

RESPONSIBLE GAMING

**A Scientific Approach to
Mediate Potential Gaming Disorders
and a Review of Global Practices**

PLAY SMART | PAUSE WHEN NEEDED | STOP WHEN NECESSARY

Foreword



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India stands today at an exciting crossroads in the evolution of online gaming. With a dynamic demographic, increasing digital penetration, and a rapidly evolving technological landscape, the online gaming sector is not just emerging; it's surging. This report aims to provide a comprehensive overview of this dynamic space, delving into the trends, challenges, and immense opportunities that define the Indian online gaming ecosystem.

In what's traditionally been a cricket crazy country, the many verticals of the Online Gaming Industry have not only provided Indians' ample opportunity to engage with a wider range of sports but also broaden their horizons through genre-bending gameplay, captivating storylines and even the development of skills like strategic thinking. This sunrise sector holds tremendous potential for growth in an increasingly digital India yet it remains misunderstood by regulatory authorities across the country who are primarily motivated at curbing harmful behaviours such as betting and gambling but end up presuming all online gaming formats to be the same.

With 500+ startups serving one of the world's biggest gaming markets, it is imperative that stakeholders employ a more nuanced, balanced approach to protect industry and consumers alike. Drawing on evolving international best practices, scientific research and expert opinions, this report comprehensively analyzes responsible gaming measures around the world. It clearly illustrates the failures of prescriptive interventions such as bans and the success of harm-reduction approaches, advancing a much-needed Code for Responsible Online Gaming tailored to India's distinct socio-economic context.

An ever-evolving industry offering gamers' respite and recreation, the views of government and civil society must evolve alongside it. When policymakers look beyond the standard game of skill versus chance debate, both industry and gamers will benefit. This report makes the compelling case that stakeholders such as government, industry, and civil society need to work together to foster a responsible online gaming ecosystem. If stakeholders work jointly to adopt an informed, forward-looking policy framework as suggested in this report, I am certain this vision can become reality.

We hope this report serves as a valuable resource, providing clarity and sparking informed discussions about the future of online gaming in India.



Foreword



Dr. Arvind Gupta
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The Online Gaming Industry has a base of over 450 million gamers and a projected market value of INR 66,000 crore by 2028, this industry exemplifies both the scale of India's digital transformation and its inherent responsibilities. Success in this sector will be measured by market growth and our ability to foster an ecosystem that prioritizes responsibility alongside innovation.

This report offers an in-depth examination of responsible gaming practices, drawing from global best practices and contextualizing them within India's unique digital landscape. It underscores critical imperatives such as regulatory oversight, player well-being, age-appropriate safeguards, self-exclusion mechanisms, and ethical monetization models. These steps will prove essential as the online gaming industry continues its trajectory of growth and technological advancement.

A future-ready gaming ecosystem requires a balanced approach, one that embraces innovation while prioritizing consumer protection. Policymakers, industry leaders, and online gaming platforms must work together to establish frameworks that mitigate risks, promote ethical standards, and instill trust. I hope this report serves as an essential guide for those committed to shaping a responsible, sustainable, and thriving online gaming ecosystem in India.



Executive Summary



India's online gaming industry is entering a new era- thriving, fast-paced, and brimming with potential. With a projected CAGR of 14.5% between 2023 and 2028, the country is home to the second-largest gaming population in the world and perfectly placed to become the epicentre of digital gaming innovation. Supported by increasing internet penetration and a growing appetite for on-demand entertainment, the sector now caters to a vast and diverse user base, offering everything from casual and card games to esports tournaments and fantasy sports leagues.

This rapid growth coincides with India's demographic dividend. With the country on track to host the largest young consumer market globally by 2028, gaming platforms are evolving quickly to capture the attention and loyalty of this next generation. Innovative business

models, gamified user experiences, and personalised engagement strategies are being rolled out at breakneck speed. But alongside this promise lies a set of complex, pressing challenges: how can we ensure that growth does not come at the cost of user wellbeing? How do we strike a balance between innovation and responsibility?

Efforts to promote responsible online gaming are underway, but the path is far from linear. Central to the Indian regulatory conversation is the long-contested distinction between games of skill and games of chance, a debate that has shaped judicial interpretation, informed state legislation, and guided industry practices. In a landmark move, the government introduced a co-regulatory framework under the amended Information Technology Rules in 2023, seeking to streamline oversight and strengthen user safeguards. However, the operationalisation of Self-Regulatory Bodies (SRBs) is still awaited, and the lack of a national standard has resulted in inconsistent enforcement and continued ambiguity. Overregulation in certain states has also led to unintended consequences, pushing gamers to grey or black market alternatives that lack safeguards entirely.

This report draws from global best practices, expert commentary, and scholarly research to propose a roadmap for India's online gaming sector - one that nurtures growth while safeguarding users. Studies increasingly highlight the positive potential of online gaming: improved creativity, problem-solving skills, and emotional resilience are among the oft-cited benefits. However, these outcomes can only be unlocked through moderation, informed choices, and a strong culture of responsibility. Academic literature also points to the multi-factorial nature of potential gaming-related harm, rooted in a mix of *structural* (game design), *personal* (individual predispositions), and *situational* (environmental) factors. Therefore, any successful strategy must be as multi-dimensional as the problem it seeks to solve.

Through a comparative lens, the report examines how countries like China, South Korea, Japan, Australia, the UK, the USA, and Malta have approached regulation. In many jurisdictions, the most effective solutions blend regulation with education, consumer empowerment,

and industry cooperation. These international case studies offer vital lessons- not just on what works, but also on what doesn't. While blanket, mandatory restrictions have often backfired, proving ineffective and even pushing users toward unsafe alternatives; voluntary, opt-in interventions have shown greater promise. Tools like customizable spending limits, cooling-off periods, and self-exclusion programs have helped many gamers regain control. In fact, data from international studies shows that a majority of users in self-exclusion schemes reported positive behavioural shifts. Importantly, these tools work best when paired with educational initiatives that help users understand the risks and make informed decisions.

Building on these insights, we propose a forward-looking solution: the *Code for Responsible Online Gaming* (CROG)- a holistic framework rooted in evidence-based and scientific practices and tailored to India's unique digital and demographic realities. CROG calls for coordinated oversight, potentially under central authorities like MeitY or BIS, and recommends consolidating scattered standards across the sector. Inspired by global best practices, the aim is to establish clear norms that are accessible to users and actionable for industry players. Importantly, CROG champions a

player-first, prevention-focused approach, empowering gamers to make healthier choices while supporting the online gaming industry's growth and innovation. It recognizes the pivotal role that online gaming companies can play in promoting user wellbeing - not through compulsion, but through design, communication, and trust-building.

The report also underscores the need for cross-sectoral collaboration. Policymakers must provide clarity and consistency in enforcement. Industry operators must embed responsible online gaming into core business models, not as an afterthought but as a principle. Civil society and academic institutions must continue to generate evidence, create awareness, and advocate for users. And the media must report responsibly, avoiding sensationalism that distorts public perception and undermines serious discourse.

Like any complex multiplayer game, building a responsible gaming ecosystem will require synergy. Success lies not in isolated efforts but in collective momentum. With the right strategy, thoughtful regulation, and a shared commitment to protecting users, India can level up- not just as an online gaming giant, but as a global model for responsible, safe, inclusive, and sustainable digital play.

Background

Online gaming has evolved into a dynamic sector that connects players in real-time across different locations, spanning diverse genres from casual games to competitive esports. Beyond mere entertainment, it strengthens social connections and enhances cognitive development. Once considered a niche hobby, gaming has now become a driving force in the media and entertainment industry. According to the EY-FICCI M&E 2024¹ report, online gaming is the fastest-growing segment in India's Media and Entertainment (M&E) sector.

In India, the online gaming sector has witnessed remarkable growth, driven by affordable internet access, increasing smartphone adoption, and a rapidly expanding youth population. The Indian online gaming market is projected to reach INR 66,000 crore by 2028, growing at a CAGR of 14.5% from 2023 to 2028, according to PwC India's 2024 Online Gaming report². With a player base exceeding 45 crore or 450 million, India ranks as the second-largest gaming market globally. Global investors recognize the potential in this sector, having invested an impressive USD 2.8 billion (INR 23,000 crore) between FY20 and FY24. Employment within the industry is also set to rise significantly, adding an estimated 2,00,000 to 3,00,000 direct and indirect jobs in the coming years.

However, this extraordinary growth comes with its own challenges, as is always the case with any new-age emerging digital sector. As the industry expands, stakeholders worldwide and in India call for a safer, more responsible, and balanced online gaming ecosystem. This report aims to explore global best practices and arrive at a science-based approach to addressing potential gaming disorders within India's unique socio-economic context. Our goal is to develop a framework that supports the continued growth and innovation of the online gaming industry while prioritizing player well-being and ethical standards.

Approach

Comparative Policy Analysis

The report conducted a thorough analysis of global policy frameworks and regulatory approaches toward online gaming, focusing on countries such as China, South Korea, the UK, the USA, Australia, Japan, and Malta. By examining best practices in responsible gaming measures, we identified strategies that could effectively adapt to India's unique socio-economic landscape. The goal was to develop a balanced regulatory framework promoting industry growth and player well-being.

Systemic Review & Meta Analysis

A systemic review of existing academic research, industry reports, and government policies was undertaken to evaluate the impact of online gaming on player behavior, particularly concerning potential gaming disorders. Through meta-analysis, data from multiple studies were synthesized, providing a comprehensive understanding of the risks, benefits, and emerging trends within the Indian gaming market.

¹ #Reinvent: India's media & entertainment sector is innovating for the future. (2024, March). FICCI and Ernst & Young. https://assets.ey.com/content/dam/ey-sites/ey-com/en_in/topics/media-and-entertainment/2024/03/ey-media-entertainment-report-2024-v1.pdf

² From sunrise to sunshine: The contribution of online gaming to the Viksit Bharat journey and India's cultural power.(n.d.). PwC India. <https://www.pwc.in/assets/pdfs/online-gaming-to-the-viksit-bharat-journey.pdf>

Methodology

Scoping

The first step involved defining the scope and objectives of the report, which focused on key issues such as potential gaming disorders, responsible gaming practices, player protection, and regulatory challenges.

Secondary Research

Extensive secondary research was conducted to gather data from credible sources, including academic publications, industry reports, and international guidelines on online gaming regulations.

Analysis

The gathered data were analyzed to uncover patterns, challenges, and opportunities within India's online gaming ecosystem. The analysis focused on understanding the socio-economic factors driving gaming growth, as well as the psychological and regulatory aspects related to potential gaming disorders. The feasibility of adapting global best practices to India's regulatory environment was also evaluated.

Expert Inputs

To ensure the report was grounded in practical insights, a diverse set of stakeholders, including industry were engaged. Their inputs provided valuable perspectives on player protection mechanisms and regulatory challenges, helping us formulate actionable recommendations for the industry.

Student Inputs

IndiaTech.org and Digital India Foundation organised a debate symposium on Responsible Online Gaming in April 2025. Insights from students of leading public policy, law, and management schools were incorporated into the report, bringing fresh, youth-centric perspectives to its analysis and recommendations.



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I. The Online Gaming Ecosystem in India

India is expected to become the largest young consumer market globally by 2030, with consumer spending set to quadruple³. Central to this transformation is the increasing consumption of digital content, driven by greater and affordable internet access, widespread mobile device usage, and the ease of on-demand content. Today, the average Indian mobile user spends around 6.2 hours per day consuming various forms of media and entertainment. India's online gaming industry's user base is projected to grow at a 5% CAGR, and the share of paying gamers is expected to rise to 34% by FY28⁴.

The online gaming industry in India is a vibrant and multifaceted landscape, encompassing a wide variety of formats that are distinguished by their unique business models, gameplay mechanics, and skill requirements. As the industry evolves, it is crucial to acknowledge the distinct game types that appeal to diverse audiences. Each category not only offers its own engaging experiences but also presents specific challenges and opportunities, particularly in relation to user engagement and the implementation of responsible gaming practices. Understanding the types of games offered and their nuances is vital for stakeholders navigating this rapidly changing environment.

A. Business Structures

1. *In-App Advertising*: Game developers often use their platforms as a space for advertisers to showcase their products. This approach enables the game to remain free for users while generating revenue through advertising. For example, players may encounter video ads, banners, or interactive promotions that appear after completing a level or specific stages of the game. These advertisements can vary from simple display ads to more immersive interactive ads that encourage user engagement, providing a steady income stream for developers while offering brands a targeted audience.
2. *In-App Purchases*: Many games operate on a "freemium" model where the game itself is free to play, but users can purchase various in-game items and enhancements. These may include customizable features such as character skins, special weapons, power-ups, or other assets that enhance gameplay or provide cosmetic appeal. This model allows players to progress or gain advantages without making mandatory payments, catering to both casual users and dedicated gamers willing to spend for a more enriched experience.
3. *Entry Fee and Prize Pool System*: In certain competitive gaming models, users are required to pay an entry fee to join tournaments or contests. This entry fee typically has two main components: a portion goes into the prize pool that is distributed among the winners, while the remainder serves as a commission for the platform hosting the event.
4. *One-Time Purchase or Subscription Model*: Some games are offered through a straightforward one-time purchase, allowing users permanent access to the full game. This may involve purchasing physical game discs or downloading digital copies for a set price. Alternatively, some games use a subscription-based payment structure, where players pay on a recurring basis (e.g., monthly or annually) to access the game or to enjoy added benefits, such as exclusive content, updates, or premium support. This model ensures continuous revenue for developers and provides players with ongoing content and features.

³ United Kingdom Government. (n.d.). *VGDC10100 - Overview and general definitions: Meaning of "video game" - HMRC internal manual - GOV. UK*. UK Government. Retrieved October 21, 2024, from <https://www.gov.uk/hmrc-internal-manuals/video-games-development-company-manual/vgdc10100>

⁴ Granic, I., Lobel, A., & Engels, R. C. M. E. (2014). The benefits of playing video games. *American Psychologist*, 69(1), 66–78. <https://doi.org/10.1037/a0034857>

B. Nature of Gameplay

Online games can further be categorized based on their nature and gameplay mechanics. Each of these formats can integrate various monetization models, maximizing profitability while maintaining player engagement. Moreover, many games blur genre boundaries, fitting into multiple categories simultaneously. This flexibility enables developers to refine revenue strategies and enhance user experience through tailored monetization approaches.

CONSOLE BASED VIDEO GAMES:

A console based video game is an electronic game that is played through an electronic device. The video device and equipment required to play the game are separate from the game itself, even if the two are sold as a single product. The video game is the software and other electronically stored content and information, rather than the hardware it is played on⁵.

The most essential distinguishing feature of these video games is that they are interactive; players cannot passively surrender to a game's storyline. Instead, these games are designed for players to engage with their systems actively and for these systems to, in turn, react to players' agentive behaviors⁶. Console Based Video games are also complex works of authorship – containing multiple art forms, such as music, scripts, plots, video, paintings and characters – that involve human interaction while executing the game with a computer program on specific hardware⁷.



E-SPORTS:

eSports are competitive video games played in both online and offline formats, often as tournaments or competitions that may be live-streamed and involve participation fees. Recently, eSports have gained prominence as a highly organized and recognized sports discipline globally. They are now featured in major sports tournaments, reflecting their growing acceptance. In a significant development, the International Olympic Committee partnered with Saudi Arabia's National Olympic Committee to host the inaugural Olympic eSports Games in 2025, further cementing eSports' status in the global sporting landscape.



CARD GAMES:

Card games primarily use a deck of cards and include popular options like Rummy and Poker, both of which have online versions:

- Rummy requires players to memorize discarded cards and calculate the probability of drawing winning cards from the remaining deck.
- Poker, available online and offline, involves players to make strategic decisions to call, raise, or fold.



CASUAL GAMES:

Casual games are designed for mass audiences with simple, easy-to-understand gameplay, and are played mainly for recreation. Casual Games combine physical skills like reflexes and dexterity with mental skills such as logic, quick thinking, and game knowledge. They include digital versions of real-world sports like chess, carrom, and billiards, indoor games like ludo and Scrabble, as well as knowledge-based games like quizzes. Casual Games can also feature games with no real-world equivalents, such as Candy Crush and Temple Run.



FANTASY SPORTS:

Fantasy sports are available on a digital platform where fans create teams using real-life players from upcoming matches, popular in sports like cricket, football, kabaddi, and basketball. Unlike e-sports or casual games, fantasy sports are based on actual player performances in live matches. Participants earn points based on how their selected players perform, with success relying on the participant's knowledge of the sport, player form, and match dynamics.



⁵ Ramos, A., Lopez, L., Rodriguez, A., Meng, T., & Abrams, S. (2013). *The Legal Status of Video Games: Comparative Analysis in National Approaches*. World Intellectual Property Organization. https://www.wipo.int/edocs/pubdocs/en/wipo_report_cr_vg.pdf

⁶ Granic, I., Lobel, A., & Engels, R. C. M. E. (2014). The benefits of playing video games. *American Psychologist*, 69(1), 66–78. <https://doi.org/10.1037/a0034857>

⁷ Ramos, A., Lopez, L., Rodriguez, A., Meng, T., & Abrams, S. (2013). *The Legal Status of Video Games: Comparative Analysis in National Approaches*. World Intellectual Property Organization. https://www.wipo.int/edocs/pubdocs/en/wipo_report_cr_vg.pdf

C. Skill Dynamics and Requirements

The debate among policymakers in India centers on whether online games should be classified as games of skill or games of chance, a distinction that is critical to determining their legal status. Since gambling falls under the purview of state legislation in India, each state has the authority to frame its own laws on the matter. As a result, every court order must be interpreted within the context of the specific legal framework of the respective state⁸.

