






Banning loot boxes for minors: A public health framework and the case of Brazil

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Journal of Behavioral Addictions

15 (2026) 1, 5–7

DOI:
10.1556/2006.2025.00524
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Received: November 9, 2025 • Revised manuscript received: January 4, 2026 • Accepted: February 8, 2026

COMMENTARY



ABSTRACT

Brazil's Digital Child and Adolescent Act (2025) prohibits paid loot boxes in games accessible to minors under a public health and child-rights framework, regardless of whether they should be classified as gambling. The law focuses on psychological mechanisms underlying harm, including variable-ratio reinforcement and reward uncertainty, to which adolescents are developmentally vulnerable. It establishes administrative sanctions, including fines of up to 10% of the company's revenue and service suspension, and restricts personalized advertising and algorithmic systems targeting minors. As the first major market to adopt a preventive harm-reduction ban, Brazil creates measurable regulatory benchmarks and a natural experiment to assess whether legislative boundaries reduce harm, influence industry monetisation strategies, and inform proportionate digital governance internationally.

KEYWORDS

gambling, adolescent, public health, loot boxes, video games, child welfare, Brazil, gaming disorder, policy, regulation

Brazil is one of the world's largest gaming markets, with digital gaming embedded in youths' daily lives. According to national data, 78% of Internet users aged 9–17 play online games (TIC Kids Online Brasil, 2024). In this context, Brazil enacted in September 2025 the Digital Child and Adolescent Act, which prohibits the use of loot boxes in games directed at or likely to be accessed by minors. The law is part of a broader child-protection agenda and followed intense debate on online commercial practices ([Digital Child and Adolescent Act, 2025](#)).

A key strength of the law lies in its functional and comprehensive definition of loot boxes. Rather than relying on industry terminology, it defines them as features in which players, upon payment, receive randomised virtual items or advantages without knowing their content or guaranteed utility. It explicitly includes both cosmetic and functional rewards, regardless of trade ability or monetary value. By focusing on payment, randomness, and uncertainty, the law clarifies that transparency measures do not exempt a mechanism if these elements are present. In-game currencies bought with real money remain in scope; free random rewards are exempt ([Digital Child and Adolescent Act, 2025](#)).

Unlike frameworks grounded in gambling legislation, the Brazilian model adopts public health and child-rights principles. It does not attempt to determine whether loot boxes legally constitute gambling; rather, it focuses on whether they reproduce psychological mechanisms known to underlie gambling harm, such as variable-ratio reinforcement schedules, near-miss

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effects, and reward anticipation driven by uncertainty (Király, Zhang, Demetrovics, & Browne, 2022). This perspective aligns with evidence showing that adolescents may display gambling-like cognitions and engagement patterns even in the absence of cash-out features (King & Delfabbro, 2018; Zendle, Meyer, & Over, 2019). The law operates through administrative rather than criminal sanctions, including fines of up to 10% of company revenue and, when necessary, suspension of services or removal of applications. It also restricts personalised advertising and algorithmic recommendation systems directed at minors, acknowledging that harms extend beyond the mechanic and are reinforced by the broader monetisation ecosystem (King & Delfabbro, 2018).

Several countries have regulated loot boxes, though with diverse legal bases and results. Belgium and the Netherlands classified paid loot boxes as gambling, prompting some companies to remove or disable them locally (Xiao, 2023), yet adolescents continue to access them through alternative accounts, VPNs, or grey markets (Denoo, Dupont, Grosemans, Zaman, & De Cock, 2023). In the UK, loot boxes that allow players to “cash out” items for real-world money are classified as gambling and thus require a special licence to operate (Fortim, 2025). Germany, Germany, Spain, and Australia use consumer-information and age-rating approaches requiring probability disclosures or spending warnings, while China imposes strict rules requiring drop-rate disclosure, playtime limits for minors, and spending limits on in-game purchases (Xiao, Henderson, Nielsen, & Newall, 2022). Within this landscape, Brazil is the first major market to ban paid randomised rewards for minors under a public health framework, prioritising harm prevention over transparency.

