

A close-up, high-angle shot of a gaming desk setup. The scene is dominated by a mechanical keyboard with vibrant, multi-colored backlighting (red, blue, green, and purple). To the right, a black gaming mouse with glowing blue and red accents is visible. In the foreground, a black and red gaming controller is partially shown. The background is dark, with a glowing red light strip and a blue light strip adding to the ambient lighting. The overall aesthetic is futuristic and high-tech.

Gaming and Gaming Disorder: Beyond the obvious

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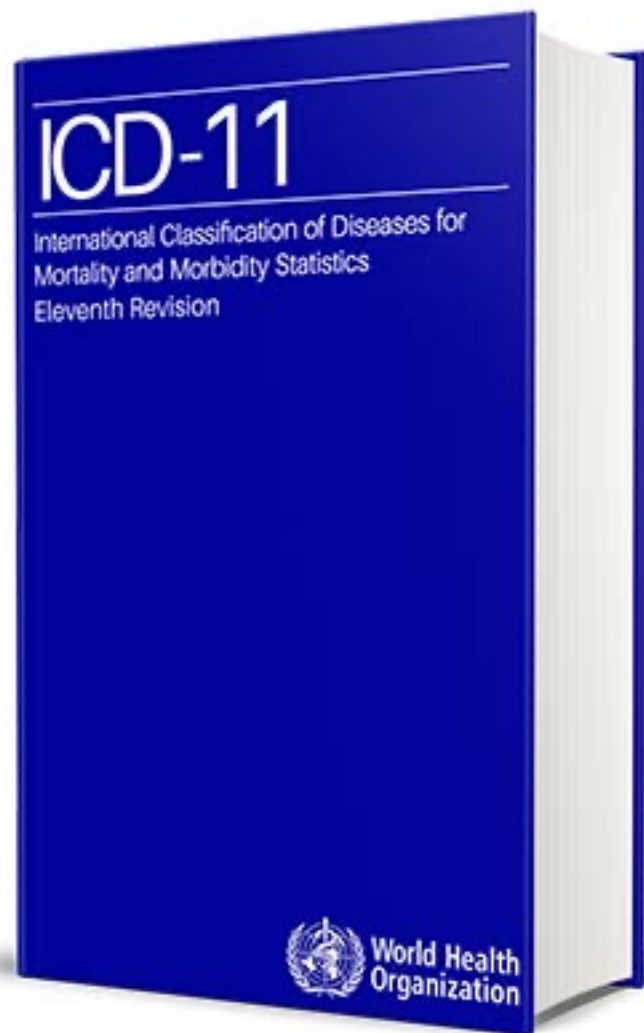
All India Institute of Medical Sciences (AIIMS), New Delhi

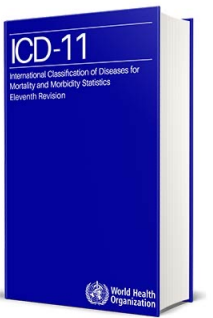


In this presentation

- Beyond the obvious on Gaming and Gaming Disorder

- ▼ Disorders due to substance use or addictive behaviours
 - ▶ Disorders due to substance use
- ▼ Disorders due to addictive behaviours
 - ▶ **6C50** Gambling disorder
 - ▶ **6C51** Gaming disorder
 - ▶ **6C5Y** Other specified disorders due to addictive behaviours
 - ▶ **6C5Z** Disorders due to addictive behaviours, unspecified



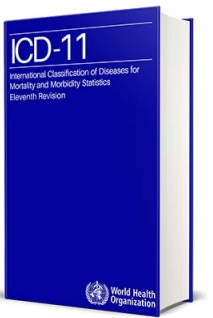


Gaming Disorder

Diagnostic Requirements

Essential (Required) Features:

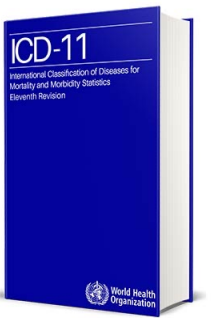
- A persistent pattern of gaming behaviour ('digital gaming' or 'video-gaming'), which may be predominantly online (i.e., over the internet or similar electronic networks) or offline, manifested by all of the following:
 - Impaired control over gaming behaviour (e.g., onset, frequency, intensity, duration, termination, context);
 - Increasing priority given to gaming behaviour to the extent that gaming takes precedence over other life interests and daily activities; and
 - Continuation or escalation of gaming behaviour despite negative consequences (e.g., family conflict due to gaming behaviour, poor scholastic performance, negative impact on health).
- The pattern of gaming behaviour may be continuous or episodic and recurrent but is manifested over an extended period of time (e.g., 12 months).
- The gaming behaviour is not better accounted for by another mental disorder (e.g., Manic Episode) and is not due to the effects of a substance or medication.
- The pattern of gaming behaviour results in significant distress or impairment in personal, family, social, educational, occupational, or other important areas of functioning.



Schizophrenia

Essential (Required) Features:

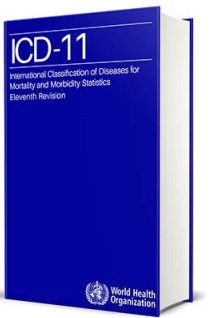
- At least two of the following symptoms must be present (by the individual's report or through observation by the clinician or other informants) most of the time for a period of 1 month or more. At least one of the qualifying symptoms should be from item a) through d) below:
 - a. Persistent delusions (e.g., grandiose delusions, delusions of reference, persecutory delusions).
 - b. Persistent hallucinations (most commonly auditory, although they may be in any sensory modality).
 - c. Disorganized thinking (formal thought disorder) (e.g., tangentiality and loose associations, irrelevant speech, neologisms). When severe, the person's speech may be so incoherent as to be incomprehensible ('word salad').
 - d. Experiences of influence, passivity or control (i.e., the experience that one's feelings, impulses, actions or thoughts are not generated by oneself, are being placed in one's mind or withdrawn from one's mind by others, or that one's thoughts are being broadcast to others).



Binge eating disorder

Essential (Required) Features:

- Frequent, recurrent episodes of binge eating (e.g., once a week or more over a period of 3 months). Binge eating is defined as a discrete period of time (e.g., 2 hours) during which the individual experiences a loss of control over their eating behaviour and eats notably more or differently than usual. Loss of control over eating may be described by the individual as feeling like they cannot stop or limit the amount or type of food eaten; having difficulty stopping eating once they have started; or giving up even trying to control their eating because they know they will end up overeating.
- The binge eating episodes are not regularly accompanied by inappropriate compensatory behaviours aimed at preventing weight gain.
- The symptoms and behaviours are not better accounted for by another medical condition (e.g., Prader-Willi Syndrome) or mental disorder (e.g., a Depressive Disorder) and are not due to the effects of a substance or medication on the central nervous system, including withdrawal effects.
- There is marked distress about the pattern of binge eating or significant impairment in personal, family, social, educational, occupational or other important areas of functioning.



- Schizophrenia
- Binge eating disorder

- **Gaming Disorder**

A top-down view of various gaming peripherals arranged on a dark, textured wooden surface. The items include a black keyboard with white keycaps, a black mouse with a blue light bar, a black game controller with a white directional pad, a black headset with red accents, and a black webcam. The text "WHAT IS GAMING?" is centered in the image in a bold, white, sans-serif font.

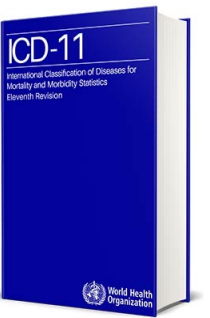
WHAT IS GAMING?

DO DIAGNOSTIC SYSTEMS DEFINE GAMING?

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6C51 Gaming disorder

Parent

[Disorders due to addictive behaviours](#)

[Show all ancestors](#) 

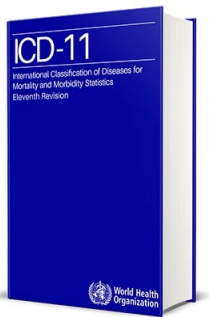
Description

Gaming disorder is characterised by a pattern of persistent or recurrent gaming behaviour ('digital gaming' or 'video-gaming'), which may be online (i.e., over the internet) or offline, manifested by: 1. impaired control over gaming (e.g., onset, frequency, intensity, duration, termination, context); 2. increasing priority given to gaming to the extent that gaming takes precedence over other life interests and daily activities; and 3. continuation or escalation of gaming despite the occurrence of negative consequences. The pattern of gaming behaviour may be continuous or episodic and recurrent. The pattern of gaming behaviour results in marked distress or significant impairment in personal, family, social, educational, occupational, or other important areas of functioning. The gaming behaviour and other features are normally evident over a period of at least 12 months in order for a diagnosis to be assigned, although the required duration may be shortened if all diagnostic requirements are met and symptoms are severe.