- a. *Games of Chance*: A game of chance (i.e. betting/gambling/wagering), in its traditional sense, is one where the outcome is determined predominantly by mere luck. The result in a game of chance is wholly uncertain and users cannot

apply their mind to estimate the result. Game of chance or betting and gambling is a prohibited activity in India under the Public Gambling Act, 1967, unless otherwise regulated or licensed by the respective state governments.

- b. *Games of Skill*: A game qualifies as a game of skill when its outcome is primarily determined by the participant's knowledge, adroitness, training, expertise, and experience. This applies to both physical and mental abilities used in executing moves. In such games, chance plays a minimal or negligible role, with the result relying mainly on the player's skill. Success requires continuous learning, practice, and honing of abilities.

“ The Supreme Court of India in *Dr. K.R. Lakshmanan vs State Of Tamil Nadu And Anr*, 1996 has ruled that a game of skill is one where “success depends principally upon the superior knowledge, training, attention, experience, and adroitness of the player,” affirming that skill, rather than chance, is the dominant factor. ”

⁸ Verghis, M., Adhikari, R., & Gokhale, G. (2016, July). *India's Gaussian case and its impact on skill game portals (Case Law)*. Nishith Desai Associates. India's Gaussian Case and its impact on skill game portals.

II. Legal Status of Online Gaming in India

While free to play games & in-app purchase/ subscription based games have largely remained out of regulatory focus, including that of content regulation, regulatory conversations have been only focused around real money gaming, gambling & betting. India's legal framework for gaming dates back to the Public Gambling Act of 1867⁹, a pre-independence statute that prohibits gambling in physical premises known as "common gaming houses." However, Section 12 of the PGA exempts "games of mere skill" from its provisions. With the adoption of the Indian Constitution, legislative authority over gambling and betting was delegated to states. Consequently, many states have enacted their own gambling laws, often based on the PGA, with minor modifications¹⁰.

Policymakers are constantly working to modernize outdated laws and fill regulatory gaps, focusing mainly on the need to introduce a national levy regulatory framework for legitimate online gaming industry and bringing clear distinction between games of skill and games of chance, an essential factor in regulating the online gaming ecosystem. While games of skill, which rely on player expertise, are legal, games of chance, determined by randomness, are gambling and betting and are prohibited. This distinction is critical in shaping taxation, legal frameworks, and industry oversight.

Over the years, Indian courts have classified games like rummy, poker¹¹, and fantasy sports as skill-based¹², distinguishing them from games of chance like roulette. Despite this legal distinction, some states have prohibited even games of skill when played for money¹³. For instance, the states like Telangana and Andhra Pradesh prohibit games of chance and skill when played for money. Cases are pending against such prohibition. Further, some States such as Nagaland and Sikkim have adopted a licensing mechanism to license both chance based as well as skill-based games.

The debate between games of skill and games of chance, alongside constitutional challenges to restrictions, has been addressed by the Supreme Court and various High Courts.

- a. In *The State of Bombay v. R.M.D. Chamarbaugwala*, the Supreme Court, defined "mere skill" as games that predominantly rely on skill, setting a precedent that games involving significant skill would not be classified as games of chance.
- b. This was further affirmed in *K.R. Lakshmanan v. State of Tamil Nadu*, where the Court introduced the "preponderance of skill" test, recognizing that although chance may play a role, success in games of skill depends primarily on factors like knowledge, training, and experience.
- c. In another pivotal ruling, *State of Andhra Pradesh v. K. Satyanarayana & Ors.*, the Supreme Court declared rummy as a game of skill due to the level of expertise required in holding and discarding cards.
- d. Similarly, in *Varun Gumber v. Union Territory, Chandigarh*, the Punjab and Haryana High Court ruled that fantasy sports are games of skill and therefore, protected as legitimate business activities under Article 19(1)(g) of the Constitution. A petition and a subsequent review petition challenging the judgment were dismissed by the Supreme Court.

The aforementioned precedents have been reinforced by recent judgments challenging state-imposed bans:

- a. In *All India Gaming Federation and Others v. The State of Tamil Nadu*, the court upheld the validity of the Tamil Nadu Prohibition of Online Gambling and Regulation of Online Games Act, 2022 and clarified that the law would only prohibit games of chance and games of skill can be regulated.
- b. Any restriction on freedom of speech, expression, or the right to practice a trade or occupation through the internet must comply with Articles 19(2) and 19(6) of the Constitution,

⁹ The Public Gambling Act, 1867. Public Gambling Act 1867

¹⁰ If the subject matter of a pre-constitutional law falls into the State List, the State Government is the competent legislature to repeal that Act as per Article 372(1), the Law Commission of India observed in its 248th Report of November 2014, according to the letter. Hence, it is now upon states to repeal the existing Public Gambling Act of 1867.

¹¹ While three courts in India have ruled that poker is a game of skill, the Gujarat High Court has held that it is a game of chance. This divergence in judicial opinions leaves the legal status of poker in a grey area, highlighting the need for further clarity. Games of Skill vs Games of Chance. (2021, October). Touchstone Partners. <https://touchstonepartners.com/wp-content/uploads/2021/10/Skill-vs-games-of-Chance-Google-Docs.pdf>

¹² Dharmeliya, S. (2024, September 19). The Skill Debate: Allahabad High Court rules on the Legality of Rummy and Poker (DM Gaming v. State of UP). IPRMENTALAW. Link

¹³ The Constitution of India in its Seventh Schedule, List II (State List) empowers the state governments to make laws regarding gambling and betting activities

which enshrine the principle of proportionality. Applying the proportionality test to online gaming, the Karnataka High Court ruled in *All India Gaming Federation v. State of Karnataka* that the regulation of online gaming should incorporate technological solutions to ensure safe and responsible gaming environments. The Court struck down the Karnataka Police (Amendment) Act, 2021, which sought to ban all games, including games of skill, if played for monetary stakes. It held that such activities, being legitimate businesses under Article 19(1)(g), do not inherently pose public order or police concerns. The Court also suggested integrating data science, corporate social responsibility, and responsible gaming programs into regulations to align legal frameworks with technological advancements.

In response to the growing complexities of online gaming, the central government in 2022 set up a seven-member inter-ministerial task force to devise a national level regulatory framework for online gaming. This task force's efforts led to the designation of the Ministry of Electronics and Information Technology (MeitY) as the nodal ministry for the sector by way of amendment to Allocation of Business Rules, 1961 in December 2021. In April 2023, MeitY introduced amendments to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 (*IT Amendment Rules 2023*), establishing a regulatory framework for online gaming. The new rules, which adopt a co-regulatory approach, aim to balance user protection with industry responsibility, defining 'permissible online real money games' and requiring certification from Self-Regulatory Bodies (SRBs) approved by the government.

The *IT Amendment Rules 2023* provide much-needed clarity for businesses in this sector. A key feature is the verification process for determining the permissibility of online real-money games based on the following criteria:

- a. The game must not involve wagering on outcomes.
- b. It must comply with due diligence requirements outlined in the rules.

- c. Compliance standards set by Self-Regulatory Bodies (SRBs) must be met, addressing issues such as user harm, addiction, and financial loss.

To standardize responsible gaming practices, the *IT Amendment Rules 2023* require online gaming intermediaries to comply with due diligence measures. These are designed to empower users, helping them make informed decisions and manage their gaming habits responsibly. Key measures that are aimed at promoting responsible gaming include:

- The safeguards against user harm, including self-harm and psychological harm;
- The measures to safeguard children, including measures for parental or access control and classifying online games through age-rating mechanism, based on the nature and type of content; and;
- The measures to safeguard users against the risk of gaming addiction, financial loss and financial fraud, including repeated warning messages at higher frequency beyond a reasonable duration for a gaming session and provision to enable a user to exclude himself upon user-defined limits being reached for time or money spent¹⁴.

SRBs are intended to play a critical role in verifying permissible games and providing a visible mark of verification that enables consumers, government and other stakeholders to distinguish between what is permissible and impermissible. However, the formation of SRBs has been delayed as MeitY continues to coordinate across ministries and address concerns about the independence of regulatory bodies. The Online Gaming Rules also require SRBs to implement frameworks to protect users from potential gaming disorders and financial risks. Delays in appointing these SRBs have hindered the full implementation of the rules. This has led some states to take regulatory matters into their own hands. For example, Tamil Nadu's Prohibition of Online Gambling and Regulation of Online Games Act, 2022 empowers the state to introduce regulations for online gaming.

¹⁴ The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2023 updated as on 6.4.2023. (2023, April 6). Ministry of Electronics and Information Technology, Government of India. <https://www.meitv.gov.in/static/uploads/2024/02/Information-Technology-Intermediary-Guidelines-and-Digital-Media-Ethics-Code-Rules-2021-updated-06.04.2023-.pdf>

Once fully implemented, these measures referenced in the *IT Amendment Rules 2023* aim to create a safer and more transparent online gaming ecosystem in India, addressing critical concerns such as addiction, financial harm and promoting responsible participation. Moreover, while the Gaming Rules establish a strong foundation for responsible gaming measures, they do not provide detailed guidance on how each measure should be executed within the Indian context. This leaves room for interpretation and may delay the practical application of these protections.

To fill this gap, industry-led initiatives such as the '**Voluntary Code of Ethics for Online Gaming Intermediaries**' have emerged, promoting self-regulation and encouraging operators to enforce user defined time and spending limits. Given the growing focus on responsible gaming, there is increasing momentum for a unified, federal-level regulatory framework that can bring consistency and clarity to this rapidly evolving industry.

SUMMARY

- India's online gaming industry is rapidly expanding, driven by a surge in digital content consumption and increased internet accessibility. Mobile gaming has grown in popularity, with Indian users spending over six hours daily on digital media, intensifying concerns around issues such as addiction, privacy, and financial risks.
- The online gaming industry presents a dynamic landscape defined by diverse game formats, unique business models, and evolving user engagement mechanisms. From video games and card games to casual, eSports, and fantasy sports, each category caters to varied player preferences, offering different challenges and opportunities, particularly regarding responsible gaming practices.
- Key monetization models include in-app advertising, freemium purchases, entry fees with prize pools, and subscription-based access. As developers strategically select these models to enhance revenue and user satisfaction, understanding gameplay dynamics remains vital.
- Central to the industry's regulation is the skill-versus-chance debate, with skill-based games requiring knowledge, expertise, and strategic thinking, as recognized by India's Supreme Court. This debate shapes legal frameworks and impacts how stakeholders approach user engagement and policy compliance in a rapidly growing market.
- The government has responded by strengthening regulatory oversight, with the Ministry of Electronics and Information Technology (MeitY) designated as the primary regulatory authority. To address this complexity, a co-regulatory framework was introduced under the *IT Amendment Rules 2023*, mandating self-regulatory bodies (SRBs) to oversee compliance and certify permissible games.
- The measures listed under the *IT Amendment Rules 2023* are aimed at balancing user protection and industry growth. At the core of this framework is the distinction between games of skill and games of chance, with the former permitted under certain conditions and the latter largely restricted. The *IT Amendment Rules 2023* introduced the Online Gaming Rules, which apply a co-regulatory approach where self-regulation is supported by Self-Regulatory Bodies (SRBs) sanctioned by the government.
- The measures proposed under the *IT Amendment Rules 2023* suggest user protections through reference to several responsible gaming practices, including: **safeguards against user harm, protection for children through parental controls and age ratings, and measures to prevent gaming addiction, financial loss, and fraud. As well as frequent warning messages and the option for users to exclude themselves upon reaching self-defined time or spending limits.**
- These measures aim to mitigate issues like addiction and financial harm, promoting a safer gaming environment. However, delays in operationalizing SRBs and the lack of standardized implementation guidance present challenges, leaving the practical application of these rules largely up to interpretation.

III. The Economic Impact of the Online Gaming Industry

A 2023 study by the Indian Statistical Institute (ISI) signals a bright future for India as a key player in the global online gaming industry. The revenue-generating potential of India's online gaming sector is increasingly clear. Between FY20 and FY23, the sector contributed an estimated INR 7,200 crore to the national GST revenue. Since the introduction of a 28% GST rate on deposits compared to the earlier industry practice of 18% on platform fee, monthly GST collections from online gaming have naturally quadrupled, now ranging from INR 1,100 to 1,300 crore.

India's Finance Minister recently reported that GST revenues¹⁵ from the sector rose by 412%, reaching INR 6,909 crore from October 2023 to March 2024, up from INR 1,349 crore in the prior six months. Industry projections suggest that from FY 2025 to 2029, the Real Money Gaming (RMG) segment alone could generate cumulative GST revenues of INR 80,000–85,000 crore, with TDS contributions estimated at INR 6,500–7,000 crore. In FY 2023–24, the sector also contributed over INR 1,080 crore in tax deducted at source (TDS) through February 2024¹⁶.

“

Prime Minister Narendra Modi, while interacting with the gaming community in India in early 2024, disclosed his avid gaming side and appreciated the growing potential of the online gaming ecosystem.

Reflecting on these discussions in a later interview, he stated,

"After interacting with young gamers, I told my government that I want to cement India's leadership in the global gaming market."

In his 2024 Independence Day address, he shared a compelling vision:

"I am seeing a big market that has come up in the field of gaming... India has a big heritage in the area, and we can bring lots of new talent to the world of gaming."

This vision was further reinforced during the 2025 Parliament Budget session, where the Prime Minister highlighted the rapid growth of India's gaming industry and emphasized that the country has the potential to become the capital of gaming in the world¹⁷. The Prime Minister's remarks underscore his optimism about India's youth driving innovation and shaping the future of this dynamic industry. ”

¹⁵ GST revenue from online gaming up 412% to Rs 6,909 crore in 6 months, says FM Sitharaman; decision on insurance deferred—BusinessToday. (n.d.). Retrieved November 11, 2024, from <https://www.businesstoday.in/latest/economy/story/gst-revenue-from-online-gaming-up-412-to-rs-6909-crore-in-6-months-says-fm-sitharaman-decision-on-insurance-deferred-445137-2024-09-09>

¹⁶ Standard, B. (2024, February 2). I-T dept collects over Rs 1,260 cr in TDS from online gaming, crypto trade. https://www.business-standard.com/economy/news/i-t-dept-collects-over-rs-1-260-cr-in-tds-from-online-gaming-crypto-trade-124020201533_1.html

¹⁷ Fazal, I. (2025, February 5). Indian gaming industry applauds PM Modi's vision of global gaming capital. StoryBoard 18. <https://www.storyboard18.com/gaming-news/indian-gaming-industry-applauds-pm-modis-vision-of-global-gaming-capital-55661.htm>

Beyond its direct economic contributions, India's online gaming sector represents the country's technological progress and innovation, aligning with the government's "Digital India" initiative. The industry has played a crucial role in promoting digital literacy and strengthening the nation's tech infrastructure. Digital payment systems, particularly UPI, have facilitated in-game transactions, contributing to the growth of the online gaming ecosystem. In FY23 alone, India processed 8,370 crore UPI transactions, underscoring the sector's contribution to enhancing digital infrastructure. With 430 crore mobile game downloads in India in 2023, accounting for 15.3% of global downloads, the rise of gaming content creators and influencers is transforming the country into a digitally empowered society and a knowledge-driven economy¹⁸.

Despite the promising growth and revenue potential of the online gaming industry, concerns have been raised about India's tax approach, which deviates from the global standard of taxing gross gaming revenue. Long-term, inconsistent policies could deter new entrants, force shutdowns, and erode investor confidence. However, the 2024 Economic Survey recognized gaming as one of the top sectors for startups in 2023, contributing 4% to the overall growth, highlighting the urgent need for a conducive ecosystem to support the sector's continued expansion¹⁹. Given the sector's

existing challenges, any user protection measures should be carefully crafted, taking into account the product, industry dynamics, and technological capabilities to avoid imposing additional strain on the industry.

Additionally, any imposition of blanket restrictions on online gaming could threaten this progress, undermining the immense progress of this sunrise industry. Over-regulation and over-taxation may turn to unregulated and potentially unsafe versions of games offered by illegitimate operators, exposing themselves to greater risks as well as driving heavy internet users toward other addictive behaviors without any positive outcomes. Without sufficient empirical evidence, it is difficult to conclude whether the benefits of such restrictions outweigh the risks, which may inadvertently reduce overall social welfare, with increased incidence of issues such as identity theft, document fraud, and increased exposure to the riskier corners of the internet.

Given these complexities, any regulatory measure must balance protecting users and promoting economic growth. Policymakers need to adopt evidence-based, proportionate, and sustainable approaches that comply with constitutional standards rather than applying blanket solutions. Different games carry varying risks due to their social and immersive components, meaning a one-size-fits-all approach is unlikely to be effective.

