ONLINE GAMING ADDICTION: DOES IT REALLY EXIST?

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KEY QUESTIONS
(Griffiths, 1998)

• What is addiction?

• Does gaming addiction exist?

• If gaming addiction exists what are people actually addicted to?
ADDICTION COMPONENTS
(Griffiths, 1995; 1996; 2005; 2009)

• Salience
• Mood modification
• Tolerance
• Withdrawal
• Conflict
• Relapse
TECHNOLOGICAL ADDICTIONS
(Griffiths, 1995; 2008)

• Technological addictions are operationally defined as non-chemical (behavioural) addictions that involve excessive human-machine interaction.

• Usually contain inducing and reinforcing features which may contribute to the promotion of addictive tendencies.

• Feature all the core components of addiction.
GENERIC FACTORS THAT MAKE INTERNET ATTRACTIVE TO USERS

(Griffiths, 2003)

• Access
• Affordability
• Anonymity
• Convenience
• Disinhibition
• Escape
• Social acceptability
• Long working hours
THEORETICAL MODELS OF GAMING ADDICTION

(Griffiths & Davies, 2005)

• That gaming addiction is a function of the computer game's effects on imagination and fantasy life (i.e. people who play computer games to excess have poor imaginations).

• That gaming addiction is a function of the computer game's effects on arousal level (i.e. people who play computer games to excess either do so for its arousing or tranquillising effects).
• That gaming addiction is a manifestation of oral, dependent or addictive personality (i.e. people who play computer games to excess do so due to their inner personality as opposed to the external source of the addiction).

• That gaming addiction is a distinct pattern of uses and gratifications associated with the computer game medium (i.e. people who play computer games to excess enjoy the physical act of playing or play only when they are bored, etc).
GAMING ADDICTION? (Griffiths, 2007; 2008)

• Studies have shown gaming increases arousal (e.g., Segal & Dietz, 1991; Griffiths & Dancaster, 1993; Lim & Lee, 2008)

• Early adolescent studies indicate that gaming addiction may exist and that 5-7% of children play games for over 30 hours a week (Fisher, 1994; Griffiths & Hunt, 1995; 1998; Phillips et al, 1995; Griffiths, 1997)

• More recently, studies on MMORPGs also suggest gaming addiction exists (Tejeiro-Delguero & Moran, 2002; Salguero et al, 2002; Chui, et al, 2004; Leung, 2004; Wan & Chiou, 2006; Grusser et al, 2007; Hart et al, 2008; Brody, 2008; Hart et al, 2008; Rehbein et al, 2010; Mehroof & Griffiths, 2010)
**BEHAVIOURAL INDICATORS OF EXCESSIVE PLAY**

- **Stealing money to play arcade games** (Klein, 1984; Keepers, 1990)
- **Stealing money to buy new games** (Griffiths & Hunt, 1995; 1998)
- **Truanting from school/college or sacrificing work to play** (Keepers, 1990; Griffiths & Hunt, 1995; 1998; Grusser et al, 2007; Rehbein et al, 2010)
- **Not doing academic work/getting poor grades** (Griffiths & Hunt, 1993; Phillips et al, 1995; Chiu et al, 2004; Ng & Weimar-Hastings, 2005; Smyth, 2007; Hart et al, 2008; Rehbein et al, 2010)
• **Sacrificing of social activities to play** (Egli & Meyers, 1984; Griffiths & Hunt, 1995; 1998; Smyth, 2007; Grusser et al, 2007; Hart et al, 2008; Rehbein et al, 2008)

• **Irritability and annoyance if unable to play** (Griffiths & Hunt, 1995; 1998; Rutkowska & Carlton, 1994; Grusser et al, 2007)

• **Playing longer than intended** (Griffiths & Hunt, 1995; 1998; Phillips et al, 1995)

• **Increased social anxiety** (Lo et al, 2005; Hart et al, 2008)

• **Decreased interpersonal relationships** (Lo et al, 2005; Ng & Weimar-Hastings, 2005; Smyth, 2007)

• **Poor sleep** (Smyth, 2007; Grusser et al, 2007; Rehbein et al, 2010)
PHYSICAL AND SOCIAL CONSEQUENCES OF EXCESSIVE PLAY

• **Photosensitive epilepsy**
  (e.g. Maeda et al, 1990; Graf et al, 1994; Harding & Jeavons, 1994; Quirk et al, 1995; Millett et al, 1997).

