Sports Betting Expansion in Brazil: Impacts on Psychiatric Health

# ABSTRACT

This article presents a psychiatric analysis of the rapid growth of online betting (bets) in Brazil and its connections to the political structure of the country. Current data indicate that approximately 30% of Brazilians, mainly young men, have engaged in online bets, with alarming consequences for public health, such as unpayable debts and a fifteen-fold increase in suicide risk among gamblers. The landscape of sports betting in Brazil has undergone significant changes over the decades, and concurrently, modern society has experienced substantial shifts in digital inclusion. Within this context, the bets market has exhibited remarkable growth in the country, driven by easy access to platforms and instant payment methods, which has turned anyone with a cell phone and internet access into a potential customer. However, health policies have not kept pace with this growth, transforming bettors into potential victims of psychiatric disorders across a broad spectrum. It is important to highlight that the treatment of gambling-related disorders is multifactorial, including therapeutic techniques (CBT, motivational interviewing, group therapy, psychoeducation and family support), in addition to the use of pharmacological strategies. This study aims to investigate the correlation between the expansion of this market and the potential harm to psychiatric health caused by betting addiction, like Suicide Related to Financial Losses, severe depression, self-destructive behavior, acute psychotic episodes or dissociative states and comorbidities with substance use and personality disorders. For the reserch, it was included scientific articles and journalistic reports published in Portuguese and English, using as databases the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), the International Classification of Diseases, Eleventh Edition (ICD-11), as well as national and international scientific journals accessed through Google Scholar, since 1994 until 2025; older references was used for historical context.

*Keywords: Sports betting, mental health, Suicide Risk, Public Health*

# 1. INTRODUCTION

The historical panorama of Brazil shows that the sports bets market has been progressively shaping throughout the country’s history. With Decree-Law No. 9,215 of 1946, a general prohibition of games of chance was established, with the exception of state lotteries that were already in force in the country. All of this changed with the creation of the Sports Lottery in 1970, and in the first year after regulation, 100,000 tickets were distributed.

By the early 1980s, this number had already increased to 17 million weekly bets; in 1989, the Sports Lottery was restructured and renamed “Loteca,” with revenues of approximately 11 million New Cruzados, which, Inflation-adjusted value would correspond to approximately 186,820.77 Brazilian Reals (BRL) or US$ 33.421,41 in direct conversion to USD in 2025. In 1990, for instance, contest no. 44, held on July 8, collected about 40.7 million Cruzeiros, which would amount to approximately 4,470,725.16 BRL (US$ 800.000,00) in 2025 using the same index. Loteca continued to be offered by Caixa Econômica Federal, and in 2017, it raised to 84,776,941.00 BRL (US$ 15,2 million), with approximately 400 million BRL (US$ 71,6 million) transferred to the brazilian federal government over 16 years since its restructuring in 2002.

The scenario of sports bets in Brazil changed considerably starting in 2018, with the sanctioning of Law No. 13,756 of the same year, which paved the way for the operation of online betting platforms. In 2019, the number of companies in the sector began to grow, with 40 new companies registered; in 2020, the market moved approximately 7 billion BRL (US$ 1,25 billion). In 2021, the number of companies increased to 116, and in 2022, it is estimated that the market moved tween 60 and 100 billion BRL (or US$ 10,7 and US$ 17,9 billion).

In 2023, the sector was regulated by Law No. 14,790/2023, which established taxation, bettor taxes, and licensing fees for operation. That year, Brazilians spent around 54 billion BRL (US$ 9,66 billion) on online betting between January and November. In 2024, Brazilians allocated between 18 and 21 billion BRL (US$ 3,22 and US$ 3,76 billion) per month to online gambling (including sports betting and games of chance), according to estimates by the Central Bank, highlighting the sector’s rapid growth in the country.

Just as the betting pattern has continuously changed over the decades, digital inclusion in Brazil has also completely transformed the population’s behavioral patterns in various social spheres. Between 2005 and 2010, there was an expansion of broadband internet; in 2008, 20.9% of Brazilian households had internet access; by 2010, the number had risen to 27.4%.

Additionally, the widespread adoption of smartphones from 2011 onward transformed the digital inclusion model. Most Brazilians began accessing the internet exclusively via mobile phones, surpassing computers as the main device from 2015. In 2016, 94.6% of internet users accessed it through a mobile phone. In 2023, 84% of households had internet access, with 81% accessing it via mobile. As a result, access to betting platforms has become extremely easy and practically instantaneous for the vast majority of Brazilians, a reality that has clearly not been matched by public policies (especially in health) with the same intensity.