¹⁸ Gaming Industry in India: Explore Opportunities with Invest India. (n.d.). Retrieved November 11, 2024, from <https://www.investindia.gov.in/sector/media/gaming>

¹⁹ Guardians of Safe Play: Ethical Gaming for Vibrant Bharat. (n.d.). Grant Thornton & E-Gaming Federation. https://www.granthornton.in/globalassets/1.-member-firms/india/assets/pdfs/ethical_gaming.pdf

IV. Benefits of Online Gaming

The role of online games in society has evolved profoundly, with these interactive platforms becoming more than just a source of entertainment. They have emerged as powerful tools for cognitive development, social engagement, and emotional resilience, offering players of all ages avenues for skill-building and mental well-being. Far from the simplistic stereotypes of the past, online games are now recognized for their multifaceted impact on individual growth and social connectedness. By engaging players in immersive worlds, online games stimulate critical thinking, promote creativity, and create virtual spaces for meaningful social interactions. This dynamic understanding of online games is transforming how educators, mental health professionals, and even international organizations view the potential benefits of gaming, suggesting that these digital landscapes hold valuable lessons and skills that players can carry with them into the real world²⁰.

One of the primary benefits of online games is their ability to enhance cognitive skills, especially in areas like problem-solving, strategic thinking, and creativity. Unlike traditional forms of entertainment, online games require active engagement, inviting players to analyze complex scenarios, make quick decisions, and devise effective strategies. Role-playing games, for example, often challenge players to navigate complex narratives, solve intricate puzzles, and make strategic choices that influence the game's outcome. These experiences help players develop a set of cognitive tools that extend beyond gameplay. Studies show that these skills are transferable; individuals who regularly engage in gaming demonstrate better spatial awareness, faster reaction times, and enhanced cognitive flexibility. Importantly, researchers have found that even seemingly simplistic games can boost creativity by stimulating imaginative thinking, encouraging players to find novel solutions to in-game challenges. This cognitive engagement prepares players to think innovatively in real-life situations, whether tackling academic tasks, solving work-related problems, or engaging in creative pursuits.

Moreover, online games can encourage a "*growth mindset*," a belief that abilities and intelligence can be developed through effort, as introduced by psychologist Carol Dweck. This mindset aligns closely with how many games are structured: players are encouraged to persist through trial and error, continuously learning and adapting their strategies based on feedback. For instance, games reward perseverance through achievements and unlockable content, reinforcing the idea that improvement comes from effort. This feedback loop mirrors educational theories, like Lev Vygotsky's "*zone of proximal development*," which describes the optimal learning space where challenges are within reach but still demand effort and skill. Games often place players in this zone, keeping them motivated by balancing difficulty with achievability. This environment nurtures the lesson that growth is attainable through persistence, a skill that proves invaluable in real-life pursuits²¹.

A key element of online games is their use of failure as a learning mechanism. These games encourage players to see failure as a natural and temporary part of the learning process. By frequently encountering setbacks and learning from them, players develop "*relentless optimism*," a trait of resilience and positivity which is not limited to gaming alone. Players often carry this growth-oriented mindset into other areas of life, facing real-world setbacks with a solution-focused approach rather than becoming discouraged. The persistence players gain from overcoming in-game obstacles provides them with a framework for dealing with challenges in their personal and professional lives²².

Today's gaming landscape is highly social, with over 70% of players regularly engaging in multiplayer experiences.

In addition to cognitive and emotional growth, online games also promote social skills and empathy, often in surprisingly impactful ways. Many multiplayer games, such as cooperative missions in role-playing games or team-based sports games, require coordination and

²⁰ Can video games make us healthier? (n.d.). Retrieved November 6, 2024, from <https://www.who.int/europe/news/item/08-12-2021-can-video-games-make-us-healthier>

²¹ Sokolov, A. A., Collignon, A., & Bieler-Aeschlimann, M. (2020). Serious video games and virtual reality for prevention and neurorehabilitation of cognitive decline because of aging and neurodegeneration. *Current Opinion in Neurology*, 33(2), 239. <https://doi.org/10.1097/WCO.0000000000000791>

²² Jones, C., Scholes, L., Johnson, D., Katsikitis, M., & Carras, M. C. (2014). Gaming well: Links between videogames and flourishing mental health. *Frontiers in Psychology*, 5. <https://doi.org/10.3389/fpsyg.2014.00260>

communication, skills essential in real-life social and professional contexts. Collaborative gaming experiences teach players how to work as part of a team, navigate conflicts, and support one another's success. This sense of community often extends beyond the screen, with research showing that individuals who participate in civic-oriented games like MMORPGs (Massively Multiplayer Online Role-Playing Games) are more likely to engage in real-world civic activities. Studies reveal that gamers involved in these experiences tend to volunteer, participate in charity, and become more engaged in social causes, suggesting that gaming can even cultivate a sense of social responsibility and civic-mindedness.

The mental health benefits²³ of gaming are equally significant. For example, video games have shown promise as tools for managing stress, building emotional resilience, and providing psychological relief.

The "Power of Play" study, conducted internationally by Video Games Europe, surveyed nearly 13,000 players and revealed that 71% of gamers use video games to relieve stress, and 55% turn to them as a means of combating loneliness.

These findings highlight the important role games play as outlets for relaxation and emotional support. For many players, online games provide a safe space to unwind, explore emotions, and experience a sense of control. The World Health Organization (WHO) has acknowledged the mental health benefits of gaming, partnering with the gaming industry to promote health-positive behaviors during the COVID-19 pandemic through initiatives like *#PlayApartTogether*. This initiative integrated WHO's health guidelines into popular games, promoting social distancing and encouraging healthy practices through an engaging format. These collaborative efforts highlight the ability of online games to serve as tools for both individual and public health, offering support during a time of increased social isolation and stress.

Furthermore, online games have proven to be effective platforms for raising awareness around broader health

and environmental issues. The United Nations has collaborated with the gaming industry through initiatives like the *Playing for the Planet* alliance, which uses popular games to educate players on issues like climate change and sustainability. These collaborations demonstrate how gaming can contribute to global well-being, using the medium's reach to engage millions of players with critical social and environmental messages. By incorporating messages about healthy living, environmental conservation, and global responsibility, online games are not only promoting awareness but also encouraging players to take actionable steps in their communities²⁴.

However, it is essential to recognize that responsible gaming practices are necessary to fully realize these benefits. While most gamers experience positive impacts from their gameplay, a small subset may struggle with excessive gaming habits that interfere with personal, social, or professional aspects of life. The World Health Organization's International Classification of Diseases (ICD-11) now includes "gaming disorder," underscoring the importance of balance. The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR)*²⁵, describes it as Internet Gaming Disorder (IGD)(1). IGD is included in the section recommending conditions warranting further research.

The debate over whether excessive gaming should be considered an addiction or mental disorder remains ongoing. Some researchers argue that compulsive gaming may be a symptom of underlying issues such as depression or anxiety rather than a disorder in itself. A study published in the *American Journal of Psychiatry* in March 2017 examined the validity of IGD criteria, comparing it to gambling addiction and problem gaming. The findings revealed that while most gamers did not exhibit symptoms of IGD, only a small fraction met the criteria for the disorder²⁶. For the vast majority, online gaming serves as a healthy and constructive activity, fostering learning, relaxation, and social connection when enjoyed in moderation.

²³ Video Games and Mental Health: A Surprising Ally. (n.d.). [Government]. United Nations Regional Information Centre for Western Europe. <https://unric.org/en/video-games-and-mental-health-a-surprising-ally/>

²⁴ Nations, U. (2023b, October 31). Building Blocks of a Better City: Minecraft's Role in Urban Development. United Nations Western Europe. <https://unric.org/en/building-blocks-of-a-better-city-minecrafts-role-in-urban-development/>

²⁵ Internet Gaming in DSM-5. (n.d.). American Psychiatric Association. <https://www.psychiatry.org/patients-families/internet-gaming>

²⁶ Przybylski, A. K., Weinstein, N., & Murayama, K. (2017). Internet Gaming Disorder: Investigating the Clinical Relevance of a New Phenomenon. *American Journal of Psychiatry*, 174(3), 230–236. <https://doi.org/10.1176/appi.ajp.2016.16020224>

SUMMARY

- India's online gaming industry has shown significant economic growth, contributing substantially to national revenues and reflecting the country's technological advancements. Between FY20 and FY23, the sector contributed approximately INR 7,200 crore in GST revenues, with recent policy changes increasing monthly collections. The sector aligns with initiatives like "Digital India," encouraging widespread UPI usage.
- Despite this growth, tax policies and potential over-regulation present challenges, which could deter investment and drive consumers towards unregulated alternatives. Policymakers must strike a balance between regulation, economic growth, and user protection to ensure sustained industry expansion and social welfare.
- Remarkably, online gaming has evolved beyond mere entertainment, providing significant benefits for cognitive development, social engagement, and emotional resilience. Online games challenge players to think critically, strategize, and solve complex problems, cultivating skills like spatial awareness, creativity, and adaptability.
- Moreover, multiplayer experiences promote social skills, teamwork, and empathy, often translating into real-world civic engagement. Gaming can also alleviate stress, combat loneliness, and support mental well-being. However, moderation and responsible gaming are crucial to maximizing these positive impacts.

V. Understanding the Causes of Potential Gaming Disorders

The prevalence of certain types of gaming disorder has been found to vary significantly across age, gender, and geographical regions. Further, gaming disorders have also been found to be associated with individuals experiencing high levels of psychological distress, social anxiety, low satisfaction, reduced quality of physical health, and social life, and problems such as reduced employment and educational attainment. Certain gaming disorders have also been found to co-occur with depression, anxiety, personality disorder, other addictive disorders such as alcohol use disorder, and addictive behaviors such as addictive use of social media.

Nevertheless, it is essential to recognize that these characteristics do not define the gaming population as a whole. Clinical evidence suggests that individuals diagnosed with a gaming disorder often present a combination of these contributing factors. For the vast majority of gamers, however, such issues are absent. It is critical to challenge the misconception that all gamers are susceptible to these disorders or their associated challenges.

The etiology of gaming disorder is one of most important research topics in the field of responsible gaming. Prevention and treatment of gaming disorders requires having a strong empirical knowledge concerning the course of its development. Similar to other forms of addictions, it has been found that certain gaming disorders are generally a result of interactive co-occurrence of three factors:

- i. Structural characteristics
(i.e. gaming-related factors)
- ii. Person-based characteristics
(i.e. individual factors)
- iii. Situational characteristics
(i.e. environmental factors)

Each of these factors have been discussed in detail in the subsequent sections.

A. Structural Characteristics | Game-related Factors

There are certain aspects of any given online game that can induce gaming disorders among users. These could range from game design and game elements to monetization techniques. These have been discussed in more detail in this section.

1. GENRES & DESIGN ELEMENTS

Online gaming can be categorized into different classes based on their genres, gameplay and type of engagement they offer to the users. For instance, in the Indian context, games can be classified into casual games, mid-core games, card games and fantasy sports. Esports- which is a competitive form of online gaming- is also a category that is growing rapidly. Each of the categories differ from each other in a multitude of ways and accordingly, their ability to induce gaming disorder also varies vastly.

Mid-core games, a mix of casual and hard-core games, which includes massively multiplayer online role-playing games (MMORPGs) are by far the most researched game type genre and the one that was consistently found as being associated with potentially problematic gaming habits alongside first-person/third person shooter (FPS/TPS) games, real-time strategy (RTS) games, and multiplayer online battle arena (MOBA)²⁷ games. These games involve highly detailed 3D and immersive virtual environments that enable users to interact with each other in a variety of different ways. These genres include a combination of structural characteristics that makes them particularly appealing to players.

Structural characteristics refer to those features of video games that may facilitate initiation, development, and maintenance of playing over time and include specificities such as the permanent nature of the game world, the advancement and complex reinforcement systems and/or the social interactions aspects. Battle royale is another form of online gaming that has recently become extremely popular. While the impact of this genre is still being studied, there is a high probability that these also have high addictive potential due to a good combination of structural features they include.

²⁷ Rehbein, F., King, D. L., Staudt, A., Hayer, T., & Rumpf, H.-J. (2021). Contribution of Game Genre and Structural Game Characteristics to the Risk of Problem Gaming and Gaming Disorder: A Systematic Review. *Current Addiction Reports*, 8(2), 263–281. <https://doi.org/10.1007/s40429-021-00367-7>

2. MONETISATION MODELS

Online gaming platforms deploy different revenue and business models depending on the kind of gameplay they offer. Free-to-play gaming, wherein revenue is secured from microtransactions (i.e., the purchase of additional game content in the form of virtual items such as textures/skins, weapons, currency, or levels) has become one of the most widespread business models. Studies have argued that some of the monetization practices often used in the free-to-play business models can be considered risky because “they involve in-game purchasing systems that disguise or withhold the true long-term cost of the activity until players are already financially and psychologically committed”²⁸.

One of the most relevant and highly debated monetization schemes to date is the “loot box”. This refers to an in-game reward system, a consumable virtual item usually in the form of a box or crate that can be purchased for real-world money (through microtransactions), which provides players with randomized rewards of unclear value. The psychological mechanism underlying microtransactions is linked to the so-called “sunk-cost effect”. The sunk cost refers to the tendency to continue a behavior because investments in money, effort or time have been made previously. Therefore, if players have already spent money on loot boxes and did not get what they wished for, they are more likely to make further purchases to get the desired item(s)²⁹. Occasionally receiving the rare, high-quality rewards they wished for acts as intermittent reinforcement, meaning that the players get strongly reinforced to continue buying loot boxes for other valuable rewards³⁰.

Another monetization model worth mentioning is the personalization of offers and pricing. Companies use in-game behavior tracking to collect data about players, their playing, and spending habits. Based on these data, they carry out behavioral and psychological profiling and use these profiles to tailor offers and even pricing to individual players. Furthermore, games may use pressuring tactics to encourage spending.

Based on the aforementioned, it can be concluded that

there are game design related factors that can contribute to the onset and maintenance of potential gaming disorders. It is therefore crucial for research to be constantly updated to understand newer genres, game design elements, and monetization techniques. Only this way it can provide policymakers the necessary information to make effective policies for prevention and harm-reduction.

B. Person-based Characteristics | Individual Factors

Factors such as demography, personality traits, motivation, comorbid psychopathology³¹, genetic predisposition, and neurobiological processes are central to users developing gaming disorders. Ultimately, it is always the users and their individual vulnerabilities that determine whether online gaming remains a healthy passion or develops into a disorder. However, it is essential to recognize that these traits do not define the gaming population as a whole. While individuals diagnosed with a gaming disorder often exhibit a combination of these factors, the vast majority of gamers do not face such challenges.

1. DEMOGRAPHY

Younger participants (especially adolescents) have reported higher prevalence rates of gaming disorders especially around video games³². A higher proportion of younger individuals play video games and are also more motivated to play video games than older individuals. Further, studies have found that males tend to exhibit higher levels of gaming disorder, while females tend to show higher levels of social media addiction³³. Findings regarding socio-economic variables, however, have been inconsistent. A number of studies did not find any significant associations between education level, employment, marital status, income, and gaming disorder symptoms, while others have reported lower prevalence rates of gaming disorders for those who are better educated, employed, and married. Inconsistent findings indicate that further studies are required, and possible cultural differences may also be present.

²⁸ Rehbein, F., King, D. L., Staudt, A., Hayer, T., & Rumpf, H.-J. (2021). Contribution of Game Genre and Structural Game Characteristics to the Risk of Problem Gaming and Gaming Disorder: A Systematic Review. *Current Addiction Reports*, 8(2), 263–281. <https://doi.org/10.1007/s40429-021-00367-7>

²⁹ González-Cabrera, J., Basterra-González, A., Ortega-Barón, J., Caba-Machado, V., Díaz-López, A., Pontes, H. M., & Machimbarrena, J. M. (2023). Loot box purchases and their relationship with internet gaming disorder and online gambling disorder in adolescents: A prospective study. *Computers in Human Behavior*, 143, 107685. <https://doi.org/10.1016/j.chb.2023.107685>

³⁰ King, D. L., & Delfabbro, P. H. (2018). Predatory monetization schemes in video games (e.g. 'Loot boxes') and internet gaming disorder. *Addiction*, 113(11), 1967–1969. <https://doi.org/10.1111/add.14286>

³¹ González-Bueso, V., Santamaría, J. J., Fernández, D., Merino, L., Montero, E., & Ribas, J. (2018). Association between Internet Gaming Disorder or Pathological Video-Game Use and Comorbid Psychopathology: A Comprehensive Review. *International Journal of Environmental Research and Public Health*, 15(4), Article 4. <https://doi.org/10.3390/ijerph15040668>

³² Stevens, M. W., Dorstyn, D., Delfabbro, P. H., & King, D. L. (2021). Global prevalence of gaming disorder: A systematic review and meta-analysis. *Australian & New Zealand Journal of Psychiatry*, 55(6), 553–568. <https://doi.org/10.1177/0004867420962851>

³³ Su, W., Han, X., Yu, H., Wu, Y., & Potenza, M. N. (2020). Do men become addicted to internet gaming and women to social media? A meta-analysis examining gender-related differences in specific internet addiction. *Computers in Human Behavior*, 113, 106480. <https://doi.org/10.1016/j.chb.2020.106480>

2. PERSONALITY TRAITS

Studies have found that there exists a correlation between gaming disorders and certain personality traits. For instance, studies suggest that there is a negative association between gaming disorders with extraversion, conscientiousness, and agreeableness and a positive association with neuroticism³⁴.