Exclusions

- Hazardous gaming ([QE22](#))
- Bipolar type I disorder ([6A60](#))
- Bipolar type II disorder ([6A61](#))

Diagnostic Requirements



Boundaries with Other Disorders and Conditions (Differential Diagnosis):

- **Boundary with Hazardous Gaming:** The category of Hazardous Gaming from the ICD-11 chapter on 'Factors Influencing Health Status or Contact with Health Services' may be assigned to individuals who exhibit problematic patterns of gaming behaviour without the other features of Gaming Disorder. Hazardous gaming refers to a pattern of gaming that appreciably increases the risk of harmful physical or mental health consequences to the individual or to others around the individual that may require some intervention or monitoring but is not considered to constitute a disorder.
- **Boundary with Gambling Disorder:** Unlike Gaming Disorder, Gambling Disorder necessitates the betting of money or other valuables in the hope of obtaining something of greater value. If gaming behaviour is focused on wagers (e.g., internet poker), Gambling Disorder may be a more appropriate diagnosis.
- **Boundary with Bipolar and Related Disorders:** Increased goal-directed activity including impaired ability to control gaming behaviour can occur during Manic, Mixed, or Hypomanic Episodes. A diagnosis of Gaming Disorder should only be assigned if there is evidence of a persistent pattern of gaming behaviour that meets all diagnostic requirements for the disorder and occurs outside of Mood Episodes.
- **Boundary with Obsessive-Compulsive Disorder:** Gaming behaviour can sometimes be described as 'compulsive' by lay people and also by some health professionals. Compulsions observed in Obsessive-Compulsive Disorder are almost never experienced as inherently pleasurable and typically occur in response to intrusive, unwanted, and generally anxiety-provoking obsessions, which is not the case with gaming behaviour in Gaming Disorder.
- **Boundary with Disorders Due to Substance Use:** Co-occurrence of gaming and substance use is common. Intoxication due to some substances may exacerbate problematic gaming behaviour. A diagnosis of Gaming Disorder can be assigned together with a Disorder Due to Substance Use diagnosis if the requirements for both are met.
- **Boundary with the effects of psychoactive substances, including medications:** Use of specific prescribed medications or illicit substances (e.g., dopamine agonists such as pramipexole for Parkinson Disease or Restless Legs Syndrome or illicit substances such as methamphetamine) can sometimes cause impaired control over gaming behaviour due to their direct effects on the central nervous system, with onset corresponding to use of the substance or medication. Gaming Disorder should not be diagnosed in such cases.

Internet Gaming Disorder

Proposed Criteria

Persistent and recurrent use of the Internet to engage in games, often with other players, leading to clinically significant impairment or distress as indicated by five (or more) of the following in a 12-month period:

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Subtypes

There are no well-researched subtypes for Internet gaming disorder to date. Internet gaming disorder most often involves specific Internet games, but it could involve non-Internet computerized games as well, although these have been less researched. It is likely that preferred games will vary over time as new games are developed and popularized, and it is unclear if behaviors and consequence associated with Internet gaming disorder vary by game type.