The economic sector is aware of this reality and has expressed significant concern about this trend. The notable growth of online betting has impacted household consumption in Brazil. Studies indicate that part of the resources previously allocated to other expenses, such as savings and leisure, is now being redirected to betting, affecting household budgets, especially among lower-income classes (C, D, and E).

In parallel with these societal changes, psychiatry has continuously monitored the evolution of betting systems to assess their effects on mental health.The “Gambling Disorder” is a recognized psychiatric condition, classified in the current edition of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5, 2013), under the chapter on Substance-Related and Addictive Disorders. It is the only behavioral addiction formally included in this category, reflecting growing evidence that gambling can trigger behavioral and neurobiological patterns similar to those observed in substance addictions.

Clinically, the disorder is characterized by a persistent and recurrent pattern of gambling behavior that results in significant impairment in personal, social, occupational, and/or financial functioning. Affected individuals show progressive difficulty in controlling the frequency, duration, and intensity of their betting behavior, in addition to symptoms such as tolerance, emotional withdrawal, and "chasing losses" (trying to recover losses through further gambling).

According to DSM-5, a diagnosis requires at least four diagnostic criteria to be present within a 12-month period, including: the need to gamble with increasing amounts of money, unsuccessful efforts to stop gambling, gambling as a way to escape emotional distress, lying to conceal the extent of involvement with gambling, among others. The severity of the disorder can be classified as mild, moderate, or severe, depending on the number of criteria met.

The etiology of gambling disorder involves a multifactorial interaction between genetic vulnerabilities, personality traits (such as impulsivity and sensation seeking), psychiatric comorbidities (such as mood disorders, anxiety, and substance use), as well as psychosocial and contextual factors. Neurobiological mechanisms include dysfunction in dopaminergic reward circuits, particularly the mesocorticolimbic pathways, similar to those observed in substance use disorders.

Although the DSM-5 does not distinguish between online and offline gambling, the advancement of digital technologies has raised increasing concerns regarding the online modality, which has a higher potential for continuous reinforcement, 24/7 availability, anonymity, and low perceived risk. These factors increase vulnerability to developing the disorder, especially among younger populations. The 11th edition of the International Classification of Diseases (ICD-11), published by the World Health Organization in 2019, classifies this behavior under the group of “Addictive Behavior Disorders,” particularly under the subtype Gambling Disorder (6C50).

The disorder is defined as a persistent and recurrent pattern of gambling behavior that is uncontrolled and significantly impairs personal, family, social, educational, occupational, or other important areas of functioning. The ICD-11 differentiates the disorder based on the primary gambling environment:

6C50.0 – Predominantly online gambling disorder

6C50.1 – Predominantly offline gambling disorder

6C50.Z – Gambling disorder, unspecified

Sports betting, often conducted through digital means, predominantly falls into category 6C50.0 (predominantly online), due to high accessibility and 24-hour availability, which fosters the development and maintenance of the disorder. For diagnosis, criteria include a persistent and recurrent gambling pattern lasting at least 12 months, with significant functional impairment, loss of control over gambling behavior, gambling taking precedence over other activities, and persistence despite negative consequences. Moreover, ICD-11 emphasizes that this disorder can coexist with other psychiatric conditions, such as mood disorders, anxiety, and substance use disorders, requiring a multidisciplinary approach for clinical management.

# 2. METHODOLOGY

This is a descriptive and exploratory literature review. For this study, references included scientific articles and journalistic reports published in Portuguese and English, using as databases the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), the International Classification of Diseases, Eleventh Edition (ICD-11), as well as national and international scientific journals accessed through Google Scholar.

# 3. FINDINGs AND DISCUSSION

The main age group of the Brazilian population engaging in online sports betting ranges from 16 to 39 years old, with a particular emphasis on young people aged 18 to 24. According to the 2024 “Political Outlook” survey by DataSenado, 56% of bettors are between 16 and 39 years old, 62% are male, and 52% have a monthly income of up to two minimum wages. Furthermore, Datafolha data show that 30% of Brazilians aged 16 to 24 have placed online sports bets—double the national average of 15%.

A survey conducted by Mobile Time & Opinion Box between March 12 and 27, 2025, showed that 21% of Brazilians with smartphones placed at least one sports bet in the past 12 months. The practice is more common among young people: 26% of respondents aged 16 to 29 reported having bet, compared to 23% among those aged 30 to 49. Another study, titled “The Biggest X-ray of Football Fans,” by CNN/Itatiaia/Quaest, indicated that 25% of fans aged 16 to 30 had placed online sports bets, compared to 16% aged 31 to 50, and 7% over 50.