A plausible explanation for the association between gaming disorder symptoms and neuroticism is that neurotic individuals are prone to anxiety, depression, and stress and may use virtual game worlds as an escape because they perceive these digital environments as more controllable and safer than their everyday lives. However, if they keep escaping in games to avoid negative affective states, gaming habits might become potentially problematic.

Similarly, individuals scoring low on conscientiousness have difficulties with being dutiful and self-disciplined, tend to be unstructured and less persistent in pursuing their goals and may therefore find games attractive due to the clear rules and constant positive reinforcement. Among personality factors, impulsivity stands out due to its relation with addictive behaviors in general³⁵. Survey studies examining large-scale adolescent and gamer samples, as well as treatment-seeking clinical samples reported a significant association between trait impulsivity and gaming disorder symptoms³⁶.

3. INDIVIDUAL VULNERABILITIES

Research suggests that, similar to other addictions, comorbidity is the norm rather than the exception in the case of gaming disorder³⁷. Among psychopathological conditions, depression and depression symptoms, as well as generalized anxiety disorder and anxiety symptoms, have been consistently related to gaming disorders. Another comorbid condition thoroughly studied is Attention-Deficit/Hyperactivity Disorder (ADHD)³⁸. According to a recent meta-analysis, both symptoms of inattention and hyperactivity, as well as the combined

ADHD symptoms, were moderately associated with gaming disorder. Several factors may contribute to the development of gaming disorder among individuals experiencing ADHD symptoms such as impaired social and affective functioning and/or impulsivity. In addition to psychopathology, there are many other individual vulnerabilities. Among these, self-esteem and social competencies are of particular importance. Low self-esteem has been reported as a risk factor in developing gaming disorder symptoms in numerous studies, as are social anxiety or poor social skills³⁹.

4. MOTIVATIONAL FACTORS

Several studies reported moderate to strong associations of escapism (i.e., playing online games to avoid everyday problems) and weak or moderate associations of achievement-related motives (e.g., advancement, competition) with gaming disorders.⁴⁰ These findings suggest that those who play solely for entertainment are unlikely to develop gaming disorder. However, those who have psychiatric difficulties may use gaming as a means to avoid everyday problems or to compensate for their deficiencies, which appears to work as a maladaptive coping mechanism and if pursued for long, it may cause negative (addiction-like) consequences.

The act of seeking in-game achievements is driven by the rewarding nature of video games. These achievements may additionally result in higher recognition and status within the gaming community, which some individuals cannot achieve in their everyday lives. Finally, social motivation can lead to excessive use by creating an obligation to play because virtual team membership can be as important as belonging to any other group. In addition, video games can also serve as safe environments to fulfill social needs. Overall, research greatly supports the idea that it is not gaming time in itself that predicts gaming disorder, but the way gamers play, their motives, and the degree they can integrate this leisure time activity in their lives.⁴¹

³⁴ Király, O., Koncz, P., Griffiths, M. D., & Demetrovics, Z. (2023). Gaming disorder: A summary of its characteristics and aetiology. *Comprehensive Psychiatry*, 122, 152376. <https://doi.org/10.1016/j.comppsy.2023.152376>

³⁵ Lee, R. S. C., Hoppenbrouwers, S., & Franken, I. (2019). A Systematic Meta-Review of Impulsivity and Compulsivity in Addictive Behaviors. *Neuropsychology Review*, 29(1), 14–26. <https://doi.org/10.1007/s11065-019-09402-x>

³⁶ Su, W., Király, O., Demetrovics, Z., & Potenza, M. N. (2019). Gender Moderates the Partial Mediation of Impulsivity in the Relationship Between Psychiatric Distress and Problematic Online Gaming: Online Survey. *JMIR Mental Health*, 6(3), e10784. <https://doi.org/10.2196/10784>

³⁷ Kuss, D. J., Pontes, H. M., & Griffiths, M. D. (2018). Neurobiological Correlates in Internet Gaming Disorder: A Systematic Literature Review. *Frontiers in Psychiatry*, 9. <https://doi.org/10.3389/fpsy.2018.00166>

³⁸ Koncz, P., Demetrovics, Z., Takacs, Z. K., Griffiths, M. D., Nagy, T., & Király, O. (2023). The emerging evidence on the association between symptoms of ADHD and gaming disorder: A systematic review and meta-analysis. *Clinical Psychology Review*, 106, 102343. <https://doi.org/10.1016/j.cpr.2023.102343>

³⁹ Wichstrøm, L., Stenseng, F., Belsky, J., von Soest, T., & Hygen, B. W. (2019). Symptoms of Internet Gaming Disorder in Youth: Predictors and Comorbidity. *Journal of Abnormal Child Psychology*, 47(1), 71–83. <https://doi.org/10.1007/s10802-018-0422-x>

⁴⁰ Yee, N. (2006). Motivations for Play in Online Games. *CyberPsychology & Behavior*, 9(6), 772–775. <https://doi.org/10.1089/cpb.2006.9.772>

⁴¹ Király, O., Tóth, D., Urbán, R., Demetrovics, Z., & Maraz, A. (2017). Intense video gaming is not essentially problematic. *Psychology of Addictive Behaviors*, 31(7), 807–817. <https://doi.org/10.1037/adb0000316>

C. *Situational Characteristics | Environmental Factors*

Environmental factors are influences that do not occur from within the individual but from elsewhere in the environment. Examples of environmental factors are the family and peers, work and school, and also the culture in which the gamer lives in. Besides game-related and individual factors, situational and environmental factors also play an essential role in the etiology of gaming disorders.

However, not all gamers are affected by the same circumstances or respond in the same way. While individuals with gaming disorders often exhibit a combination of these factors, the vast majority of gamers do not display such symptoms. It is crucial to dispel the misconception that all gamers are equally susceptible to potential gaming disorders.

1. FAMILY INTERACTION

As in the case of substance use and other potentially addictive behaviors, familial influences and early life experiences affect the likelihood of an individual developing a gaming disorder. Positive family functioning, characterized by good parent-child communication, common social activities, cohesion, connectedness, acceptance, secure attachment, warmth, and affectivity, were protective factors, while poor family functioning, conflicts, hostility and demanding, authoritarian, neglectful or permissive parenting style were risk factors for potentially problematic gaming habits.

More recent findings confirmed that in addition to the low-quality parent-child relationship, lack of monitoring and violent disciplining have deleterious effects⁴². Review findings suggest that parental monitoring and regulation of gaming behavior are effective strategies for potential gaming disorder prevention⁴³. Parents who regulate their children's gaming are also more likely to help them find and practice alternative leisure time activities, which is crucial in maintaining a healthy balance and is recommended as a prevention strategy. It has also been found that core self evaluations mediate the effect of parental rejection on gaming disorder⁴⁴.

2. PEER TO PEER INTERACTION

Gaming disorder symptoms among young adults were correlated with problems with peers (both being bullied and bullying others), having friends whose gaming habits were also potentially problematic, having low educational and career achievements (skipping school classes, truancy, and having low school grades), and having poor social skills, low competence, and a low level of integration⁴⁵. The invisibility, anonymity, and equal/fair chances provided by virtual game worlds may be very tempting for those otherwise excluded and harassed by their peers because they can experience self-efficacy while playing and feel recognized by fellow gamers.

The three interrelated factors discussed above play a key role in the development and maintenance of gaming disorders. Online games are designed to maximize player engagement by involving numerous psychological mechanisms such as operant conditioning. Individual factors also play a crucial role in the development and maintenance of gaming disorder through the individual's psychological and neurobiological vulnerabilities. Last, environmental factors such as the family or broader cultural environment heavily influence how individuals play and whether gaming may become potentially problematic. Consequently, due to the multifactorial nature of gaming disorders, the prevention and intervention of gaming disorders also requires a multifaceted approach and involvement of several stakeholders. The interventions to mediate the issues stemming from gaming disorders must, therefore, go beyond just limiting exposure to online gaming through imposed limits or abstinence.

Now that we've examined the factors contributing to potentially problematic gaming habits, we must define when these patterns evolve into more severe conditions. Distinguishing casual and recreational play from clinically recognized gaming disorder is key to developing effective interventions. International organisations like World Health Organization (WHO) and the American Psychiatric Association (APA) have attempted to define what constitutes gaming disorder although this area continues to be an evolving topic wherein the underlying causes may be subjective and situational.

⁴² Cuong, V. M., Assanangkornchai, S., Wichaidit, W., Hanh, V. T. M., & Hanh, H. T. M. (2021). Associations between gaming disorder, parent-child relationship, parental supervision, and discipline styles: Findings from a school-based survey during the COVID-19 pandemic in Vietnam. <https://doi.org/10.1556/2006.2021.00064>

⁴³ Bussone, S., Trentini, C., Tambelli, R., & Carola, V. (2020). Early-Life Interpersonal and Affective Risk Factors for Pathological Gaming. *Frontiers in Psychiatry*, 11. <https://doi.org/10.3389/fpsy.2020.00423>

⁴⁴ Throuvala, M. A., Janikian, M., Griffiths, M. D., Rennoldson, M., & Kuss, D. J. (2019). The role of family and personality traits in Internet gaming disorder: A mediation model combining cognitive and attachment perspectives. <https://doi.org/10.1556/2006.8.2019.05>

⁴⁵ Gao, Y.-X., Wang, J.-Y., & Dong, G.-H. (2022). The prevalence and possible risk factors of internet gaming disorder among adolescents and young adults: Systematic reviews and meta-analyses. *Journal of Psychiatric Research*, 154, 35–43. <https://doi.org/10.1016/j.jpsychires.2022.06.049>

D. Definition by World Health Organization

As per the International Classification of Diseases (ICD) by the World Health Organization (WHO)^{46,47}, “gaming disorder” is characterized by a pattern of persistent or recurrent gaming behavior, which may be online or offline, manifested by:

- i. impaired control over gaming (e.g., onset, frequency, intensity, duration, termination, context);
- ii. increasing priority is given to gaming to the extent that gaming takes precedence over other life interests and daily activities; and
- iii. continuation or escalation of gaming despite the occurrence of negative consequences.

The pattern of gaming behavior may be continuous or episodic and recurrent. The pattern of gaming behavior results in marked distress or significant impairment in personal, family, social, educational, occupational, or other important areas of functioning. The gaming behavior and other features are normally evident over a period of at least 12 months for a diagnosis to be assigned. However, the required duration may be shortened if all diagnostic requirements are met and symptoms are severe.

E. Definition by American Psychiatric Association

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR) published by the American Psychiatric Association⁴⁸, the clinical diagnosis of Internet Gaming Disorder (IGD) if five (or more) of the following nine criteria are met:

- i. preoccupation with online/offline gaming (i.e., preoccupation);
- ii. experience of unpleasant symptoms when gaming is taken away (i.e., withdrawal);
- iii. the need to spend increasing amounts of time engaged in games (i.e., tolerance);
- iv. unsuccessful attempts to control participation in games (i.e., loss of control);

- v. loss of interest in previous hobbies and entertainment as a result of, and with the exception of games (i.e., give up other activities);
- vi. continued excessive use of games despite knowledge of psychosocial problems (i.e., continuation);
- vii. deceiving family members, therapists, or others regarding the amount of gaming (i.e., deception);
- viii. use of games to escape or relieve negative moods (i.e., escape); and
- ix. jeopardizing or losing a significant relationship, job, or education or career opportunity because of participation in games (i.e., negative consequences)

F. Ongoing Discussion & Research on the Extent of Gaming Disorder in Users

Whether gaming disorder should be classified as a mental disorder is the subject of much debate and a growing body of research. There is neurological research showing similarities in changes in the brain between video gaming and addictive substances. Many studies have sought to examine the validity and reliability of the criteria for gaming disorder and estimate its impact on physical, social and mental health. One such study, published in the American Journal of Psychiatry, has found that among those who played games, most did not report any symptoms of internet gaming disorder and the percentage of people that might qualify for internet gaming disorder is extremely small⁴⁹. The study was conducted on a cohort of users from the US, UK, Canada and Germany. Some key findings from the report are as follows:

- i. Among those who played games, more than 2 out of 3 did not report any symptoms of Internet Gaming Disorder.
- ii. A very small proportion of the general population (between 0.3% and 1.0%) might qualify for a potential acute diagnosis of Internet gaming disorder.
- iii. Comparison to gambling disorder revealed that

⁴⁶ World Health Organization. (n.d.). Gaming disorder. Retrieved October 21, 2024, from <https://www.who.int/standards/classifications/frequently-asked-questions/gaming-disorder>

⁴⁷ ICD-11. (n.d.). ICD-11 for Mortality and Morbidity Statistics. Retrieved October 21, 2024, from <https://icd.who.int/browse/2024-01/mms/en#1448597234>

⁴⁸ Internet Gaming in DSM-5. (n.d.). American Psychiatric Association. <https://www.psychiatry.org/patients-families/internet-gaming>

⁴⁹ Przybylski, A. K., Weinstein, N., & Murayama, K. (2017). Internet Gaming Disorder: Investigating the Clinical Relevance of a New Phenomenon. *American Journal of Psychiatry*, 174(3), 230–236. <https://doi.org/10.1176/appi.ajp.2016.16020224>

Internet-based games may be significantly less addictive than gambling and similarly dysregulating as electronic games more generally.

Similar studies suggest that gaming disorder affects only a small proportion of people who engage in digital or video gaming activities.⁵⁰ However, people who partake in gaming should be alert to the amount of time they spend on gaming activities, particularly when it is to the exclusion of other daily activities, as well as to any changes in their physical or psychological health and social functioning that could be attributed to their pattern of gaming behavior.

However, some recent studies have reported that the incidence of “gaming disorder” increased dramatically during the COVID-19 pandemic⁵¹, driven by a combination of factors such as lockdowns, lack of social interaction, and the accessibility of gaming as a source of entertainment and stress relief during a period of unprecedented uncertainty. The research and the debate are ongoing. Some argue, for example, that gaming disorder could be a symptom of an underlying problem, such as depression or anxiety, and not a disorder or addiction itself.

SUMMARY

- The prevalence of gaming disorders varies by age, gender, and region, and is often linked to psychological and social challenges, such as anxiety, depression, and diminished quality of life.
- Understanding the development of gaming disorder involves examining structural (game-related), personal (individual traits), and situational (environmental) factors.
 - Game elements, design, and monetization strategies like loot boxes can heighten addiction risk.
 - On an individual level, demographic factors, personality traits (e.g., neuroticism), mental health conditions, and motivations (e.g., escapism) influence susceptibility.
 - Environmental influences such as family dynamics and peer interactions further shape gaming behavior.
- This multifaceted etiology demands a holistic approach to prevention and intervention, focusing on more than simply restricting gameplay.

With a deeper understanding of gaming disorder, the next step is to explore how these issues are managed through responsible gaming frameworks. In the following section, we'll define the concept and scope of responsible gaming, followed by a comparative analysis of countries like China, South Korea, the USA, the UK, Japan, Australia, and Malta. By examining their approaches, we'll assess the effectiveness of various responsible gaming measures in safeguarding users. The discussion will also address the practicality of time and money limits, considering whether voluntary, user-driven strategies might offer more effective alternatives to rigid, mandatory controls.

⁵⁰ Darvesh, N., Radhakrishnan, A., Lachance, C. C., Nincic, V., Sharpe, J. P., Ghassemi, M., Straus, S. E., & Tricco, A. C. (2020). Exploring the prevalence of gaming disorder and Internet gaming disorder: A rapid scoping review. *Systematic Reviews*, 2020 9:68. <https://link.springer.com/content/pdf/10.1186/s13643-020-01329-2.pdf>

⁵¹ Gao, Y.-X., Wang, J.-Y., & Dong, G.-H. (2022). The prevalence and possible risk factors of internet gaming disorder among adolescents and young adults: Systematic reviews and meta-analyses. *Journal of Psychiatric Research*, 154, 35–43. <https://doi.org/10.1016/j.jpsychires.2022.06.049>

VI. Responsible Gaming Around the World: Global Strategies and Approaches

Responsible gaming is a holistic approach aimed at mitigating the risks associated with gaming, ensuring that players can engage safely without falling into potentially problematic gaming habits and patterns. It is designed to create a balance between recreation, entertainment, and other beneficial aspects of gaming while safeguarding individuals from potential risks and encouraging the adoption of ethical behavior across the industry, thereby promoting a sustainable gaming environment. Responsible gaming goes beyond mere regulation. It is a collective responsibility that involves collaboration between governments, regulatory authorities, gaming operators, civil society, and players.

Gaming operators are central to promoting responsible gaming. They are required to implement measures that protect users, such as providing tools for setting customisable deposit and spending limits, enabling self-exclusion options, and offering real-time activity statements to help players track their habits. Operators should be encouraged to integrate features that prompt players to engage in healthier gaming behaviors, such as reminders when they have reached time or financial limits. By designing games with responsible gaming in mind, the industry helps reduce the risk of potential gaming disorders while ensuring that gaming remains a form of entertainment rather than a source of harm.