This policy innovation is timely because loot box engagement has been consistently linked to psychological, behavioural, and financial harms among young people. Research shows that higher loot box spending correlates with stronger gambling-related cognitions, impulsivity, and problem-gambling or gaming symptoms across populations and study designs, with mental health factors moderating these relationships (Garea, Drummond, Sauer, Hall, & Williams, 2021; Kim et al., 2023; Spicer et al., 2022; Villalba-García, Czakó, Griffiths, & Demetrovics, 2025; Zendle et al., 2019). Adolescents who frequently purchase loot boxes report psychological distress (including anxiety and depressive symptoms) alongside family and financial strain from overspending and covert purchases (King & Delfabbro, 2018; Király et al., 2022; Li, Mills, & Nower, 2019). The variable-ratio reward structure reinforces risk-taking and may normalise gambling-like behaviours over time (Drummond & Sauer, 2018; Murch & Clark, 2015).

Adolescents appear particularly vulnerable to these mechanisms due to developmental, cognitive, and social factors. Neurodevelopmental research shows that reward-related brain systems, including dopaminergic pathways involved in risk evaluation, mature earlier than prefrontal regions responsible for impulse control and long-term planning (Casey, Getz, & Galvan, 2008). This imbalance heightens susceptibility to reward uncertainty and near-miss effects,

both central features of loot box design (Drummond & Sauer, 2018). Social pressures to obtain cosmetic or competitive advantages, combined with limited parental monitoring of digital spending and exposure to gambling-like content, further reinforce engagement with chance-based monetisation systems (King & Delfabbro, 2018; Koncz, Demetrovics, Griffiths, & Király, 2023). Loot boxes may thus operate as an early behavioural pathway to gambling for vulnerable youths, particularly those with impulsivity, emotional dysregulation, or exposure to gambling within the family environment (Blaszczynski & Nower, 2002; Villalba-García et al., 2025).

The implementation of the Digital Child and Adolescent Act will test how the gaming industry responds to strict regulatory boundaries. Previous experiences in Belgium, the Netherlands, and China indicate that companies seldom eliminate monetisation systems entirely; instead, they often substitute loot boxes with fixed-reward schemes such as battle passes (Johnson & Brock, 2020). Monitoring such substitution effects will be as important as measuring reductions in exposure to randomised rewards. Moreover, enforcement may face challenges in a country marked by wide regional and socioeconomic inequalities in digital access and spending capacity, as regulatory compliance remains problematic even in jurisdictions with established frameworks (Xiao, Deery, Petrovskaya, Park, & Newall, 2025). Also, while compliance is more feasible among major companies, the same does not hold for the vast mobile gaming market, where millions of small developers operate independently (Fortim, 2025). As such, the Brazilian ban constitutes not only a regulatory intervention but also a natural quasi-experiment, providing a unique opportunity to examine how legislative boundaries interact with corporate strategies, user behaviour, and structural disparities in digital consumption.

Brazil’s prohibition of loot boxes for minors represents a turning point in the global regulation of chance-based monetisation in digital games. By shifting focus from gambling classification to a public health rationale, the law sets clear exposure limits and measurable conditions for evaluation. Its effectiveness will depend on enforcement, compliance, and the ability to monitor substitution effects and unequal impacts. Findings from Brazil may be transferable to other low and middle income countries, informing proportionate safeguards beyond national borders. For the behavioural addictions field, systematically studying the Brazilian case may help determine whether such legal interventions can effectively reduce harm, inform proportionate regulation, and advance evidence-based approaches to digital-risk prevention.

Funding sources: This study was supported by the Research Incentive Fund of the Hospital de Clinicas de Porto Alegre (FIPE/HCPA; ROR: <https://ror.org/010we4y38>).

Authors’ contribution: Conceptualization: DTS, IF. Writing – Original Draft: DTS, IF. Writing – Review & Editing: DTS, IF, THR, FHPK, HSK.

Conflict of interest: Thiago Henrique Roza has served as consultant or speaker for EMS, Johnson & Johnson, and GENOM. Hyoun S Kim received research funding from

Alberta Gambling Research Institute (AGRI), Gambling Research Exchange Ontario, and International Centre for Responsible Gaming (ICRG). He also received travel expenses and or honorariums for conference presentations from AGRI and ICRG. All other authors declare no conflict of interest.

Use of artificial intelligence: ChatGPT (OpenAI, San Francisco, CA; GPT-5 model) was used exclusively to improve the language and readability of this manuscript. The tool was employed for grammar correction, sentence structure refinement, and overall fluency enhancement. No AI technology was used for content generation, data analysis, or formulation of arguments and conclusions. All content, arguments, and conclusions were developed solely by the authors, who personally reviewed and verified all AI-assisted language improvements to ensure accuracy and fidelity to the original meaning.

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