressed when unable to play?

(Conflict)

Did you have fights with others (e.g., family, friends) over your time spent on games?
Have you neglected others (e.g., family, friends) because you were playing games?
Have you lied about time spent on games?

(Problems)

Has your time on games caused sleep deprivation?
Have you neglected other important activities (e.g., school, work, sports) to play games?
Did you feel bad after playing for a long time?

Note: Responses are rated on a 5-point scale: 1 – never; 2 – rarely; 3 – sometimes; 4 – often; 5 – very often. The higher the score, the more problematic the gaming.

***If you feel your son or daughter has a problem with video game addiction, they likely do. To successfully rid your child of their obsessive thoughts and behaviors involving gaming, seek the help of a professional who can develop a program specifically for your child and family based on your individual circumstances and your child's history.

In the meantime, for every hour your child spends outside playing, allow them 20 minutes of video game time.