Governments and regulatory bodies establish legal frameworks to enhance transparency and fairness. These regulations ensure that gaming activities are conducted in a secure environment, safeguarding against financial risk and unfair practices while enforcing player protection at every level. Governments also often run awareness campaigns to educate the public about the risks associated with potentially problematic gaming habits, encouraging players to use the protective tools available and providing resources for those seeking help. Public awareness initiatives promote a shared responsibility, urging players to monitor their gaming behaviors actively. For example, countries like the UK and Australia have taken significant steps to ensure players are informed about the risks, providing pre-commitment tools, time management systems, and access to help centers for managing financial risks or addressing unhealthy gaming practices.

Globally, the approach to responsible gaming varies across jurisdictions, but the overarching goal remains consistent—protecting players while allowing them to

enjoy gaming safely. Countries like Australia take a proactive approach, implementing pre-commitment measures and activity statements to minimize risks, while South Korea's focus has shifted to user-defined limits that allow parents to control their children's gaming hours, leading to healthier habits from a young age. Meanwhile, the USA enforces a mix of federal and state-level laws that emphasize player protection through self-exclusion programs, deposit limits, and responsible advertising. Despite regional differences, the global effort is aligned in minimizing risk while maintaining gaming as a safe, enjoyable activity. However, in the examined countries, most of the rules, regulations, and measures primarily focus on gambling and betting.

The responsibility for engendering a safe gaming environment extends beyond operators and regulators. NGOs, civil society, and the players all play key roles in this ecosystem. NGOs and advocacy groups help raise public awareness, provide support services for those affected by potential gaming disorders, and push for sustainable and equitable regulatory frameworks. Players, on the other hand, are encouraged to actively engage with the tools available to them—such as setting personal limits, using self-exclusion programs, and seeking help when necessary—ensuring they contribute to a safe and responsible gaming culture.

Ultimately, responsible gaming is about creating a balanced ecosystem where the enjoyment of gaming does not come at the cost of player well-being. It involves a multi-layered strategy integrating regulatory frameworks, operator responsibilities, player engagement, and public awareness to build a sustainable gaming environment. Through continuous adaptation to new technological developments and evolving challenges, responsible gaming remains committed to protecting players, promoting fairness, and ensuring that the gaming industry operates ethically and transparently.

In the following section, we conduct a country-wise analysis of responsible gaming regulations, exploring the frameworks in place across nations like China, South Korea, the USA, the UK, Japan, Australia, and Malta. This comparative study will shed light on the effectiveness of different regulatory strategies, offering insights into how each nation addresses responsible gaming challenges and protects its players.

How Countries Tackle Responsible Gaming: A Comparative Analysis

As online gaming continues to thrive in popularity and accessibility, it presents many challenges that warrant careful consideration and management. These challenges include the risks of potential gaming disorders, financial vulnerabilities, underage exposure to inappropriate content, and the growing prevalence of cyberbullying. While gaming can offer valuable benefits such as entertainment, social interaction, and cognitive development, it also has the potential to negatively impact individuals and society if not approached with responsibility and care.

In response to these challenges, numerous countries have implemented responsible gaming policies and regulations to cultivate a safer gaming environment. However, it is crucial to recognize that in some global jurisdictions, the term “gaming” also encompasses gambling and betting. In India, several online gaming formats which have withstood judicial scrutiny to be qualified as games of skill, however there are no government regulations that specify what constitutes skill or chance. This distinction emphasizes the need for regulatory frameworks specifically tailored to address the nuances of the Indian gaming ecosystem, ensuring both safety and enjoyment for all participants.



A. CHINA

China has been enacting several stringent regulations to curb online gaming addiction, particularly targeting minors. Key measures include real-name registration, restrictions on in-game purchases, and time limits on gameplay as part of the broader “Anti-Addiction System.”⁵² The *2019 Notice on the Prevention of Online Gaming Addiction in Juveniles* aimed to mitigate risks associated with gaming disorders by enforcing a 1.5-hour daily gaming limit for minors on weekdays (3 hours on weekends) and banning gameplay between 10 PM and 8 AM. Spending caps based on age were also introduced. Notably, regulations in China target video games and casual games.

Despite these efforts, studies like Zendle et al. (2023)⁵³ suggest that the regulations have not significantly reduced excessive playtime. Additionally, loopholes such as the use of VPNs (Virtual Private Networks) and account rentals have allowed users to bypass restrictions, prompting discussions about policy revisions. In response, the government is exploring the use of facial recognition and stricter controls to enhance compliance.

The study also suggested that top-down regulations may effectively secure compliance from major corporations with the resources to monitor and manage their user bases and are prominent targets for political oversight in China. However, ensuring and monitoring compliance among thousands of smaller companies presents significant challenges, as seen with similar regulatory efforts worldwide. This disparity in compliance could lead to unchanged or even increased levels of heavy gaming among smaller companies as avid players shift from well-regulated, major games to those offered by smaller, non-compliant firms. Considering the fragmented nature of the video game industry, dominated by a few large corporations surrounded by countless small and medium-sized enterprises, uneven compliance seems likely. For these smaller enterprises, implementing comprehensive age verification systems may be impractical in terms of cost and feasibility and challenging for authorities to enforce.

China also experimented with a “fatigue shutdown” system, which reduced in-game rewards after three hours of gameplay and cut them off entirely after five hours. However, this approach has proven to be psychologically counterproductive and has raised questions about its long-term efficacy. Media reports indicate that the government is reconsidering these restrictions, acknowledging challenges like user migration to unregulated platforms and industry-wide enforcement difficulties.

⁵² Király, O., Browne, D. T., & Demetrovics, Z. (2022). Developmental and Family Implications of State-Controlled Video Game Play in China. *JAMA Pediatrics*, 176(6), 543–544. <https://doi.org/10.1001/jamapediatrics.2022.0322>

⁵³ Zendle, D., Flick, C., Gordon-Petrovskaya, E., Ballou, N., Xiao, L. Y., & Drachen, A. (2023). No evidence that Chinese playtime mandates reduced heavy gaming in one segment of the video games industry. *Nature Human Behaviour*, 7(10), 1753–1766. <https://doi.org/10.1038/s41562-023-01669-8>



B. SOUTH KOREA

South Korea, much like China, has taken significant steps to address gaming addiction among minors. In 2011, the country introduced the "Shutdown Law" (also known as the "Cinderella Law"), which prohibited children under 16 from playing online games between midnight and 6 AM.⁵⁴ This law aimed to ensure children received adequate sleep and did not become overly engrossed in gaming during late-night hours. Notably, regulations in South Korea target video games and casual games.

In addition to the Shutdown Law, South Korea implemented another regulation in 2012, which limited continuous gaming time. After two hours of play, gamers were required to take a 10-minute break, and only then were they allowed to continue gaming for an additional hour. This one-size-fits-all approach, known as shutdowns, was criticized for being overly simplistic and ineffective in addressing the complexities of gaming behavior.

However, after years of criticism over its effectiveness and concerns about children's rights, South Korea repealed the law in August 2021. The Ministry of Culture, Sports and Tourism, along with the Ministry of Gender Equality and Family, introduced a more flexible "choice permit" system. This allows parents to set gaming hours for their children, shifting the focus from blanket restrictions to promoting healthier gaming practices at home with more family involvement.

The shift toward user-defined time limits reflects the evolving approach to responsible gaming in South Korea. The government recognized that a more nuanced system would respect individual choice and parental control. It also acknowledged that minors were increasingly spending more time on social media than on gaming and that most advanced countries do not impose such strict gaming regulations. Under the current law, families can set gaming time limits based on their preferences, promoting responsible gaming in a more tailored way.

Key responsible gaming measures in South Korea include:

- a. A strict user verification process, including age verification, to ensure compliance with gaming regulations.
- b. Promotion of anti-addiction measures that encourage healthier gaming habits.
- c. Adherence to stringent advertising standards to prevent over-promotion of gaming to vulnerable populations.
- d. Enabling users or parents to request gaming restrictions during specific hours to create a more controlled gaming environment.

While South Korea's approach to online gaming regulation is evolving, the country maintains strict restrictions on real-money games, with most online gambling being illegal for residents. Exceptions include government-run services like Sports Toto and Lotto. No distinction is made between games of skill and chance, and operators providing such games must comply with the country's strict regulatory framework.

⁵⁴ Choi, J., Cho, H., Lee, S., Kim, J., & Park, E.-C. (2018). Effect of the Online Game Shutdown Policy on Internet Use, Internet Addiction, and Sleeping Hours in Korean Adolescents. *Journal of Adolescent Health, 62*(5), 548–555. <https://doi.org/10.1016/j.jadohealth.2017.11.291>



C. JAPAN

In Japan, both gambling and online gaming are regulated under various laws, but the overarching emphasis on responsible gaming remains a key concern across all sectors.

Gambling

Japan's approach to responsible gambling⁵⁵ is largely shaped by the Casino Act (or Integrated Resort (IR) Promotion Act) of 2016 and the IR Implementation Act of 2018. Together, these regulations establish strict standards for player protection and gambling operations, supporting tourism and economic growth while prioritizing public health. The “IR Laws” were enacted in 2016 and 2018, respectively. Until then, the operation of gambling activities by the private sector, either in digital or land-based form, had been prohibited as criminal offenses under the Penal Code. The IR laws basically carve out an exception for casinos in resort areas and are heavily licensed. The law is still in the implementation phase.

Recent updates from the Japan Casino Regulatory Commission in 2023 have added new requirements to reduce the social impacts of gambling, particularly within casinos and pachinko establishments. The phased implementation of these guidelines, planned for 2024 to 2025, focuses on preventing gambling addiction through financial and behavioral profiling of at-risk individuals. New regulations limit monthly casino visits, allowing a maximum of three per week or ten per month. Visitors must also use My Number ID-based identification to ensure compliance and enable effective monitoring of gaming activities.

Japan strictly prohibits online gambling, limiting legal betting to government-sanctioned events, such as horse racing and motorboat racing. Following a 2022 case involving unauthorized offshore gambling, the government reinforced its stance against offshore gambling services accessed by Japanese residents. The National Police Agency has issued warnings emphasizing the legal risks of offshore betting, though enforcing these rules remains challenging.⁵⁶ Sports betting in Japan is similarly limited, currently restricted to state-operated sports like horse racing, track cycling, and motorboat racing. However, interest is growing in expanding legal sports betting to include popular sports like baseball and football. In 2021, the ruling Liberal Democratic Party explored this idea as a potential boost for post-pandemic economic recovery, with support from companies like Rakuten, who advocate for regulated sports betting to stem revenue loss to offshore operators.

Key responsible gambling measures in Japan include:

- Strict ID Verification and Casino Visit Limits: Comprehensive ID checks and visit limitations.
- Accessible Support for Gambling Addiction: Japan offers a wide array of support resources, including counseling and assistance programs, to aid those experiencing gambling-related issues. Regional support centers and the National Helpline for Gambling Addiction are part of this extensive network.

All real-money games in Japan's regulated environments, whether in casinos or amusement parlors, must comply with the Casino Act and adhere to strict licensing requirements under the Japan Casino Regulatory Commission. This regulatory framework ensures a balanced approach to gambling, promoting public welfare while safeguarding the entertainment industry.

⁵⁵ Fukuda, M. (n.d.-a). Gambling Laws & Regulations Japan 2024. <https://iclg.com/practice-areas/gambling-laws-and-regulations/japan>

⁵⁶ Fukuda, M. (n.d.-b). Gaming Law 2023: Japan. <https://practiceguides.chambers.com/practice-guides/gaming-law-2023/japan/trends-and-developments#:~:text=As%20mentioned%20in%201.1%20Current,located%20within%20an%20IR%20area>

Online Gaming

A central element of Japan's responsible gaming policy includes age verification and income-based restrictions to manage gambling access and financial risk. To protect lower-income individuals, the government has imposed betting limits, and Pachinko and other amusement gaming operators must follow responsible advertising practices, strictly avoiding marketing to minors. Japan also emphasizes industry accountability, encouraging operators to adopt self-regulatory practices like self-exclusion programs and financial literacy resources to help players manage their gaming habits. The government collaborates with local authorities and health organizations to provide support services, including the National Helpline for Gambling Addiction and regional support centers, offering resources for those impacted by gambling.

In esports, Japan prevents high-stakes events from being classified as gambling by capping prize money in arcade-style games at JPY 9,600 (USD 100), per the Amusement Business Act, which also requires operator licensing. However, this restriction does not apply to online digital competitions, allowing for more flexible prize structures in the digital space. Although Japan permits loot boxes in games, it has implemented specific consumer protection rules to curb exploitative practices. Rather than banning loot boxes outright, Japan mandates transparency, requiring game operators to disclose win probabilities for in-game items, helping protect players without restricting game developers.

Key responsible gaming measures in Japan include:

- **Opt-In Self-Exclusion for Online Gaming:** An optional self-exclusion program allows users to voluntarily limit their own access to gaming platforms, with settings to control both gaming time and spending. While this mechanism empowers players to independently manage gaming habits, operators are not mandated to enforce or monitor these self-imposed restrictions.
- **Transparency in Microtransactions:** To encourage responsible spending and awareness, online gaming platforms must disclose in-game spending options, particularly with loot boxes, by providing clear odds of winning virtual items.
- **Public Awareness Campaigns:** The Japanese government actively supports campaigns to educate the public on gaming addiction and responsible gaming practices, especially targeting younger audiences.
- **Age and User Verification:** Strict age verification protocols prevent minors from accessing online gaming platforms, ensuring a safer gaming environment for younger users.
- **Consumer Protection in Microtransactions:** To safeguard consumers from potential financial risks, regulations mandate clear disclosures on spending and winning odds in loot boxes and other microtransactions.

Prize Limits in E-sports: Controlled prize money limits for arcade-based esports events prevent their classification as gambling, while digital-only events enjoy more flexibility, allowing greater freedom in competitive gaming formats.



D. THE UNITED KINGDOM (UK)

The UK's approach to responsible gambling is primarily governed by the Gambling Act 2005, with recent reforms outlined in the UK Government's 2023 White Paper on gambling regulation. These changes, aimed at enhancing player safety and consumer choice, include reducing the intensity of online games, strengthening financial vulnerability checks, and improving age verification processes.

In the UK, most rules and regulations primarily focus on gambling and betting. However, the country has established frameworks for video games and is considering regulations for loot boxes. The Gambling Act governs games of chance, betting, lotteries, and gambling, but its jurisdiction is limited to these areas. This does not imply that other aspects of gaming are unregulated, as they may fall under different legal frameworks.

The UK has introduced voluntary, user-defined deposit limits as part of its efforts to modernize gambling regulations.⁵⁷ An action plan was outlined in a white paper published in April 2023, followed by a public consultation that ran from July 26 to October 4, 2023. The UK conducted pilot financial risk assessments of users by evaluating age and spending patterns through one-way notifications, surveys, and live chat interactions. Additionally, users were encouraged to set personal deposit limits and were sent detailed “activity reports” to review and acknowledge.

The implementation was done across four stages, with a heightened focus on financial risk profiling to tailor responsible gaming measures based on individual player behavior. The reforms also introduce new measures like a statutory maximum stake limit of £5 per spin for players aged 25 and older and £2 per spin for those aged 18-24 for slot games. **In addition, the UK has mandatory age verification, self-imposed deposit limits, and self-exclusion programs for online gambling operators.**

A key element of the UK's reforms is addressing microtransactions and loot boxes in Online Gaming, often compared to gambling. The DCMS (Department for Digital, Culture, Media, and Sport) Committee has supported limits on microtransactions and even suggested banning the sale of loot boxes with random contents to children. Expert testimony has emphasized that while the public debate focuses on harm, there is limited evidence proving significant negative impacts from these revenue models, and regulatory efforts may stifle small and innovative game developers.

The UK has also introduced voluntary financial assessment-based deposit limits, which require players to set deposit thresholds based on their age and spending patterns. Mandatory financial risk assessments will apply if monthly net deposits exceed £5,000 for those over 24, and £2,500 for 18 to 24 years old. Users are encouraged to monitor their gaming activity and set responsible play limits, with real-time reporting on their spending behavior. **Programs like GAMSTOP offer players a proactive way to manage their online gambling habits. By registering, users can voluntarily block access to gambling websites and apps operated by UK-licensed companies for a selected period, helping them regain control and make more responsible choices.**

⁵⁷ A safer bet: Gambling and the risks of over-regulation. (n.d.). Institute of Economic Affairs. Retrieved November 11, 2024, from <https://iea.org.uk/publications/a-safer-bet-gambling-and-the-risks-of-over-regulation/>

Key responsible measures in the UK include:

- Rigorous user verification processes, comprehensive self-exclusion programs, and the integration of tools designed to encourage safe gaming practices.
- Players have easy access to a wealth of responsible gambling resources under programs like GAMSTOP, and financial transactions are closely monitored to prevent both financial risks and gambling addiction.
- Operators must adhere to stringent advertising standards and contribute to ongoing research and treatment programs for gambling-related issues, reflecting a strong commitment to responsible gaming.

- Additionally, operators should offer users the option to opt-out from receiving market communication, and provide users with information on how to monitor and control their gambling.

The UK's regulatory framework covers all real money games, with no distinction between games of skill and chance, requiring operators to obtain licenses from the Gambling Commission to operate in the UK market. It is important to note that in the UK, most of the rules, regulations, and measures primarily focus on gambling and betting rather than addressing broader gaming activities.