• **Auditory hallucinations**
  (Spence, 1993)

• **Enuresis**
  (Schink, 1991)

• **Encoprisis**
  (Corkery, 1990)
• Skin, joint and muscle problems, blisters, calluses, hand and finger numbness (Loftus & Loftus, 1983)

• RSI (“Nintendonitis”) (Reinstein, 1983; Brasington, 1990; Casanova & Casanova, 1991; Siegal, 1991)

• Wrist, neck and elbow pain (McCowan, 1981; Miller, 1991)

• Hand-arm vibration syndrome (Cleary, McKendrick & Sills, 2002)

• Obesity (Shimai et al, 1993; Deheger et al, 1997 Johnson & Hackett, 1997)
ADDICTION STUDIES ON ONLINE GAMING

• Some authors have conformed these findings although these are typically uncritical (e.g., Leung, 2004; Ng, & Wiemer-Hastings, 2005; Young, 2008; Smahel et al, 2008)

• Others have found empirical support across different ages (e.g., Hart et al, 2008)

• Some studies question the difference between ‘addiction’ and ‘high engagement’ (Charlton, 2002; Charlton & Danforth, 2007)

• Other authors question its existence at all (e.g., Wood, 2007)
ONLINE GAMING ADDICTION
(Kuss & Griffiths, 2011)

• Reviewed 58 empirical studies on internet gaming addiction
• Argued that gaming addiction follows a continuum
• Antecedents in etiology and risk factors, through to the development of a “full-blown” addiction
• Gaming addiction associated with various personality traits (e.g., introversion, sensation-seeking, neuroticism, state/trait anxiety, low emotional intelligence, social inhibition)
• Terminologies and assessment of addiction was variable (e.g., problem video game playing, problematic online game use, video game addiction, online gaming addiction)
• Excessive (problematic) engagement found in approx 8-12% of young persons, whereas addiction seems to be present in 2-5% of children, teenagers and students.
ONLINE GAMING STUDIES: THE PROBLEM
(Grüsser, Thaleman & Griffiths, 2007)

• A self-selected sample comprising of 7,069 gamers; mostly male (94%); average age of 21 years

• 1 in 9 (840 gamers) fulfilled at least three diagnostic criteria of addiction concerning gaming behaviour.

• Addictive signs modelled on key symptoms of dependence syndrome outlined by the World Health Organisation.

• Included craving, tolerance, withdrawal symptoms, loss of control, neglect of other activities, etc.

• Gamers who displayed at least three addictive signs were then compared with the remaining gamers.
• “Addicted” gamers predictably played for significantly longer daily periods of time.

• Also significantly more likely to report withdrawal symptoms and craving.

• Although these gamers showed signs of addiction the results did not conclusively show that the gamers are genuinely addicted.

• Many gamers play excessively and display few negative consequences.

• However, 24/7 online games may be potentially addictive for those with a predisposition for playing.
PROBLEMS WITH GAMING ADDICTION SURVEYS
(Griffiths, 2000; Widyanto & Griffiths, 2006)

• They tend to have no measure of severity
• They tend to have no temporal dimension
• They have a tendency to overestimate the prevalence of problems
• They tend to take no account of the context of playing
• They tend to use non-validated screening instruments
There is also a need for a general taxonomy of video games.

It could be the case that particular types of games have very positive effects while other types are not so positive.

