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Online computer gaming: Advice for parents and teachers

Some years ago in a previous issue of *Education and Health*, I provided some advice to parents and teachers on responsible playing of video games by children and adolescents (see Griffiths, 2003).

More recently, I have received a large increase in the number of e-mails from parents and teachers concerning online games like *World of Warcraft*, *Everquest* and *Lord of the Rings*. The most typical e-mails I get are along the lines of 'Could my child become addicted to an online game?', 'Are online computer games more addictive than offline games?', 'Isn't online gaming pointless?' and 'My child is addicted to online gaming, what can I do?' In this article I will attempt to answer these types of question.

Is it possible for an adolescent to become addicted to an online computer game?

Addiction basically boils down to constant reinforcement (i.e., rewards). An adolescent cannot become addicted something unless they are constantly rewarded for the behaviour they are engaged in. Online gaming is potentially addictive although the number of people who are truly addicted is small in number. In my research I have only come across a handful of people who I would genuinely call addicts. Such individuals may play over 80 hours a week on games like *World of Warcraft* and *Everquest*. However, playing excessively does not mean someone is addicted. If there are no negative detrimental effects as a result of excessive

playing, I would not view that behaviour as an addiction.

Online gaming addiction comes about by the partial reinforcement effect (PRE) (Griffiths, 2008a). This is a critical psychological ingredient of gaming addiction whereby the reinforcement is intermittent (i.e., people keep responding in the absence of reinforcement hoping that another reward is just around the corner). Knowledge about the PRE gives the game designer an edge in designing appealing games. Magnitude of reinforcement (e.g., high points score for doing something in-game) is also important. Large rewards lead to fast responding and greater resistance to extinction - in short to more "addiction" (Griffiths, 2008a). Instant reinforcement is also satisfying.

Is online gaming more addictive than offline gaming?

Online gaming involves multiple reinforcements in that different features might be differently rewarding to different people (what I would call 'the kitchen sink approach'). In video games more generally, the rewards might be intrinsic (e.g., improving your highest score, beating your friend's high score, getting your name on the "hall of fame", mastering the machine) or extrinsic (e.g., peer admiration) (Griffiths, 2008a). In online gaming, there is no end to the game and there is the potential for teenagers to play endlessly against (and with) other real people. This can be immensely rewarding and psychologically engrossing. For a small minority of people this will lead to addiction where online

gaming is the single most important thing and that person's life and which the compromise and neglect everything else in there life. Currently there is little research indicating how the addiction establishes itself and what people are actually addicted to (Griffiths, 2008b).

Is there potential for long-term damage to an adolescent's mental health through playing online games?

As with all addictions, there is a potential for long-term damage but the good news is that very few people appear to have developed such problems although there is research suggesting that in extreme cases, online gamers can experience all the core signs and symptoms of more traditional addictions such as withdrawal symptoms, conflict with other activities, mood modifying effects, and relapse (Chappell, Eatough, Davies & Griffiths, 2006). Healthy enthusiasms add to life, addictions take away from them. The vast majority of excessive gamers will say their activity has positive effects for them. There are many people who play excessively without having any negative impact on their life at all although many players experience some signs of addiction without necessarily being addicted (Grüsser, Thalemann & Griffiths, 2007).

What are the benefits to having a virtual life?

There is lots of evidence suggesting that gaming can have very positive effects in peoples' lives. Online gaming can make people feel psychologically better about themselves and help raise self-esteem. The immersive and dissociative experience of gaming can also be very therapeutic and help people deal with every day stresses and strains. Research by our research unit shows that many gamers love the fact that playing games leads to time loss (Wood & Griffiths, 2007; Wood, Griffiths & Parke, 2007). Many

would argue that this is more positive than drug use, drinking alcohol or other activities like gambling. Simulated environments also allow people to explore their personalities (e.g. gender swapping) and test out boundaries.

Is online gaming pointless?

Accusations of 'pointlessness' can be levelled at almost any leisure activity in life, not just online gaming. More and more people engage in some kind of computer gaming so the number of people attacking such activities will decrease over time. People are also becoming more digitally literate. The demographics of online gaming are also expanding (Griffiths, Davies & Chappell, 2004a). The average age of a gamer is steadily getting older and more females are starting to play. People only engage in leisure activities that are psychologically and socially rewarding for them. Recent research from our research unit has also shown that around a third of online gamers make good friends in the game (Cole & Griffiths, 2007) and that online games allow players to experiment with other parts of their personality that would be difficult to do offline, such as gender swapping (Hussain & Griffiths, 2008).

The 'golden rules' of gaming

Finally, just to reiterate some 'golden rules' that I have made before in relation to children and adolescent gaming.

- Check the content of the gaming activity. Try and give children and adolescents games that are educational rather than violent. Parents usually have control over what their child watches on television - gaming should not be any different.

- Try to encourage gaming in groups rather than as a solitary activity. This will lead to children and adolescents talking and working together. Also remember that many online games are based on social

activity and working together. Our research has consistently shown that the main reason for playing online games is for the social element (Griffiths, Davies & Chappell, 2003; 2004b).

- Set time limits on playing time. Tell children and adolescents that they can play for a couple of hours after they have done their homework or their chores - not before.

- Parents and guardians should always get their children to follow the recommendations by the game manufacturers and/or the service providers (e.g., sit at least two feet from the screen, play games in a well-lit room, never have the screen at maximum brightness, and never engage in gaming when feeling tired).

- Finally, if all else fails, temporarily prohibit gaming and then allow them to play again on a part-time basis when appropriate.

Conclusions

In over two decades of examining both the possible dangers and the potential benefits of videogame playing, evidence suggests that in the right context videogames can have positive health and educational benefits to a large range of different sub-groups (Griffiths, 2005; 2008b). There are also recent overviews showing that online gaming can be used in an educationally beneficial context (Defreitas & Griffiths, 2007; 2008). If care is taken in the design, and if they are put into the right context, videogames (both online and offline) have the potential to be used as training aids in classrooms and therapeutic settings, and to provide skills in psychomotor coordination, and in simulations of real life events (e.g., training recruits for the armed forces).

Countries such as China have introduced laws to limit the amount of time that adolescents and adults can spend playing online games, and other countries such as Holland and South Korea have seen the opening of dedicated treatment clinics for

gaming addiction (Griffiths, 2008b). Whether such activity needs to be legislated for is arguable. For me, it comes down to moderation and common sense. Any activity when taken to excess can cause problems in a person's life. We would not legislate against people excessively reading or exercising. Why should online gaming be treated any differently? I have only come across a handful of genuine gaming addicts in all the time I have been researching. However, I am the first to admit that online gaming can be problematic to some individuals. As mentioned earlier, one of the main reasons why online gaming may be more problematic than 'stand alone' (offline) gaming is that 24/7 online games are never ending (unlike 'stand alone' games which can be paused and returned to some time later). In some cases, the Internet may be providing a potentially ever-present addictive medium for those with a predisposition for excessive game playing.

The way forward lies not in legislation but in education and prevention. For the vast majority of individuals, online gaming is an enjoyable and harmless activity - at least that is what the empirical evidence says at present. Maybe the situation will change over time and/or research will show there are cultural differences (suggesting different policies in different countries). Real life problems need applied solutions and alternatives, and until there is an established body of literature on the psychological, sociological and physiological effects of online gaming and online gaming addiction, directions for education, prevention, intervention, treatment, and legislative policy will remain limited in scope. More research is clearly needed to help inform educators and other stakeholders to make evidence-based policy decisions.

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