**IS
PUBLISHED
RESEARCH
MORE
SPECIFIC?**





Open access



Research article

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What Constitutes 'Gaming' in the Gaming Disorder?: Observations and Recommendations

[Yatan Pal Singh Balhara](#)  , [Swarndeeep Singh](#) , and [Pawan Kumar Gupta](#)  [View all authors and affiliations](#)

[OnlineFirst](#) | <https://doi.org/10.1177/02537176221150601>

- Online database of PubMed for "gaming disorder"[All Fields]
- Included studies-
 - human participants (clinical and nonclinical populations)
 - included gaming disorder or problem(atic) gaming in title, abstract or main body of text
 - study design was a meta- analysis or a systematic review
 - published since February 11, 2021

Included definition and/or description

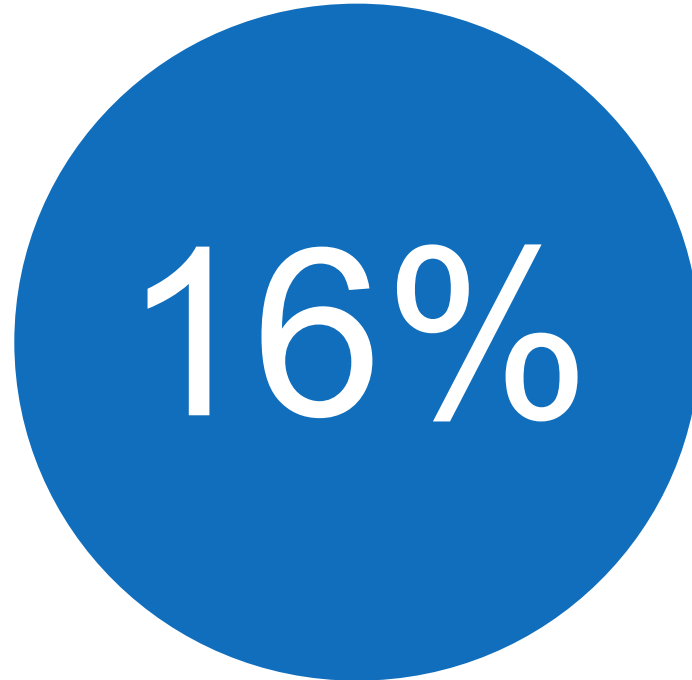
83%

Gaming
Disorder

25%

Gaming

Commented on the lack of definition,
description or details of 'gaming'