E. AUSTRALIA

Australia's regulatory framework for gaming and gambling is decentralized, with governance split across territorial, state, and federal levels. Each of the eight mainland states and territories oversees gambling activities within its own jurisdiction, while more than 53 laws apply nationwide. The federal Interactive Gambling Act 2001 regulates online gambling, and a national self-exclusion register has been introduced, allowing users to exclude themselves from all licensed online and phone wagering services in one step.

Australia's responsible gaming framework is based on behavioral science, aimed at minimizing risk. Key measures include a national self-exclusion register, provision of activity statements on demand, and operator-designed initiatives to limit user exposure to affordable levels of gaming. Pre-commitment tools for time and expenditure are also encouraged.⁵⁸

The Australian Senate's inquiry into in-game spending limits has sparked discussions on effective, responsible gaming measures. Research by Drummond et al. supports the idea that setting monthly spending limits, such as a \$50 cap, can effectively reduce overspending and is generally well-received by gamblers. However, King et al. cautioned that such a blanket approach might have unintended consequences, such as increased playtime or game designers seeking alternative revenue streams through microtransactions on third-party platforms, complicating regulation and tracking.

Only licensed and regulated interactive gambling services⁵⁹ are permitted in Australia. Operators are required to obtain licenses from the relevant state regulatory bodies to offer gambling services in the country. It is important to note that in Australia, most of the rules, regulations, and measures primarily focus on gambling and betting rather than addressing broader gaming activities.

Key responsible gambling measures in Australia include:

- Rigorous compliance with advertising standards and mandatory disclosure of gambling product information, promote transparency and informed decision-making among players.
- Vigilant tracking of financial transactions to help combat money laundering and address issues of gambling addiction.
- Support for self-exclusion programs is readily available, along with access to professional counseling services for those in need.
- Furthermore, the installation of safe gambling tools enables the monitoring of player behavior, fostering a culture of responsibility.

Comprehensive financial transaction monitoring further mitigates gambling-related risks, contributing to a safer gaming environment for all participants.

⁵⁸ Authority, A. C. and M. (1728015288). BetStop – the National Self-Exclusion Register™ | ACMA. Australian Communications and Media Authority. <https://www.acma.gov.au/betstop-national-self-exclusion-register™>

⁵⁹ Australian Government. (n.d.). INTERACTIVE GAMBLING ACT 2001. Retrieved October 21, 2024, from https://classic.austlii.edu.au/au/legis/cth/consol_act/iga2001193/



F. THE UNITED STATES OF AMERICA (USA)

In the United States, online gaming and gambling are governed by a combination of federal and state laws, including the Unlawful Internet Gambling Enforcement Act (UIGEA) of 2006 and the Interstate Wire Act of 1961. It is important to note that in the US, most of the rules, regulations, and measures primarily focus on gambling and betting rather than addressing broader gaming activities.

The United States is one of the few jurisdictions that has evaluated the distinction between skill and chance. Under its federal law, the USA exempted fantasy sports under UIGEA, 2006. However, the legal standing of fantasy sports was reinforced by landmark cases such as *Dew-Becker v. Wu* and *White v. Cuomo*, which applied the preponderance of skill test. These rulings established that while fantasy sports may involve an element of chance, their outcomes are predominantly determined by skill. This legal recognition has played a crucial role in the expansion of fantasy sports across the U.S., where more than 40 states have now legalized them.

Individual states have introduced additional responsible gaming regulations, with measures such as age verification, self-exclusion programs, and advertising restrictions. For instance, New Jersey's Division of Gaming Enforcement requires operators to implement responsible gaming practices, including mandatory age verification, user-set deposit limits, and self-exclusion options for online gaming.

State-specific responsible gambling initiatives in the U.S. often include:

- **Allocating a portion of state gambling revenue toward research on responsible gambling and addiction prevention.** For example, Louisiana directs 5% of sports betting tax revenue to problem-gambling resources, New Hampshire allocates up to \$250,000 from sports betting and charitable casino revenue, and New Jersey dedicates \$1.2 million from sports wagering fees.⁶⁰
- Requiring operators to submit comprehensive plans for addressing responsible gambling issues.
- Mandating self-exclusion programs that allow users to voluntarily restrict their access to gambling platforms.
- Providing users with tools to set personal limits on time spent gambling and the amount of money wagered.
- Prohibiting operators from accepting deposits made via credit cards to reduce the risk of financial harm.
- Ensuring that employees who interact with users receive proper training on responsible gambling protocols.

⁶⁰ Epstein, R. (2023, August 22). The Big Business of Sports Betting. Men's Health. <https://www.menshealth.com/trending-news/a44674774/problem-gambling-resource-allocation-state-guide/>



G. MALTA

Malta has positioned itself as a leading hub for online gaming operators, supported by a comprehensive regulatory framework administered by the Malta Gaming Authority (MGA).⁶¹ The MGA's regulations emphasize player protection, mandating key measures such as age verification, responsible gaming features, and adherence to responsible advertising practices. Operators are also required to offer mandatory self-exclusion programs and set deposit limits to ensure a safe gaming environment for users.

The primary legislation governing real money gaming in Malta is the Gaming Act (Chapter 583 of the Laws of Malta), supplemented by other regulations. **For licensing purposes, Malta distinguishes between games of skill and games of chance, with the latter subject to stricter licensing requirements. The MGA's position vis-à-vis Digital Games of Skill was laid out in a Position Paper⁶² published in December 2015. In this paper, the MGA highlighted the distinction between games of skill and games of chance. Skill games in Malta are defined as per regulation 8 of the Gaming Authorisations Regulations.⁶³ All real money gaming operators must secure licenses from the MGA, with additional oversight applied to chance-based games due to their higher risk.**

Key responsible gaming measures in Malta include:

- Enabling user protection through self-exclusion schemes and raising awareness about the risks of gaming.
- Prohibiting misleading or unfair promotional activities to protect consumers.
- Applying a risk-based approach to Anti-Money Laundering (AML) measures, ensuring that operators maintain the integrity of the gaming environment.
- Installing safe gaming tools that allow users to monitor and control their gaming behavior.
- Enforcing strict age verification processes to prevent minors from accessing gambling platforms.

⁶¹ A Malta Government. (2023, January 12). Home—Malta Gaming Authority. <https://www.mga.org.mt/>

⁶² MGA issues Position Paper on Digital Games of Skill with Prize. (n.d.). Malta Gaming Authority. <https://www.mga.org.mt/mga-issues-position-paper-on-digital-games-of-skill-with-prize/>

⁶³ Gaming Authorisations Regulations. (2018, July 20). Legizlazzjoni Malta. <https://legislation.mt/eli/sl/583.5/eng/pdf>

SUMMARY

- The concept of responsible gaming encompasses measures aimed at ensuring that gaming remains a safe and enjoyable activity without leading to harmful behaviors. It is a collaborative effort involving gaming operators, regulatory bodies, governments, civil society, and players themselves.
- Online gaming operators play a key role by offering tools like customizable spending limits, self-exclusion options, and reminders to encourage healthy gaming habits. Regulatory authorities establish legal frameworks to ensure fairness, security, and player protection, often coupled with public awareness campaigns that educate players about gaming risks and available protective tools.
- Different countries adopt varying approaches; for example, Australia emphasizes pre-commitment measures, South Korea focuses on parental controls, and the USA combines state and federal regulations to safeguard players. Ultimately, responsible gaming strives for a balanced ecosystem where entertainment does not compromise player well-being, supported by collective efforts and adaptable strategies to meet evolving industry challenges.

Building on the country-wise analysis of responsible gaming policies and regulations, it becomes evident that different jurisdictions employ a variety of strategies to mitigate potentially problematic gaming habits. One such strategy revolves around time and money limits, which are often viewed as key tools in promoting responsible gaming. In the next section, we explore the limitations of interventions focused solely on restricting gameplay duration, as well as the potential of voluntary limit-setting as a more effective approach to mediate potential gaming disorders. Drawing lessons from the jurisdictional comparisons in the previous section, this discussion critically evaluates the feasibility and efficacy of these measures within broader responsible gaming frameworks.

VII. Time and Money Limits in Online Gaming: Impact, Efficacy, and Alternatives

As highlighted in the earlier sections, there are several factors that lead to the onset and subsequent maintenance of potential gaming disorders among users. These factors range from structural characteristics (i.e. the game design and elements that are aimed at ensuring sustained engagement with the users) and person-based characteristics (i.e. the personality traits, individual vulnerabilities, and motivational factors that define actions of a user) to situational factors (i.e. the environment and the relationships that the users interact with). Since the causation of potential gaming disorders is a result of various factors, any intervention designed to mediate it must look to solve all of these fundamental issues. Therefore, broad and general measures like debarment are unlikely to holistically address the issue. Instead, more science-based, precise, and personalized forms of intervention are going to be far more effective in addressing potential gaming disorders.

A. *Why Hard Limits and Top-Down Approaches Fall Short*

Regulatory interventions in the online gaming industry, though often implemented with the intent to protect consumers, frequently lead to unintended consequences that counteract their purpose. From encouraging the black market's growth to compromising consumer safety, many of these measures reveal the complexities of regulating a dynamic digital ecosystem. Examining global case studies, we see how restrictive gaming regulations often fail to achieve their intended goals and, instead, spur adverse outcomes that place consumers at even greater risk.

In Sweden⁶⁴, for example, the introduction of an 18% tax rate on online gambling operators in 2019, along with restrictions on advertising, bonuses, and high-stake games, aimed to protect players and regulate the sector. However, research revealed that only 72-78% of online casino gambling occurred on regulated sites, as players turned to unregulated platforms with fewer restrictions. Sweden's approach, instead of safeguarding consumers, inadvertently pushed them toward unlicensed platforms that lacked robust consumer protections.

Attempts to restrict gaming activity in other countries have similarly demonstrated the difficulties of enforcement. Thailand's 2003 attempt to block gaming servers from 10 pm to 6 am faced implementation issues, while South Korea's "Shutdown Law" banning under-16 players from gaming between midnight and 6 am was circumvented as minors used family members' accounts. In China, playtime restrictions limiting minors to 90 minutes of gaming on weekdays (later reduced to just three hours per week) gave rise to black-market services, with account rentals and VPNs allowing minors to evade the rules. These cases illustrate how overly restrictive measures can be evaded, ultimately complicating regulatory efforts.

In Japan, a self-regulatory approach was taken in 2012 to increase transparency around loot boxes or "gacha" by disclosing item probabilities to reduce overspending. However, while awareness was raised, spending patterns barely changed. Instead, users adjusted to the new system while companies innovated within the regulations, creating more enticing gacha models. Japan's experience suggests that while transparency can inform users, it may not be sufficient to curtail high spending as players and companies adapt to new regulatory measures.

Australia's Interactive Gambling Act of 2001⁶⁵, aimed at curbing offshore gambling by banning unlicensed online casinos and poker providers, faced enforcement challenges, allowing unlicensed operators to continue catering to Australians. This regulatory limit, designed to reduce gambling-related issues, had the unintended effect of pushing Australian users to unregulated platforms with fewer consumer protections. Meanwhile, compliant local operators were at a competitive disadvantage, underscoring the need for enforcement capabilities to match regulatory goals.

Germany's restrictive regulations on stakes and advertising compliance had similar effects. Large operators could meet the compliance costs, but smaller ones often struggled and exited the market, creating space for black-market operators to attract users seeking an unrestricted gaming experience. In Norway, the 2010

⁶⁴ Håkansson, A., & Widinghoff, C. (2020). Gambling Despite Nationwide Self-Exclusion—A Survey in Online Gamblers in Sweden. *Frontiers in Psychiatry*, 11. <https://doi.org/10.3389/fpsy.2020.599967>

⁶⁵ Australian Government. (n.d.). INTERACTIVE GAMBLING ACT 2001. Retrieved October 21, 2024, from https://classic.austlii.edu.au/au/legis/cth/consol_act/iga2001193/

implementation of payment-blocking measures to prevent local banks from processing transactions with unlicensed online gaming operators pushed players to alternative payment methods like foreign payment processors and cryptocurrencies, which were difficult for authorities to monitor. This policy disproportionately impacted legal operators who complied, while illegal operators exploited workarounds, illustrating the challenge of enforcing financial restrictions.

The 'prohibition' or 'neo-prohibition' approach, adopted in various jurisdictions, further illustrates the challenges of enforcing strict gaming bans. Blocking unlicensed websites often fails due to players' ability to circumvent these restrictions using VPNs and other digital workarounds. This "whack-a-mole" effect demonstrates how blanket bans are difficult to enforce, especially given the accessibility of unregulated content on the internet. Once on black-market platforms, players face higher risks, as these sites lack the harm-reduction measures commonly found on regulated platforms, such as self-set deposit limits and self-exclusion programs. These prohibitionist measures highlight that without enforceable policies, the restrictions risk driving players toward more dangerous options.

The concept of monthly spending caps on gambling has gained attention as a potential measure to reduce gambling-related harm. At first glance, it appears to be a straightforward solution—by limiting the amount consumers can spend, policymakers hope to curb excessive gambling behavior and reduce harm. However, beneath this seemingly simple intervention lie complex issues with significant implications for consumer rights, regulatory effectiveness, and market dynamics. One major issue with spending caps is their inherent paternalism. Restricting consumer spending with rigid limits creates a regulatory environment that may feel invasive to consumers, limiting their freedom to make personal financial choices. While proponents argue that these measures protect vulnerable populations, the one-size-fits-all approach fails to consider individual differences and personal circumstances. Additionally, spending caps raise significant privacy concerns. Enforcing such limits requires gathering extensive personal and financial data, posing administrative challenges and data security risks. Operators would need to track individual spending behavior, raising the specter of invasive monitoring.

Consumers may be deterred by such an environment, seeking alternatives that don't infringe on their privacy—namely, black-market platforms that operate outside the regulatory framework.

To avoid repeating these challenges, regulatory approaches need to be rooted in thorough research and industry collaboration. First, detailed assessment studies are essential to gauge the potential impacts of spending caps on consumer behavior, market structure, and economic activity. By understanding how consumers and operators may respond, policymakers can design measures that genuinely protect consumers without inadvertently pushing them toward black-market alternatives. Rather than relying on blunt restrictions, regulators should promote practical harm-reduction measures that leverage technology to target high-risk behavior specifically. This approach addresses individual risk levels while avoiding the paternalistic overreach of a spending cap. Finally, collaboration with industry stakeholders can pave the way for voluntary standards and best practices that enhance consumer protection without the unintended consequences of rigid regulation. By engaging with industry leaders, regulators can create a cooperative environment in which operators proactively implement harm-reduction measures rather than simply complying with top-down restrictions that may prove ineffective.

B. Inefficacy of interventions focused exclusively on limiting the duration of gameplay

Studies have observed that policies and directives aimed at mediating potential gaming disorders focused exclusively on duration of gameplay are based upon infirm grounds and are, therefore, found to be lacking in effectiveness.⁶⁶

A study conducted on users in China to analyze the efficacy of restrictions on gameplay⁶⁷ found no credible evidence for overall reduction in the prevalence of heavy playtime following the implementation of regulations.

Restricting playtime may simply lead to users bypassing regulations, for example, by accessing games that do not or need not comply with regulations using virtual private networks (VPNs). Additionally, there are concerns that such policies may 'backfire', and lead to the accidental

⁶⁶ Cekic, S., Bediou, B., Achab, S., Rich, M., Green, C. S., & Bavelier, D. (2024). Going beyond video game consumption when considering Internet Gaming Disorder. *Comprehensive Psychiatry*, 133, 152500. <https://doi.org/10.1016/j.comppsy.2024.152500>

⁶⁷ Zendle, D., Flick, C., Gordon-Petrovskaya, E., Ballou, N., Xiao, L. Y., & Drachen, A. (2023). No evidence that Chinese playtime mandates reduced heavy gaming in one segment of the video games industry. *Nature Human Behaviour*, 7(10), 1753–1766. <https://doi.org/10.1038/s41562-023-01669-8>

emergence of novel sources of risk. For example, overly stringent regulation may drive individuals towards unregulated platforms that do not comply with regulations and such directives on limiting gameplay.

Furthermore, the inefficacy of such limitations could additionally be a result of inconsistent regulatory compliance across the games industry. Top-down regulation may be able to secure compliance from large corporations who have the resources to effectively identify and police their player bases and have become prime targets of political intervention in China. It is less clear how compliance is easy to affect and police for thousands of small companies, particularly in light of similar noncompliance to top-down industry regulation in other parts of the globe. This uneven compliance may plausibly lead to either a lack of reduction in heavy playtime within small game companies or even an increase as heavy players migrate from -regulated and compliant platforms to non-regulated platforms.

Studies have also found that shutdown features (or forceful limitations to gaming) are limited in their effectiveness. Pre-commitment features (such as those where users cannot spend beyond a certain limit) have a moderate effect on financial expenditure. Users are generally not in favor of pre-commitment and may instead seek out other unregulated gaming platforms or activities.⁶⁸

Therefore, it is important to address the fundamental factors that lead to potential gaming disorders. Studies on the subject reinforce the importance of considering the role that mental health issues (e.g., depression, anxiety, ADHD) and certain psychological traits (e.g., neuroticism, BIS) play in the expression of potential gaming disorders.⁶⁹ As such, policies and directives around promoting healthy consumption of online gaming would prove to be more efficient if they probed aspects of gameplay other than simple amounts of time spent playing. These include addressing the underlying mental health issues and other aspects of an individual's personality.

