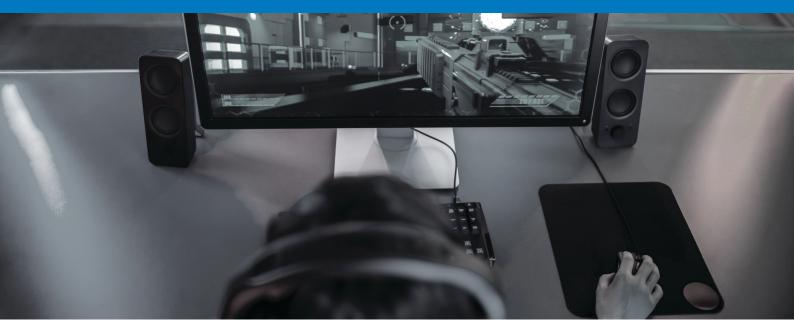




Untangling the Weird, Wired Web of Gaming Disorder and its Classification





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and international research and debate on the complex topic of internet-overuse in young people and regularly comments on the topic in the media, as well as educating the general community.

This article outlines the research findings about the impact of playing online video games and advises on healthy video game use.

n June 2018, the World Health Organisation (WHO) made the important decision to include a new mental health condition, termed 'Gaming Disorder' (GD) in the long-awaited 11th version of their highly influential 'International Classification of Diseases' manual, known as the 'ICD 11'.¹ In 2013, the North American Psychiatric Association had already included what it called 'Internet Gaming Disorder' (or IGD) in the fifth edition of its classification manual, the DSM 5, although it stopped short of nominating it as a full mental health disorder, instead classifying it a 'disorder of emerging interest'.²

Following this announcement by WHO, there has been a large number of articles raising concerns about this new classification in both the academic and the wider press. This also comes at a time when public and media interest in various computer games, in particular multi-user 'action-type' games played by relatively younger gamers, is very high. It is thus a good time to appraise the concerns and arguments that are regularly raised about the concept

Take Home Messages

- Gaming disorder has now been recognised by the World Health Organisation as a legitimate mental health condition
- As with many mental illnesses, people with gaming disorder frequently have other coexisting mental health conditions
- Studies have suggested that up to 10% of children and teens use the internet to at least problematic levels
- By precisely and clearly defining what constitutes problem gaming, the risk of pathologising all gamers can be avoided

of gaming disorder as a legitimate mental health condition.

Here are, as we observe it, some of the commonly reported myths and misconceptions around this complex issue, along with some commentary and responses.

Myth 1: Researchers and clinicians have created a 'moral panic'

A frequently cited argument is that this classification is creating an unnecessary 'moral panic'. It is also often alleged that researchers and clinicians who support this classification are themselves idealsrather than science-driven (i.e., motivated by their own sense of moral panic).

Having read, reviewed or co-authored many hundreds of clinical papers suggesting that screen-based and gaming-based addictions are of clinical concern, we have yet to see one that used language that in any way could be described as sensationalist, or 'values-driven'. Rather, the research papers are invariably put together in a sober, rational and objective manner – the way quality science should be developed and publicised.^{3,4}

It is also important to separate panic, an extreme reaction, from measured and reasonable concern, a rational and adaptive response when genuine issues arise. We often see parents who report being quite concerned about their child's level of screen use, but we see little evidence of irrational panic.^{5,6}

Interestingly, the accusation that researchers with a particular finding are creating a 'moral panic' or are 'imposing their values on society' is a common technique used by some to devalue or undermine academic work that does not support their own world views, or runs contrary to their financial interests.

Myth 2: Gaming disorder cannot be a 'real' disorder in its own right, because many other conditions are associated with it

It is widely acknowledged that screen-based disorders are strongly associated with a wide range of other mental health conditions, such as depression, anxiety, attention-deficit disorder, and autism spectrum disorders.

A common criticism of the consideration of screen-based disorders, such as gaming disorder, as legitimate 'standalone' mental disorders is that they may be a secondary behaviour, resulting from a preexisting condition, rather than a disorder in their own right.

However, a close look at most mental disorders will reveal that, in clinical practice, the existence of a 'pure' disorder is the exception rather than the rule.⁷ In other words, most people do not have only, say, a depressive disorder, but may have features of anxiety or an underlying personality disorder as well.