Recommended that there is a need to have a more precise definition of gaming

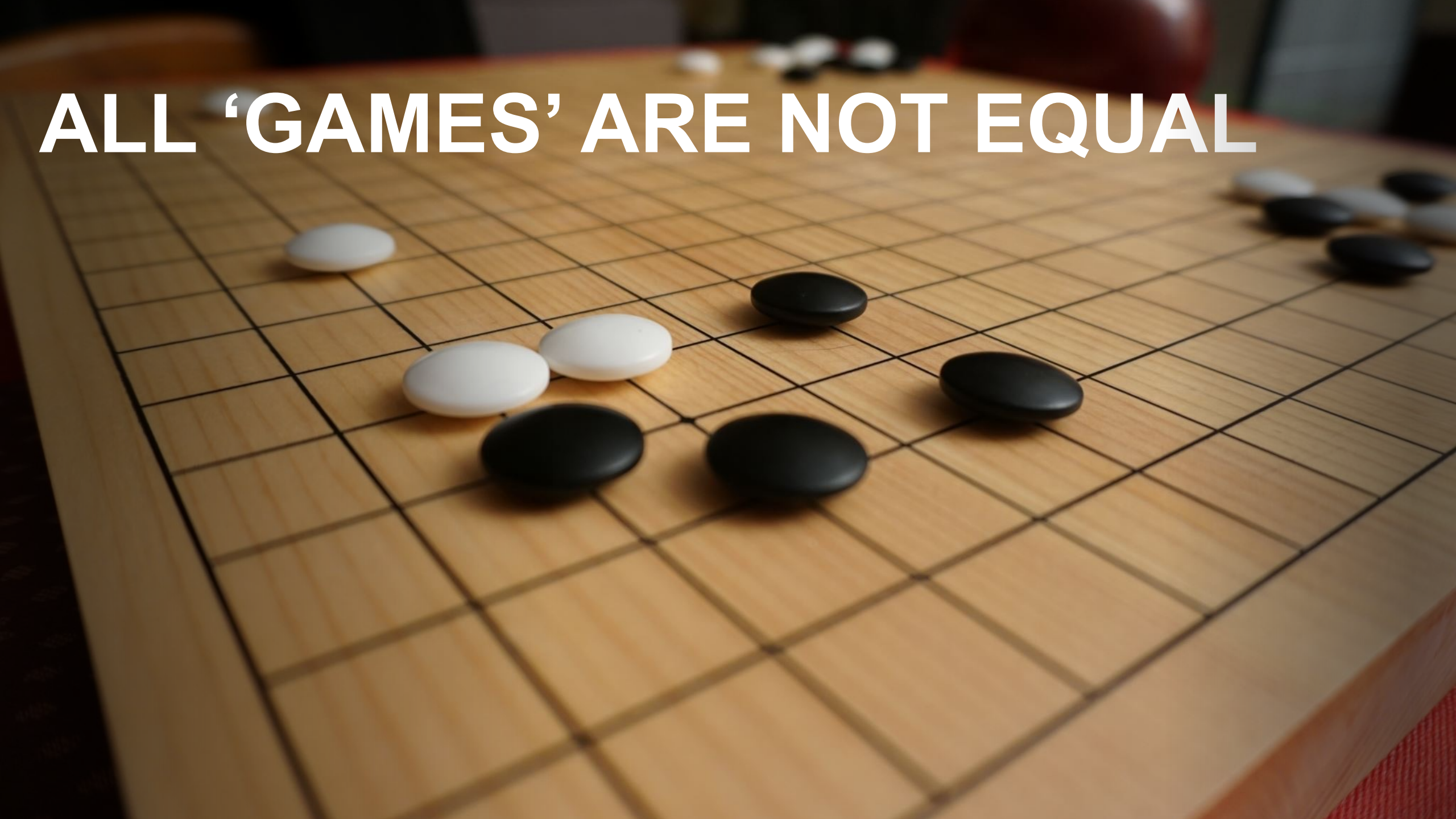


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**DOES IT
MATTER?**



ALL 'GAMES' ARE NOT EQUAL



All Games are NOT equal

- Gaming characteristics as important mediators of the association of gaming with various outcomes
- Those who experienced problem gaming differed from those who did not in terms of gaming characteristics

(Erevik et al, 2022)

All Games are NOT equal

- Certain genres of games as well as specific games have been found to be more popular among those with problem gaming

(Jeong et al, 2018, Rehbein et al, 2010, Wenzel et al, 2009)

- Some gaming genres have been significantly associated with severity of IGD symptom (persistence)
- Gaming characteristics might act as mediators in the relationship between problem gaming and suicidality

(Gauthier et al, 2014)

Expert Rev Neurother. 2020 Jan; 20(1): 85–93.

PMID: [31544539](https://pubmed.ncbi.nlm.nih.gov/31544539/)

Published online 2019 Sep 26. doi: [10.1080/14737175.2020.1671824](https://doi.org/10.1080/14737175.2020.1671824)

Treatments of internet gaming disorder: a systematic review of the evidence

[Kristyn Zajac](#),^{1,*} [Meredith K. Ginley](#),² and [Rocio Chang](#)³

This systematic review provides an updated summary of the scientific literature on treatments for IGD. Inclusion criteria were that studies: 1) evaluate the effectiveness of an intervention for IGD or excessive gaming; 2) use an experimental design (i.e., multi-armed [randomized or non-randomized] or pretest-posttest); 3) include at least 10 participants per group; and 4) include an outcome measure of IGD symptoms or gaming duration. The review identified 22 studies evaluating



WHAT CONSTITUTES GAMING BEHAVIOR?

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What constitutes gaming behavior?

- Behavior of those who are directly playing the game

What constitutes gaming behavior?

- Gaming is a much more complex behavior
- It extends beyond playing the games directly

What constitutes gaming behavior?

- ‘Observers’ have been conceptualized as a type of gamers

(Jang et al, 2021)

- *“fans who frequently watch esports events or streamers' esports gameplay but whose esports gameplay is not equaled by their viewing consumption”*

Does the gaming disorder as listed in ICD-11 include "the observers"?

Balhara YPS¹ 

Author information ▶

Asian Journal of Psychiatry, 26 Nov 2022, 80:103365

DOI: [10.1016/j.ajp.2022.103365](https://doi.org/10.1016/j.ajp.2022.103365) PMID: 36481620

**SOME
'GAMES' MAY
NOT EVEN
BE 'GAMES'**



SKILL



CHANCE

A thin vertical line on the left side of the page, transitioning from orange at the top to blue at the bottom.