C. Voluntary limit setting by users to mediate potential gaming disorders

Limit setting is increasingly being seen as one of the most effective interventions to prevent potential gaming disorders. Limit setting encompasses a wide range of tools that gaming platforms provide to users to allow them to set their own limits on the time and money they wish to spend. Researchers view this method as a way of putting informed player choice at the core of responsible gaming.⁷⁰ These limits could include play or time limit, deposit limit, entry fee limit, and loss limit. The research conducted around mediating potential gaming disorders has found users reported stronger support for primary prevention strategies, including education, screening, and warning labels, than for other prevention approaches, whereas In-game shutdown features received the lowest support.⁷¹

Primary prevention strategies target the general population and aim to maintain gaming at healthy levels. This approach assumes that all individuals who use games can benefit from information and skills to prevent the occurrence of associated problems. Primary approaches typically include educational and public awareness campaigns, including recommendations about accessibility. These findings suggest that gamers may be more favorable toward prevention measures aligned with informed decision-making, autonomy, and self-directed actions.

Assessment of voluntary programs (such as self-exclusion) has found that users report lower gaming spends and a decrease in gaming frequency and time spent. A study has reported that 95% of problem users had a positive experience with a self-excluding initiative.⁷² Research supports the effectiveness of voluntary self-exclusion as an intervention for addressing potential gaming disorders. Participants who opted for self-exclusion reported reduced spending and gameplay time.⁷³ These users also reported a decreased need for formal treatment. Substantiating voluntary self-exclusion with educational and awareness programs can further enhance the efficacy of such an intervention.

Studies have also investigated the effect of a pop-up reminder concerning the setting of monetary limits. It

⁶⁸ Stevens, M. W., Dorstyn, D., Delfabbro, P. H., & King, D. L. (2021). Global prevalence of gaming disorder: A systematic review and meta-analysis. *Australian & New Zealand Journal of Psychiatry*, 55(6), 553–568. <https://doi.org/10.1177/0004867420962851>

⁶⁹ González-Bueso, V., Santamaría, J. J., Fernández, D., Merino, L., Montero, E., & Ribas, J. (2018). Association between Internet Gaming Disorder or Pathological Video-Game Use and Comorbid Psychopathology: A Comprehensive Review. *International Journal of Environmental Research and Public Health*, 15(4), Article 4. <https://doi.org/10.3390/ijerph15040668>

⁷⁰ Auer, M., Reiestad, S. H., & Griffiths, M. D. (2020). Global Limit Setting as a Responsible Gambling Tool: What Do Players Think? *International Journal of Mental Health and Addiction*, 18(1), 14–26. <https://doi.org/10.1007/s11469-018-9892-x>

⁷¹ Stevens, M. W. R., Delfabbro, P. H., & King, D. L. (2021). Prevention Strategies to Address Problematic Gaming: An Evaluation of Strategy Support Among Habitual and Problem Gamers. *The Journal of Primary Prevention*, 42(2), 183. <https://doi.org/10.1007/s10935-021-00629-0>

⁷² Tanant, F. (2019, March 16). How AI Can Help With Self Exclusion and Responsible Gambling. SEON. <https://seon.io/resources/using-ai-to-promote-responsible-online-gambling-and-self-exclusion/>

⁷³ Yakovenko, I., & Hodgins, D. C. (2021). Effectiveness of a voluntary casino self-exclusion online self-management program. *Internet Interventions*, 23, 100354. <https://doi.org/10.1016/j.invent.2020.100354>

was found that individuals are more likely to stick to their limits while gaming if they received a pop-up⁷⁴ reminder that informed them that they had reached a pre-set spending limit compared to those who did not.⁷⁵ Such forms of intervention to prevent and address potential gaming disorders have been particularly effective in cases involving high-intensity gamers. High-intensity gamers significantly decreased their play compared to other gamers who did not set a limit.⁷⁶

Studies and research on this subject strongly suggest that voluntary limit setting interventions are an efficient form of responsible gaming tools that platforms can deploy to minimize harm and protect players. Studies also suggest that such voluntary programs are better suited to address the issue of potential gaming disorders as compared to directives that are aimed at forceful limitations.

D. Why Self-Exclusion Programs Work

Self-exclusion programs have emerged as an important tool for individuals struggling with potentially problematic gaming habits, offering a structured way to manage and reduce their engagement.⁷⁷ These programs allow users to voluntarily exclude themselves from access to online gaming platforms, either for a specific period or permanently, and may function at the level of individual platforms or across entire regions through centralized registers. In many cases, a national or regional self-exclusion system enables users to block access to multiple operators in one step, broadening the protective reach of the program. The key advantage of these centralized systems is that they provide a strong and secure safety net for individuals by covering multiple operators, a feature that enhances their effectiveness. However, the impact of self-exclusion programs is heavily influenced by the ease of access, visibility, and overall discoverability, as overly complex or high-friction processes tend to reduce user participation.

Studies have shown that self-exclusion programs can lead to measurable improvements in individual well-being. For instance, a study conducted by Ladouceur et al.⁷⁸ in 2007 focused on participants in a self-exclusion program in Quebec and demonstrated significant

positive outcomes. Participants who voluntarily excluded themselves reported a reduction in gambling expenditures, enhanced self-control, and noticeable improvements in quality-of-life metrics such as reduced urge to gamble, greater perceived control over gambling urges, and fewer negative impacts on daily and social life. These changes became evident within six months of program enrollment, offering empirical support for the idea that self-exclusion can effectively promote healthier gambling behaviors and foster personal well-being.

Another perspective on the effectiveness of self-exclusion programs is offered by Wohl et al. in their 2012 review of responsible gaming tools, which examined self-exclusion programs along with complementary tools like limit-setting features and pop-up reminders. Wohl's review emphasized that responsible gaming interventions can be more impactful when they operate within a comprehensive support framework that includes educational resources and cooperation among stakeholders, such as gaming companies and policymakers. Responsible gaming tools provide users with better insights and awareness, empowering them to make informed decisions and maintain a healthy approach to gaming. However, when these interventions are overused or applied in a repetitive fashion, such as excessive pop-up reminders, there is a risk of desensitization, highlighting the need for research on the long-term effects of these programs to refine their efficacy.

Several researchers have proposed improvements to self-exclusion programs to address some of these challenges. In the case of gambling, Collins and Kelly in 2002⁷⁹ suggested establishing a centralized registry for self-excluded individuals that would be accessible to the entire gambling industry. They also recommended instituting deterrent measures such as confiscating any winnings made in violation of a self-exclusion agreement. However, they cautioned that these penalties should not criminalize the act of gambling itself. Blaszczynski et al. in 2004⁸⁰ further argued that gambling venues should maintain transparency through public reporting and ensure that their staff are trained to

⁷⁴ Wohl, M. J. A., Gainsbury, S., Stewart, M. J., & Sztainert, T. (2013). Facilitating Responsible Gambling: The Relative Effectiveness of Education-Based Animation and Monetary Limit Setting Pop-up Messages Among Electronic Gaming Machine Players. *Journal of Gambling Studies*, 29(4), 703–717. <https://doi.org/10.1007/s10899-012-9340-y>

⁷⁵ Stewart, M. J., & Wohl, M. J. A. (2013). Pop-up messages, dissociation, and craving: How monetary limit reminders facilitate adherence in a session of slot machine gambling. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors*, 27(1), 268–273. <https://doi.org/10.1037/a0029882>

⁷⁶ Auer, M., & Griffiths, M. D. (2013). Voluntary limit setting and player choice in most intense online gamblers: An empirical study of gambling behaviour. *Journal of Gambling Studies*, 29(4), 647–660. <https://doi.org/10.1007/s10899-012-9332-y>

⁷⁷ Gainsbury, S. M. (2014). Review of self-exclusion from gambling venues as an intervention for problem gambling. *Journal of Gambling Studies*, 30(2), 229–251. <https://doi.org/10.1007/s10899-013-9362-0>

⁷⁸ Ladouceur, R., Sylva, C., & Gosselin, P. (2007). Self-Exclusion Program: A Longitudinal Evaluation Study. *Journal of Gambling Studies*, 23(1), 85–94. <https://doi.org/10.1007/s10899-006-9032-6>

⁷⁹ Collins, P., & Kelly, J. (2022). Problem Gambling and Self-Exclusion: A Report to the South African Responsible Gambling Trust. *Gambling Law Review*, Volume 6 (Number 6). <https://doi.org/10.1089/10921880260441770>

⁸⁰ Blaszczynski, A., Ladouceur, R., & Shaffer, H. J. (2004). A science-based framework for responsible gambling: The Reno Model. *J Gambl Stud.*, Fall; 20(3)(301–17). <https://doi.org/10.1023/b:jogs.0000040281.49444.e2>

support self-exclusion efforts. While they stressed that individuals hold the primary responsibility for their gambling behavior, they also emphasized that gambling operators should play an active role in enforcing and supporting self-exclusion initiatives.

The design of self-exclusion programs varies considerably by region and country. In France, for instance, two self-exclusion measures provide differing levels of control. A temporary seven-day self-exclusion applies only to certain online gambling websites, offering short-term relief, while the National Gambling Self-Exclusion File⁸¹ enforces a three-year ban covering all legal gambling venues, both online and offline. The seven-day exclusion has shown limited immediate impact on reducing gambling activity but yielded medium-term benefits, particularly in reducing cognitive distortions such as the illusion of control and perceived inability to stop gambling. These shifts in perception can decrease the desire to gamble, highlighting the psychological benefits of self-exclusion programs. However, studies indicate that shorter programs, while helpful in mitigating some cognitive distortions, may lack the depth needed for long-term behavioral change, which points to the value of extended self-exclusion durations.

Studies comparing short and medium-term self-exclusion measures suggest that the latter is more effective for long-term behavioral change.⁸² A study by Hayer and Meyer in 2011⁸³ demonstrated that self-exclusion programs ranging from one to twelve months had a positive impact on gambling behavior. Longer self-exclusion periods tend to have better outcomes as they allow time for individuals to develop and reinforce healthy gaming habits. However, these programs are most effective when combined with measures aimed at improving self-efficacy and addressing potentially problematic cognitive patterns, such as reducing the illusion of control and cravings.

Self-exclusion programs also often face limitations in participant expectations and effectiveness. Some participants enter self-exclusion programs with unclear expectations regarding the level of external enforcement versus their own responsibility to abstain. While the

symbolic commitment involved in signing a self-exclusion agreement can serve as a powerful motivator for some, others may feel unsupported without a more structured oversight mechanism. In response to these issues, experts have recommended that self-exclusion programs be managed by independent organizations to ensure neutrality and fairness, while gaming operators continue to provide the necessary infrastructure and support.⁸⁴

Some of the most successful self-exclusion programs provide nationwide, multi-operator exclusion options, like Sweden's *Spelpaus* system. Introduced in 2019, *Spelpaus*⁸⁵ enables individuals to exclude themselves from all licensed gambling operators in Sweden with a single action. *Spelpaus* has been notably effective in reducing potentially problematic gambling habits, particularly among younger people and women. **However, approximately 38% of participants in *Spelpaus* reported instances of gambling even while self-excluded, which indicates that the effectiveness of the system is limited by the availability of unlicensed and overseas gambling platforms.** These compliance challenges, common to many self-exclusion programs, highlight the need for stronger enforcement mechanisms to prevent individuals from circumventing exclusion measures through unregulated sites.

Ultimately, self-exclusion programs represent a valuable tool for reducing potentially problematic gaming habits, with long-term efficacy heavily dependent on comprehensive coverage, ease of access, and adequate enforcement. Self-exclusion agreements have demonstrated efficacy in reducing gaming frequency and expenditure, particularly when designed to be accessible and user-friendly. However, challenges remain, including high rates of breach among those heavily involved and difficulties in maintaining consistent enforcement across platforms. These challenges are compounded by the need for accessible program entry points, enhanced identification protocols, and supportive resources for participants. Enhanced public awareness, clear communication of program expectations, and policy refinements aimed at broader inclusion and regulation are crucial for maximizing the positive impacts of self-exclusion on individuals and society.

⁸¹ Luquiens, A., Dugravot, A., Panjo, H., Benyamina, A., Gaïffas, S., & Bacry, E. (2019). Self-Exclusion among Online Poker Gamblers: Effects on Expenditure in Time and Money as Compared to Matched Controls. *International Journal of Environmental Research and Public Health*, 16(22), 4399. <https://doi.org/10.3390/ijerph16224399>

⁸² Caillon, J., Grall-Bronnec, M., Perrot, B., Leboucher, J., Donnio, Y., Romo, L., & Challet-Bouju, G. (2019). Effectiveness of At-Risk Gamblers' Temporary Self-Exclusion from Internet Gambling Sites. *Journal of Gambling Studies*, 35(2), 601–615. <https://doi.org/10.1007/s10899-018-9782-y>

⁸³ Hayer, T., & Gerhard, M. (2011). Self-exclusion as a harm minimization strategy: Evidence for the casino sector from selected European countries. *J Gambl Stud.*, 2011 December(27 (4)), 685–700. <https://doi.org/10.1007/s10899-010-9227-8>

⁸⁴ Fam, J. Y. (2018). Prevalence of internet gaming disorder in adolescents: A meta-analysis across three decades. *Scandinavian Journal of Psychology*, 59(5), 524–531. <https://doi.org/10.1111/sjop.12459>

⁸⁵ Håkansson, A., & Widinghoff, C. (2020). Gambling Despite Nationwide Self-Exclusion—A Survey in Online Gamblers in Sweden. *Frontiers in Psychiatry*, 11. <https://doi.org/10.3389/fpsyg.2020.599967>

SUMMARY

- The findings of the various research studies indicate that broad and restrictive regulatory measures, such as imposing time and money caps on gaming, often fail to effectively reduce potential gaming disorders and can even exacerbate issues by driving users to unregulated and potentially unsafe platforms.
- International case studies highlight unintended consequences, including increased black-market activity and reduced consumer protection. Attempts to regulate solely through gameplay duration limits, such as shutdown laws or playtime restrictions, have shown limited success, as users frequently find ways to circumvent these measures.
- Conversely, voluntary interventions, including user-driven limit-setting and self-exclusion programs, demonstrate greater potential for mitigating potential gaming disorders. These methods empower individuals with informed choices, promoting personal accountability while maintaining autonomy.
- Research supports the efficacy of voluntary measures in reducing gaming expenditures and frequency, especially when paired with awareness campaigns and educational tools. This evidence suggests a need for regulatory approaches that prioritize user engagement and personalized harm-reduction strategies over rigid restrictions.

VIII. Global Best Practices in Responsible Gaming: Lessons for India

Experts argue that gaming disorder is often a manifestation of deeper psychological issues, such as anxiety or depression, rather than a standalone addiction. In fact, similar to other behavioral issues, gaming disorder is rarely isolated and is more frequently found to coexist with other mental health problems.

The potential causes of gaming disorder are multifaceted, driven by a combination of factors. These include game-related elements (such as the design, genre, and monetization techniques that encourage prolonged engagement), individual factors (like demographic background, personality traits, and motivations), and environmental influences (such as family dynamics and peer interactions). Given this complexity, it's clear that a one-size-fits-all approach to prevention is insufficient. Effective interventions must address these various dimensions, moving beyond simplistic measures like time restrictions on gameplay.

Policies that have solely focused on limiting the duration of gameplay have shown little to no success in curbing excessive gaming. Countries that initially adopted these policies often had to revise or withdraw them, as they failed to reduce heavy playtime meaningfully. Instead, many players were successful in circumventing these rigid rules by using VPNs, creating multiple accounts, or shifting to unregulated platforms, essentially rendering such restrictions ineffective.⁸⁶

Recent research and studies advocate for a more nuanced, player-centric approach to responsible gaming. Voluntary limit-setting, where players define their own boundaries on time and spending, has been shown to be far more effective than externally mandated limitations. Empowering users to make informed choices, rather than

imposing rigid controls, is now seen as the core of responsible gaming practices. Players tend to favor preventive measures that emphasize autonomy, informed decision-making, and self-regulation. Studies also show that self-exclusion programs, which allow players to temporarily opt out of gaming, have been highly effective, with 95% of users experiencing positive outcomes. Furthermore, the simple act of providing pop-up reminders to users about their self-imposed limits significantly increases their adherence to those limits, reducing the risk of potentially problematic gaming habits.

These findings highlight the importance of shifting towards a more holistic and user-focused approach to responsible gaming, one that empowers players to manage their own behavior while providing the necessary safeguards to minimize risks. Rather than imposing blanket restrictions, policies should encourage informed, autonomous decision-making that supports long-term responsible gaming habits.

While global models provide valuable insights, it is also crucial to evaluate the progress made domestically, analyzing the effectiveness of current responsible gaming initiatives. IT Rules formulated by the union government are based on the global best practices. Hard limits and restrictions are typically designed for minors and children. However, in some countries, these restrictions have been removed or replaced by self-regulation mechanisms, allowing individuals or parents to set personalized boundaries. Approaches like self-exclusion, where users define their own time or monetary limits, have been found to be more effective and empowering. Some of the leading global markets referred to for best practices include USA, China, UK, South Korea, and Australia.