In population studies of gambling disorder, a condition that closely resembles gaming disorder, it has been found that more than half of gambling addicts have underlying depression, anxiety, post-traumatic stress disorder or other such conditions that precede or co-exist with the gambling behaviour.⁸ However, no clinician or researcher would ever suggest that gambling disorder is not a legitimate diagnosis just because there is an associated or pre-existing mental condition. Indeed, successful treatment involves a full appraisal of all aspects of one's behaviours and symptoms.

Myth 3: There is no substantial evidence that gaming disorder actually exists

Since the first clinical descriptions of what was then termed 'internet addiction' in the mid-1990's, there has been an explosion of global research on internet gaming disorder and other screen-based, addiction-like conditions.

These include brain-imaging studies, population-based studies (often involving school or college-aged students), and treatment studies.⁹

Although there is yet to be a single standardised definition of gaming disorder, internet gaming disorder or screen addiction, studies have suggested a substantial proportion of children and teens have problematic and pathological levels of use (5-10% and 1-2% respectively).⁶

Within these groups, particularly among teens, structural and functional changes in the brain have been reported, along with addiction-like behaviours and substantial negative impacts on key areas of functioning.¹⁰

Serious cases are regularly reported in both the academic and the mainstream literature, including children and adults who are experiencing social isolation or are suicidal as a result of their condition. There have even been reports of people who have died at their screen due to heart failure or pulmonary embolus as a result of prolonged periods of physical inactivity, inadequate food and fluid intake, and lack of sleep.^{11,12}

We have personally seen and assessed many highly concerning cases. In our experience, there exists a group of severely affected children whose addiction to gaming markedly affects their ability to function, and who require urgent and dedicated intervention and treatment.

Myth 4: Even if gaming disorder is real, it is not 'common' enough to justify inclusion as a disorder

Prevalence should not be a determinant of validity. Many disorders that have been clinically recognised are exceedingly rare but remain important because of their serious impact on the lives of those

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affected. For example, apotemnophilia (an overwhelming urge to amputate healthy parts of one's own body) is extremely rare, but can clearly have catastrophic consequences.¹³

Even if one were to ascribe to the belief that very uncommon disorders should not be included in the ICD, an examination of mental health epidemiology reveals that screen-based disorders are not actually uncommon.

'Common' conditions such as depression, anxiety, and in children, attention-deficit-hyperactivity disorder (ADHD) have a prevalence of between five and 10%.¹⁴

The less common (but serious) conditions such as schizophrenia, bipolar disorder, anorexia nervosa, and autism spectrum disorders tend to have a prevalence of 1-2% or less.²

Most quality population studies of screen addiction put prevalence rates at about 5-10%, with approximately 1-2% being more severely affected.⁹ It is therefore at least as prevalent as conditions such as bipolar and schizophrenia, and given its potential impact on patients' lives, merits ongoing and committed study.

Myth 5: Problematic internet use should not be compared to 'real' addictions like substance use

It is well-established that all goal-directed human behaviour involves, to some extent, the 'reward chemical', dopamine.

The fact that substances such as caffeine, cocaine and nicotine trigger the release of very high levels of dopamine in the brain compared to other 'naturally enjoyable' activities such as eating, exercising, or indeed playing computer games, explains, to some extent why these substances can quickly become addictive.

But it is equally clear that one does not need to ingest an actual substance or to trigger very high levels of dopamine release to develop a major dependency problem.

The best example of this is again pathological gambling, which of course shares many psychological and neurological similarities with pathological computer gaming.¹⁰ Very few, if any, researchers or clinicians around the world would maintain that pathological gamblers are 'not real addicts' simply because their specific addiction doesn't involve an ingested substance.

Myth 6: There is a lack of agreement among researchers on how to analyse and study this complex condition

This is somewhat true – the criteria by which gaming disorder/ internet gaming disorder should be formally classified are yet to be fully agreed on.¹⁵ Most complex mental illnesses have been through a similar process of clarification, research, and movement before there was agreement about the exact diagnostic criteria.^{16,17} But they were still classified as a disorder. Many decades are often required to adequately clarify a condition – good examples would be schizophrenia and anorexia.

Affected people needing clinical assistance should not be denied diagnosis and treatment while this clarification process is underway.

There currently exists a broad set of principles in relation to the diagnosis and management of gaming disorders that helps inform and guide researchers and clinicians. Although substantial progress has been made, the science is always evolving.

Myth 7: Technology is not uniquely addictive

All human endeavours that require engagement, concentration and which bring tangible rewards, have the capacity to become highly compelling – even 'addictive'.