**GAMING
BLING**

**WHO
DETERMINES
THE SKILL
AND CHANCE
ELEMENTS
OF A 'GAME'?**



Who determines the skill and chance elements of a 'game'?

- Law of the land
- A specific activity recognized as 'gaming' may be recognized as 'gambling' elsewhere
- The diagnosis shall vary across jurisdictions

**CLINICAL
DIAGNOSIS
DEPENDS ON
LEGAL
STATUS?**



The background features a blurred image of a game board with various pieces including chess pawns and a die. The color palette transitions from purple on the left to orange on the right.

GAMIFICATION OF GAMBLING **AND** GAMBLIFICATION OF GAMING

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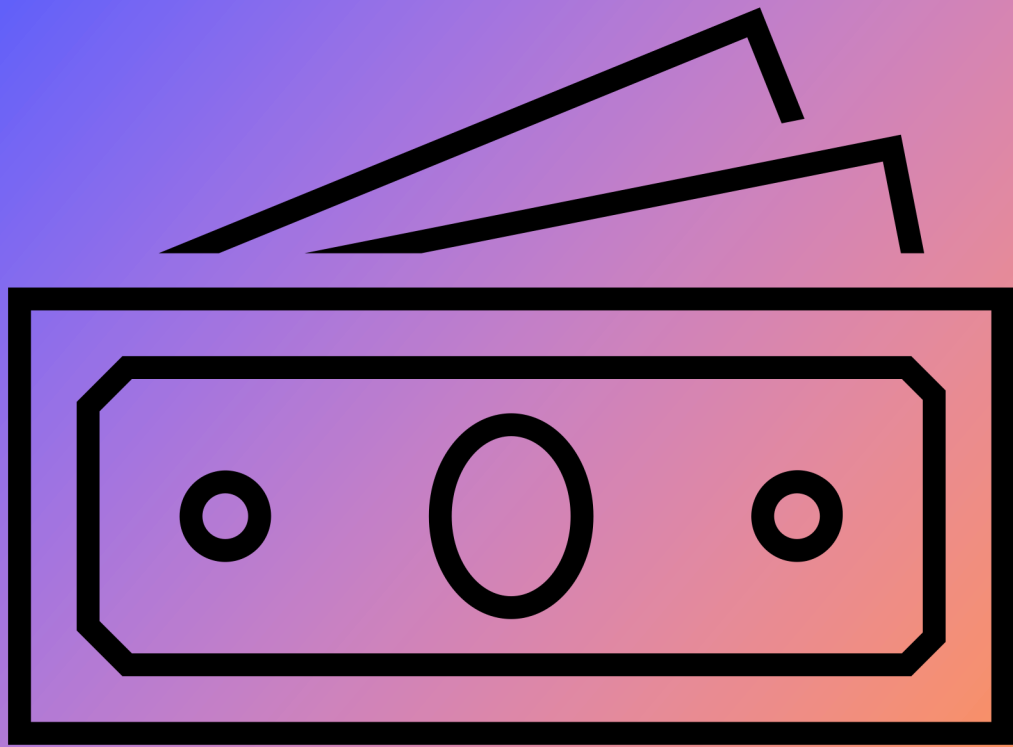
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Loot box

- A consumable virtual item which can be redeemed to receive a randomized selection of further virtual items- loot



‘Pay to win’ gameplay systems

- Favor those that spend real money on loot boxes
- Regulated under national gambling laws in some countries



GAMING



GAMBLING

GAMING

GAMING
with
elements of
Gambling

GAMBLING
with
elements of
Gaming

GAMBLING

GAMBLING

GAMING



EXTENSIVE FOCUS ON PATHOLOGY

The background features a series of overlapping, curved lines in various colors including blue, green, orange, and yellow, creating a dynamic, abstract pattern that resembles a stylized globe or a network of connections. The lines are thin and have a slight glow, set against a solid black background.

