

## Research Highlights for Children's Online Gaming: A brief overview of the empirical literature

### Aims

Research suggests that a minority of online game players are excessive users who experience symptoms traditionally associated with substance-related addictions, including mood modification, tolerance, salience (preoccupation), and negative consequences (e.g., loss of control, neglect of work/educational activities, relationship problems, etc.). UK findings from the EU Kids Online II research demonstrates that 49 % of boys aged 9 – 12 and 66 % of boys aged 13 – 16 play games with others online. A systematic literature review was carried out into online gaming addiction in children and adolescents.

### Key Findings

- Between January 2000 and March 2011, a total 24 empirical studies have investigated excessive and/or online gaming in children and/or adolescents. These studies have all been self-report surveys apart from a few case study reports, experiments, and a focus group interview study. Data varies in quality and the vast majority of studies have major methodological shortcomings. Only one study (carried out in Germany) has used a large nationally representative sample of adolescents.
- In Massively Multiplayer Online Role Playing Games (MMORPGs), such as *World of Warcraft*, there is typically no end to the game. Children and adolescents can potentially play endlessly against (and with) other real people. This is opposed to offline video games, where games can be paused and/or saved. Online games can be immensely rewarding and psychologically engrossing. For a small minority of people this may lead to addiction.
- Some empirical evidence suggests that in the right context, online gaming can have very positive effects, for example, raising self-esteem, and playing excessively may not lead to any detrimental effects. However, the empirical literature suggests that excessive gaming is widespread among a minority of young people and that in some of these instances, the gaming appears to be a genuine addiction.
- A comprehensive literature review by Kuss and Griffiths (2011) reported that prevalence rates for problematic gaming or online gaming addiction have been reported up to 12% (although typically in the 2% to 5% range). However, the most robust study carried out on over 15,000 adolescents in Germany reported that 3% male adolescents and 0.3% of female adolescents were dependent on gaming. Critical literature reviews have noted the distinction that has been made between excessive engagement and addiction. Excessive (problematic) engagement in gaming has been reported in approximately 8–12% of young persons, whereas addiction seems to be present in 2–5% of children, teenagers and students.

- However, many different screening instruments have been used to measure online gaming addiction. Very few of these studies have used screening instruments that have been psychometrically tested for reliability and validity.

### Policy Context

Children and young people spend increasing amounts of time playing online games. There is concern that risks may be associated with excessive playing of online games.

### Methodology

For this literature review, a comprehensive literature search was conducted using the database *Web of Knowledge*. The following search terms (and their derivatives) were entered in relation to child and adolescent online video gaming: 'excessive', 'problematic', 'compulsive', and 'addictive'. In addition, further studies were identified from supplementary sources, such as *Google Scholar*, and these were added in order to generate a more inclusive literature review. Studies were selected in accordance with the following inclusion criteria. Studies had to (i) contain empirical data (including everything from case studies through to surveys with thousands of participants), (ii) have been published after 2000 (as there were no studies on this topic prior to that date), and (iii) contain some kind of analysis relating to online gaming addiction.

### Background

The Internet offers a wide variety of games to play. Many studies have reported that a small number of people (including children and adolescents) play online games such as *World of Warcraft* and *Everquest* excessively. In some cases this has been described as an addiction. A relatively small number of empirical studies have been published, addressing topics as diverse as classification, etiology, and phenomenology of this behavioral addiction. There have also been recent reviews on whether the concept of online gaming addiction is even a valid concept.

### Sources

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