RESPONSIBLE GAMING MEASURES	GLOBAL BEST PRACTICES	CENTRAL GOVERNMENT IT RULES
Age Gating / KYC	✓	✓
Self Exclusion (Time Limits)	✓	✓
Self Exclusion (Money Limits)	✓	✓
Warning Messages	✓	✓
Responsible Advertising	✓	✓
Parental Controls	✓	✓
Age Rating Mechanism based on Content and the Nature of Game	✓	✓
Mental Health Support	✓	✓
Awareness on Responsible Gaming	✓	✓

⁸⁶ Snodgrass, J. G., Zhao, W., Lacy, M. G., Zhang, S., & Tate, R. (2019). Distinguishing Core from Peripheral Psychiatric Symptoms: Addictive and Problematic Internet Gaming in North America, Europe, and China. *Culture, Medicine, and Psychiatry*, 43(2), 181–210. <https://doi.org/10.1007/s11013-018-9608-5>

A responsible gaming framework for India must balance the growing potential of the online gaming industry with the imperative to safeguard players, particularly the vulnerable, from potentially problematic gaming habits. Online gaming, while offering significant benefits like promoting digital skills, literacy, and facilitating digital payment adoption, carries the risk of potential gaming disorders, excessive spending, and exposure to inappropriate content. To address these concerns without stifling industry's growth, a comprehensive "Code for Responsible Online Gaming" (CROG)^{87, 88} is needed—a collaborative initiative involving the government, industry operators, civil society, and the consumers.

At the core of this framework would be standardized guidelines that regulate gaming content and practices. Implementing age and genre-based classifications, modeled on global systems like the Entertainment Software Rating Board (ESRB)⁸⁹, would allow users to make informed decisions and shield younger audiences from unsuitable content. These classifications would ensure online games are labeled not just by age groups but also by content, giving players and parents clarity on what is appropriate. Furthermore, technological interventions could be deployed to track gaming habits, detect signs of potentially problematic gaming habits, and suggest limits on spending and playtime. Such tools could monitor for signs, including compulsive gaming behavior and excessive financial losses, and prompt users to take breaks or limit gameplay, thereby reducing the likelihood of potential gaming disorders.

The framework would also prioritize the creation of a safe and secure gaming environment, addressing privacy concerns, preventing cyberbullying, and protecting players from online threats, risks, and fraud. Crucial to this would be the enforcement of privacy norms, establishing a sustainable policy to ensure fair play, as well as embedding safeguards against cybersecurity risks. By prioritizing player safety, the framework would enhance trust and transparency in the industry, enabling gamers to engage without fear of exploitation or harm.

Financial safeguards would also be central to the responsible gaming framework. Technology powered tools could regulate how much time and money players invest in games, using features like profit-and-loss limits, timers, and mechanisms that delay the redeployment of winnings. These tools are designed to curb impulsive spending, and would ensure that players make informed decisions, thereby reducing the risk of financial harm. By embedding these measures into their platforms, the online gaming industry can mitigate concerns related to excessive spending while maintaining an enjoyable gaming experience.

Another critical aspect of the framework would be to dispel misconceptions about the industry, particularly the false belief that online gaming encourages underage participation or financial ruin. Despite existing safeguards, such as mandatory age verification and financial checks, misinformation continues to hinder the sector's growth. A unified, transparent code would not only counter these misconceptions but also promote responsible gaming practices and industry accountability, leading to greater trust among users and regulators alike.

The development of this framework must be a joint effort between the government and the gaming industry, incorporating insights from other jurisdictions that have successfully navigated these challenges. Drawing on global best practices while tailoring them to India's unique social and cultural landscape will ensure the framework is both inclusive and effective. By focusing on harm reduction through flexible, well-designed guidelines, rather than rigid restrictions or outright bans, India can cultivate a gaming environment that is not only economically vibrant but also socially responsible.

A holistic, balanced approach is essential to support the growth of India's online gaming industry while protecting players, especially vulnerable groups, from potentially problematic gaming habits. This comprehensive framework integrates population-level safeguards and platform-level controls to create a user-centric, technology-driven, and culturally appropriate approach.

⁸⁷ Baruah, R. (2021, December 13). IndiaTech Urges MeitY To Come Up With Code For Online Gaming. Inc42 Media. <https://inc42.com/buzz/indiatech-urges-meity-to-come-up-with-code-for-online-gaming/>

⁸⁸ Rameesh, K. (2021, December 16). Need the right regulation, not outright banning. Financial Express. <https://www.financialexpress.com/opinion/need-the-right-regulation-not-outright-banning/2380937/>

⁸⁹ ESRB Ratings. (n.d.). ESRB Ratings | Entertainment Software Ratings Board. ESRB Ratings. Retrieved October 21, 2024, from <https://www.esrb.org/>

RESPONSIBLE GAMING MEASURES

USER - LEVEL CONTROLS

Know Your Customer (KYC)	<ul style="list-style-type: none"> ■ Implement strict KYC processes to verify user identity, age, and location. ■ Ensure compliance with national laws to prevent underage access and fraudulent activities
Education & Awareness	<ul style="list-style-type: none"> ■ Launch targeted awareness campaigns on responsible gaming measures, risks of potentially problematic gaming habits, and financial management. ■ Provide accessible resources (e.g., toolkits, helplines) for players and families. ■ Address misconceptions around financial risks and underage participation with fact-based campaigns. ■ Highlight industry efforts toward responsible gaming and user safety to build trust among regulators and the public. ■ Partner with educational institutions, media outlets, and civil society to dispel misconceptions surrounding online gaming.
Age Rating	Implement a standardized age-appropriate content classification system (inspired by global models like the ESRB). Display clear, visible age ratings and content descriptions for informed user choices.
Age Gating	Appropriate age verification mechanisms to be implemented during sign-ups to prevent minors from accessing inappropriate games.
Self-Exclusion Options	<ul style="list-style-type: none"> ■ All platforms should create and provide for a self exclusion option, enabling individuals to opt out of gaming temporarily or permanently. ■ Ensure platforms maintain their databases, denying access to excluded individuals. ■ Empower users to make autonomous and informed decisions about their gaming activities.

PLATFORM - LEVEL CONTROLS

User-Defined Limits & Self-Exclusion Tools	<ul style="list-style-type: none"> ■ Empower players with tools to set personalized time and money limits. ■ Enable flexible self-exclusion options, including short-term breaks and permanent exclusion. ■ Promote these tools during registration and periodically within the platform. ■ Incorporate tools to help users manage spending, through the following self initiated measures: <ul style="list-style-type: none"> - Daily, weekly, or monthly spending caps. - Loss and win limits to curb impulsive financial decisions. - Delayed redeployment of winnings to encourage thoughtful spending.
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PLATFORM - LEVEL CONTROLS

Behavioural Nudges and Reminders	<ul style="list-style-type: none"> ■ Utilise technology to nudge player behavior in case of signs of potentially problematic gaming habits. ■ Introduce automated nudges as pop-up reminders suggesting breaks in case of potentially problematic gaming habits. ■ Use machine learning to personalize nudges based on user patterns, enhancing effectiveness. ■ Ensure compliance with the proposed DPDP regulations whenever dealing with the personal data of players.
Content Classification & Visibility	<ul style="list-style-type: none"> ■ Clearly label games by age suitability, content type, and intensity. ■ Provide detailed content warnings wherever necessary to help users make informed choices.
Safety & Privacy Protections	<ul style="list-style-type: none"> ■ Implement advanced cybersecurity measures to protect user data and to prevent data breaches. ■ Detect and address cyberbullying, fraudulent activities, and other online threats. ■ Publish transparent privacy policies and ensure compliance with national data protection laws.
User-Centric Responsible Gaming Features	<ul style="list-style-type: none"> ■ Develop products that prioritize user autonomy and promote responsible decision-making. ■ Offer features like timers, spending dashboards, and easy-to-use self-assessment tools. ■ Provide accessible customer support and mental health referrals for players exhibiting potentially problematic behaviors.
Incorporating Insights from Global Best Practices	<ul style="list-style-type: none"> ■ Recognize that potential gaming disorders often coexist with mental health challenges like anxiety and depression. ■ Learn from global approaches that prioritize flexible, voluntary, and user-driven measures over rigid external restrictions. ■ Avoid over-restrictive and top-down measures, as evidence shows they are often circumvented or counterproductive. ■ Incorporate flexibility, cultural sensitivity, and technology-driven interventions for a tailored approach in India.
Multi-Stakeholder Collaboration	<ul style="list-style-type: none"> ■ Need for a multi-stakeholder task force comprising government agencies, gaming platforms, civil society, mental health professionals, and consumers. ■ Adapt global best practices to India's unique cultural, social, and economic landscape. ■ Develop measurable benchmarks to assess the framework's progress, ensuring transparency and accountability. ■ Regularly update the framework to address emerging trends, technological advancements, and regulatory challenges.

IX. Towards a Responsible Gaming Framework for India

India's online gaming industry has undergone exponential growth in recent years, transforming into a sunrise sector that has generated significant economic value. However, this growth has not come without its challenges. The risks associated with excessive gaming, such as potentially problematic gaming habits, financial risk, and psychological distress call for a comprehensive and meticulously designed responsible gaming framework. Such a framework must not only protect vulnerable players but also support the industry's long-term growth. To achieve this delicate balance, the framework must be built on global best practices, supported by scientific research, and tailored to India's unique socio-cultural landscape.

A responsible gaming framework for India should focus on creating a safe online gaming environment that benefits both consumers and industry operators. One key element in ensuring this balance is the integration of voluntary limit setting and self-exclusion tools, which have shown proven efficacy in other jurisdictions. Countries have successfully implemented self-exclusion programs, allowing players to voluntarily limit their time and spending. Studies show that over 95% of participants in such programs report positive behavioral changes. In India, adopting similar mechanisms such as the ability for players to set personal time limits, spending caps, and opt for cooling-off periods, can empower users to make informed and autonomous decisions about their online gaming behavior.

The recommendation for a national framework that consolidates and codifies all existing standards, charters, and codes for India's online gaming industry is rooted in the recognition that while the current initiatives are commendable, they are fragmented across various organizations. Many gaming industry federations associated have established their own set of guidelines and protocols aimed at ensuring responsible gaming. However, the lack of uniformity and cohesion among these frameworks creates challenges in achieving a consistent and comprehensive approach to responsible gaming across the entire industry. A national framework that codifies all existing standards, charters, and codes for responsible gaming in India's online gaming industry is a crucial step. By bringing together the initiatives of

various gaming federations under one national standard, the industry would benefit from uniformity and clarity. With a governmental body such as QCI, BIS, or MeitY overseeing the framework, it would gain the authority and recognition necessary to establish trust and accountability across the sector. In doing so, the Indian online gaming industry would not only mitigate risks and concerns but also lay the foundation for long-term, sustainable growth that is both responsible and ethical.

A core feature of India's responsible gaming framework should be centered around transparency and consumer protection. Users must have access to clear, concise information about gaming content, risks, and available safeguards. Institutionalization of content rating systems, similar to the Entertainment Software Rating Board (ESRB) model, would help ensure that online games are appropriately classified by age and content. This would not only protect minors but also help parents make more informed choices about the games their children play. Moreover, the framework should incorporate technology powered interventions that monitor players' habits, detect early signs of potential gaming disorders, and provide real-time alerts to encourage healthier gaming habits.

Protecting minors from accessing real-money gaming platforms should be a non-negotiable priority. Age verification and player authentication mechanisms such as Know Your Customer (KYC) must be strengthened and standardized across the industry. The use of Aadhaar-based authentication for KYC and age verification could serve as a solution to this challenge. With such measures in place, the industry can ensure that only eligible and verified users are participating in real-money games. Additionally, these digital tools can prevent minors from circumventing age restrictions, a critical step toward protecting younger players from financial risks.

India's responsible gaming framework must also be data-driven and evidence-based. Policymakers should learn from the experiences of countries where rigid playtime restrictions have led to unintended consequences, such as users turning to unregulated platforms or circumventing restrictions through technological loopholes. Instead, India should focus on player-centric approaches that

emphasize voluntary self-regulation, informed by empirical research. This approach encourages long-term healthy gaming habits, rather than imposing blanket bans or rigid controls that often fail to address the root causes of potential gaming disorders. By relying on data and insights from consumer behaviors, mental health outcomes, and financial impact, India can create more effective, adaptive, and feasible policies.

The role of industry operators is undoubtedly crucial in promoting responsible gaming. Online gaming operators must take proactive steps to integrate responsible gaming tools directly into their platforms. These tools should include real-time notifications, spending and playtime reminders, and self-exclusion programs. Furthermore, industry stakeholders must invest in public awareness campaigns to educate players on the risks associated with excessive gaming, the availability of safeguards, and mental health resources. Partnerships with mental health organizations can facilitate better support for players experiencing gaming-related risks, which is an area where most platforms currently fall short.

Governments, too, must play an active role by establishing clear, enforceable regulations that focus on consumer protection, while still enabling the industry to innovate and thrive. Policymakers should collaborate with experts to ensure that these regulations are grounded in scientific research and reflect the realities of consumer behavior. Mental health services and counseling should be accessible to all players, while regulations should require operators to adhere to strict KYC and age verification procedures to protect vulnerable individuals. In addition, the government must ensure that consumer protection laws are enforced and that gaming companies are held accountable for non-compliance.

Civil society, including non-governmental organizations (NGOs), must serve as a bridge between the industry and the consumers. Their advocacy can play an important role in raising awareness about responsible gaming practices, particularly among vulnerable communities. NGOs can also provide community support through counseling, outreach programs, and rehabilitation services, helping individuals and families affected by potentially problematic gaming habits. By promoting public understanding of gaming-related risks and advocating for evidence-based policies, civil society

organizations can help create a more informed and empowered player base.

Academia also has a key role to play in addressing the rise of potential gaming and technology-related disorders. One notable initiative is the SHUT (Services for Healthy Use of Technology) program by National Institute of Mental Health & Neurosciences (NIMHANS),⁹⁰ which provides access to a digital detox helpline to assist those struggling with excessive screen time. While currently it operates only once in a week, the demand for this service reflects the growing concern over technology addiction. Academic institutions like NIMHANS can contribute valuable research on gaming behavior, addiction, and mental health, offering insights that inform both industry practices and government regulations. Furthermore, universities should engage in outreach programs to educate students and the public about responsible gaming practices, as well as the potential risks of excessive gaming.

The media plays a powerful role in shaping public perceptions of gaming, particularly when it comes to sensitive issues such as suicides linked to gaming addiction. Unfortunately, media reporting on gaming-related suicides often lacks the depth and nuance needed to convey the complexity of these incidents. A study by Dr. YPS Balhara et al.⁹¹ highlights that nearly 95% of digital news reports in India attributed suicides solely to gaming, without investigating broader factors such as mental health issues, addiction, or financial stress. This sensationalist reporting generates public panic and leads to misguided calls for blanket bans on gaming, rather than addressing the underlying mental health challenges. The media must follow the World Health Organization (WHO) guidelines for responsible suicide reporting, which emphasize accuracy, context, and the inclusion of mental health resources. By consulting experts and complying to these guidelines, media outlets can contribute to a more balanced and constructive dialogue on online gaming and its potential risks.

The shared responsibility for creating a safer and more responsible online gaming ecosystem lies with all the stakeholders—industry operators, industry federations, government, consumers, civil society, academia, and the media. The government should implement regulations that prioritize consumer protection and encourage data-

⁹⁰ Yasmeen, A. (2022, November 22). Digital detox helpline in Bengaluru to assist people to overcome addiction to technology. *The Hindu*. <https://www.thehindu.com/news/national/karnataka/shut-clinic-at-nimhans-now-has-a-digital-detox-helpline/article66170370.ece>

⁹¹ Balhara, Y. P. S., Singh, S., & Yadav, Z. (2022). Media reporting on deaths due to suicide attributed to gaming in digital news: A case of misrepresentation and missed opportunities. *Asian Journal of Psychiatry*, 68, 102955. <https://doi.org/10.1016/j.ajp.2021.102955>

driven, evidence-based policymaking. Consumers must be proactive in using available tools to manage their gaming behavior and stay informed about the potential risks. Civil society should continue to advocate for wider public awareness around the benefits and challenges of the online gaming ecosystem, providing support to those with potentially problematic gaming habits. Academia must engage in research and outreach initiatives, such as the NIMHANS SHUT program, to provide insights into responsible gaming behaviors. Finally, the media should commit to responsible reporting, avoiding sensationalism and ensuring that gaming-related stories are backed by expert opinion and evidence.

India's online gaming ecosystem stands at a critical juncture. The industry has the potential to become a major driver of economic growth, but its success must be carefully balanced with a strong commitment to consumer protection. A comprehensive responsible gaming framework, aligned with global best practices and grounded in shared responsibility among all the stakeholders is essential for a safe and innovative online gaming environment. By prioritizing transparency, promoting self-regulation, and encouraging cross-sector collaboration, India has the opportunity to not only nurture a thriving industry but also set the standard for a sustainable, ethical, and responsible online gaming ecosystem.

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