GAMIFICATION AND SERIOUS GAMES

Gamification refers to the addition of game elements to non-game contexts

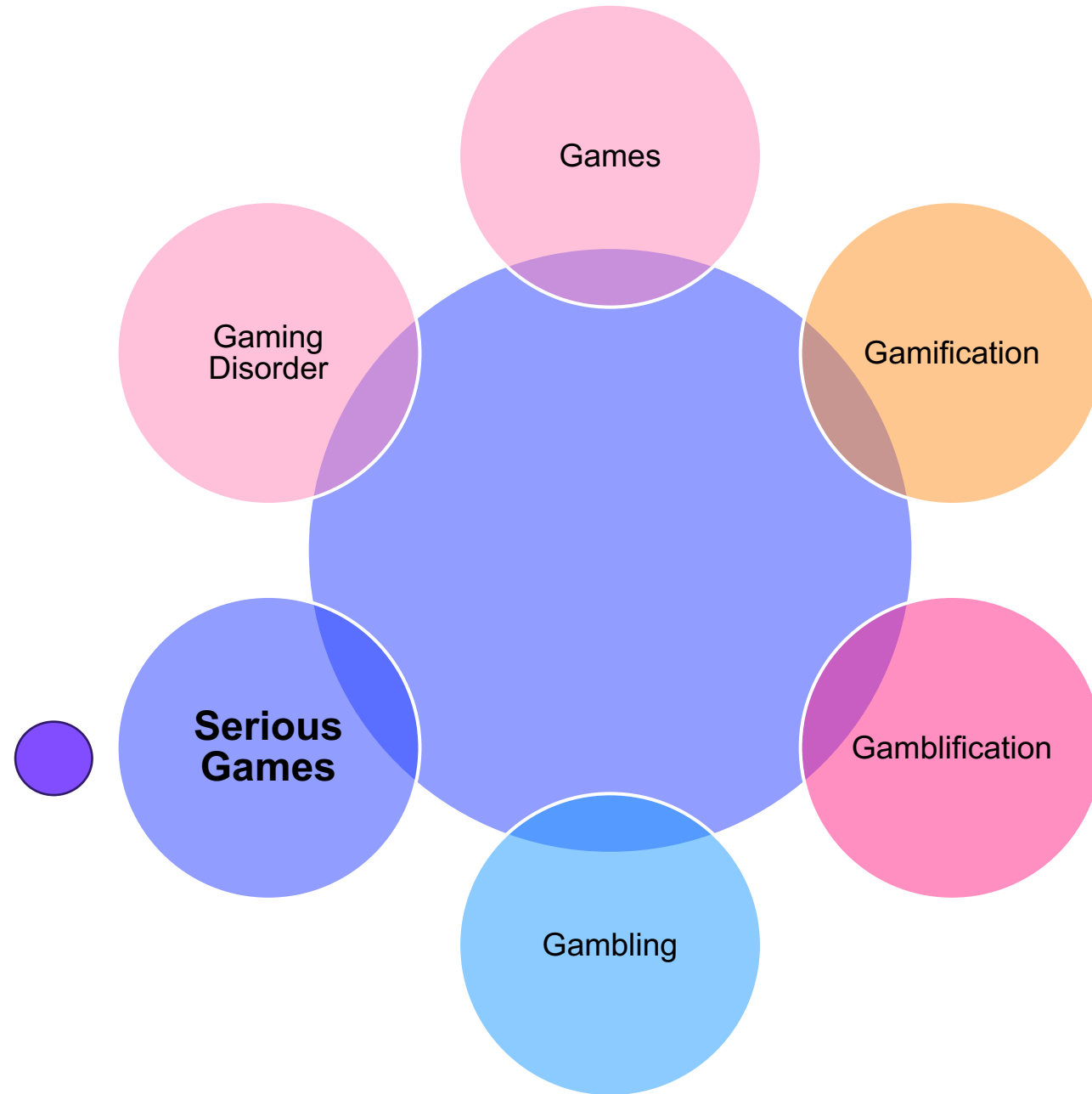
Serious games utilize gaming as a central and primary medium

(Deterding et al, 2011; Fleming et al, 2014)

Gamification as an approach to improve resilience and reduce attrition in mobile mental health interventions: A randomized controlled trial

Silja Litvin , Rob Saunders, Markus A. Maier, Stefan Lüttke


Published: September 2, 2020 • <https://doi.org/10.1371/journal.pone.0237220>





Thank you

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