Griffiths (1993; 1997) outlined the nine different types of game in which only the final three types are essentially violent.
- Sport Simulations
- Racers
- Adventures
- Puzzlers
- Weird Games
- Platformers
- Platform blasters
- Beat 'Em Ups
- Shoot 'Em Ups

(Griffiths, 1997)
VIDE O GAME TAXONOMIES: STRUCTURAL CHARACTERISTICS
(King, Delfabbro & Griffiths, 2010)

• **Social Features**: Social utility features; Social formation/institutional features; Leader board features; Support network features

• **Manipulation and Control Features**: User input features; Save features; Player management features; Non-controllable features

• **Narrative and Identity Features**: Avatar creation features; Storytelling device features; Theme and genre features

• **Reward and Punishment Features**: General reward type features; Punishment features; Meta-game reward features; Intermittent reward features; Near miss features; Event frequency features; Payout interval features

• **Presentation Features**: Graphics and sound features; Franchise features; Explicit content features; In-game advertising features
• King, Delfabbro and Griffiths (2011) reported certain SCs were stronger predictors of problematic VG involvement than factors such as gender, age, and time spent playing.

• Problem video game players reported significantly higher enjoyment of features such as:
  
  – adult content in video games
  – earning points
  – getting 100% in the game
  – mastering the game

• Westwood and Griffiths (2010) identified six distinct types of gamers based on SCs: (a) story-driven solo gamers; (b) social gamers; (c) solo limited gamers; (d) hardcore online gamers; (e) solo control/identity gamers; and (f) casual gamers.
GAMING ADDICTION TREATMENT
(Orzack et al, 2006; Young, 2008; Griffiths & Meredith, 2009; King, Delfabbro & Griffiths, 2010)

- ‘Gaming addiction’ clinics
- Online support forums
- On-Line Gamers Anonymous
- Various CBT treatments
- Multi-modal treatment (CBT, Skills training, Interpersonal Therapy, Couples Therapy/Family Therapy)

"I'm going to Internets Anonymous... we meet in a Yahoo chatroom!"
ONLINE GAMING: OTHER OBSERVATIONS

- Online gaming and time loss - not necessarily bad (Wood & Griffiths, 2007a; 2007b)

- Online gaming can be used for socializing, helping others, and meeting friends and future partners (Griffiths et al, 2003, 2004; Yee, 2006; Cole & Griffiths, 2007; Choi et al, 2007; Jansz & Tanis, 2007; Wang & Wang, 2008; Griffiths et al, 2011)

- Online gamers may differ in personality types from non-gamers (Teng, 2008; Mehroof & Griffiths, 2010)

- Online gaming can be a way of exploring other personas such as gender swapping (Hussain & Griffiths, 2008)

- Online gaming is converging with online gambling (Griffiths, 2008)
INTERNET ADDICTION TYPOLOGY
(Young 1999)

• **Cybersexual addiction:** Compulsive use of adult websites for cybersex and cyberporn

• **Cyber-relationship addiction:** Over-involvement in online relationships

• **Net compulsions:** Obsessive online gambling, shopping, etc.

• **Information overload:** Compulsive web surfing or database searches

• **Computer addiction:** Obsessive computer game playing (e.g. *Doom, Myst, Solitaire* etc.)
Many of these excessive users are not "Internet addicts"

Just use the Internet excessively as a medium to fuel other addictions (Griffiths, 1999, 2000)

The Internet is just the place where they engage in the behaviour

There are case study reports of individuals who appear to be addicted to the Internet itself (Griffiths, 2000b; Young, 1998)
• These are usually people who use Internet chat rooms or play fantasy role playing games (activities that they would not engage in except on the Internet itself)

• Engaged in **text-based virtual realities** and take on other personas and social identities as a way of raising self-esteem

• Internet may provide an **alternative reality** to the user and allow them feelings of **immersion** and **anonymity**
CONCLUSIONS

• Gaming addiction appears to exist (depending upon addiction criteria used)

• Adverse effects are relatively minor and temporary, resolving spontaneously with decreased frequency of play, or to affect only a small subgroup of players.
• Excessive players most at-risk from developing problems although more research needed

• Despite positive consequences for many, online gaming can be negative to a minority. In this case, the medium may be more harmful for susceptible individuals

“You’re right, it is too nice outside to play inside. Could you help me carry the TV and PlayStation out to the deck?”