It is often said that, say, violin-playing or book-reading can become compelling, even harmful if done to excess, but no-one talks about 'violin addiction' or 'book addiction'... so why should internet usage or gaming be any different?

Modern, interactive digital technologies are inherently very different in character to all forms of technology, entertainment or engagement that have gone before.

Digital technologies can adapt and evolve – often in real time – to the individual user's unique characteristics and personality. This is unlike most if not all human activity or technology that has gone before.

Whether in social media, gaming or browsing for news, digital technologies can endlessly cater to what Prof Adam Gazzaley, author of 'The Distracted Mind',¹⁹ has called our information-foraging biological drive. For this reason, a number of people struggle to limit the amount of time they spend with digital devices such as phones, computers and gaming consoles.

With the increasing reach due to wearable and constantly available access and the evolution of artificial intelligence, this level of sophisticated engagement is certain to continue to increase.



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No book or violin, no matter how beautifully written or skilfully made, can ever match this degree of personalised and seamless integration with our desires and habits.

Myth 8: The concept of 'gaming disorder' will only serve to pathologise or stigmatise all gamers

This is probably the most common concern raised.

The argument goes that, if gaming disorder becomes a legitimate condition, there is nothing to stop gamers who play enthusiastically from being labelled 'problem gamers' and thus becoming stigmatised, or having their rights to enjoy games curtailed or restricted by, say, their parents.^{20,21}

However by precisely and clearly defining what constitutes (and what does not) problem gaming, we can effectively avoid pathologising all gamers. In other words, introducing clear definitions about what constitutes a disorder, such as the presence of significant harms and a loss of control over gaming, will make diagnosis unambiguous and prevent 'false positives'.

We acknowledge that for the majority of keen gamers, this pastime is enjoyed positively and harmlessly – they certainly would not qualify for having a 'mental illness'.

The history of psychiatric classification reveals many similar examples. With clinical depression, clear and evidence-based guidelines exist to inform when we can diagnose this potentially serious condition, and when the features are more suggestive of a passing or less-severe bout of sadness rather than an actual clinical condition.

Similarly, a diagnosis of anorexia or bulimia helps to distinguish disordered from normal eating, allowing those with a disorder to

access appropriate treatment, without stigma flowing through to the large number of people who enjoy eating or who sometimes diet or over-exercise. Such guidelines are specifically developed to avoid over-diagnosis and thus potential stigma, as well as unnecessary treatment in people: the same principle applies to gaming disorder.

In summary, we have tried to bring a reasoned, fact-based approach that may assist in untangling some of the complexities surrounding the understanding of gaming disorder and its cousins, screen addiction and problematic internet use.

It is disingenuous for commentators who are sceptical about this condition, to accuse researchers of creating a 'moral panic' or of being ideals-driven and unscientific, while ignoring the growing wealth of objective scientific and clinical evidence supporting the reality that there is a cohort of people who are very adversely affected by excessive screen use and gaming. Such commentary methods and tactics have been observed before in other health and science debates, most notably with the 'tobacco wars' discussions of the 1970's,²² and the current discourse around, and against, climate science.²³

One very major – and indeed welcome – recent development in the world of technology is that the leaders in this industry, the 'tech titans' mainly based in California, have recently been very vocal themselves in acknowledging the potential negative effects their products and innovations can have in many users. For example, a group of senior executives from social media companies recently launched the 'Centre for Humane Technologies', with a small proportion of the many billions of dollars they made out of their products going towards funding ways of reducing harmful over-usage of these products.²⁴

And in all this debate, it is easy to lose sight of the real issue: the often-desperate people, who are struggling in very real ways to

control their screen, internet and gaming overuse. To dismiss their concerns as invalid –as not 'a real mental health condition' – is to fail in our duty as clinicians, as researchers and indeed as members of an engaged and empathic community.

Declaration

The authors were commissioned by Healthed for this article. The ideas, opinions and information presented are solely those of the authors.

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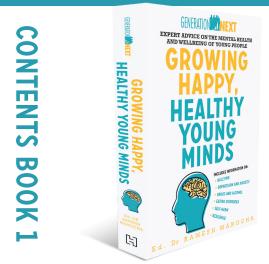
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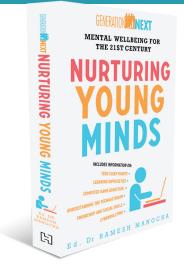
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