Several studies indicate that the ease of access to online betting platforms is directly associated not only with an increase in psychiatric disorders but also with greater financial expenditure and risky economic behavior. Some findings from the scientific literature include:

## 3.1 Ease of Access And Increased Spending

Study: Gainsbury et al. (2015) found that players using low stakes bet more frequently and showed greater monthly expenditure volatility. “Stake” refers to the amount wagered on a particular bet — i.e., the amount of money the bettor is willing to risk.

Microtransactions and Minimum Bets: The ability to bet very small amounts (cent-level stakes) reduces subjective risk perception, leading to more frequent bets and cumulatively higher expenses over time.

Immediate Reinforcement Mechanics: Online interfaces offer real-time betting, instant notifications, and cash-out options (withdrawing winnings before the event ends), which encourage repetitive and higher-value betting.

Study: Parke et al. (2019) showed that users of apps with cash-out features were more likely to place higher and more frequent bets than traditional bettors, with spending spikes over short periods.

## 3.2 Chasing Losses and Compulsive Behavior

“Chasing losses” (immediately trying to recover previous losses) is facilitated by digital platforms — allowing instant re-betting opportunities, which increases total expenditure and debt accumulation.

Study Gainsbury et al (2014): In a large international survey of 10,838 Internet gamblers across 96 countries, this study identified loss chasing as a key behavioral marker of disordered gambling. Casino players were more likely than poker players to chase losses, and those who did reported higher gambling expenditure, time spent gambling, and stronger irrational beliefs. Chasing losses was also linked to gambling motivations such as excitement and the desire to win money. These findings highlight the potential of chasing behavior as an early indicator of gambling problems in online environments.

## 3.3 Targeted Marketing and Push Notifications

Push notifications are messages sent directly to a user’s device (smartphone, tablet, or computer) via apps or browsers, even when the app is closed. They aim to inform, alert, or engage users with updates, promotions, or reminders.

Online operators use algorithms to send promotions, top-up bonuses, and push notifications during emotionally vulnerable moments (e.g., after a loss), encouraging continued betting and higher spending.

Study: Russel et al. (2018) evaluated the effects of direct messages (SMS and email) on betting intention and behavior. Text messages (SMS) showed a strong association with a higher likelihood of placing a bet and increased spending on the following day. This supports the idea that direct communication — closely related to the concept of push notifications — can stimulate impulsive gambling. Wardy et al. Wardle et al. (2022) found that approximately 31% reported that marketing (including direct messages or notifications) led them to spend on gambling in an unplanned manner. The effect was especially strong among individuals with identified gambling problems.

## 3.4 Financial Comorbidities and Debt

Chronic indebtedness: The ease of embedded credit (cards and e-wallets) allows spending beyond users’ financial capabilities, often leading to high-interest loans or emergency credit usage.

Several recent studies have found an association between sports betting and increased financial indebtedness, especially in the United States. Researchers at the University of Kansas (2024) found that online sports betting leads to significant increases in credit card balances, reductions in available credit, and decreases in liquid investments. These effects were particularly pronounced among financially vulnerable households. A study from the Kellogg School of Management (2024) revealed that online sports betting drains household savings. Bettors with fewer financial resources were the most impacted, often sacrificing funds intended for savings and long-term investments to finance their bets. A report from the National Bureau of Economic Research (2024) found that bettors do not only use discretionary funds but also sacrifice other financial resources, which may displace financial investments and increase financial instability.

## 3.5 Spending and Disorder Severity

Monthly spending as a clinical marker: Various screening tools (e.g., POGQ – Problem Online Gambling Questionnaire) include financial spending items to assess problem gambling severity. Higher monthly expenditures are associated with more severe disorder scores (American Psychiatric Association, 2013).

**3.5.1 Associated Psychiatric Conditions and Treatment**

Among the main psychiatric disorders associated with sports betting addiction are impulse-control disorders, mood and anxiety disorders, and sleep disturbances. However, much more severe conditions are also reported in the scientific literature, including:

***3.5.1.1 Suicide Related to Financial Losses***

Considered the most serious and well-documented complication. Individuals addicted to betting frequently accumulate unpayable debts and may develop hopelessness and suicidal ideation. Epidemiological data indicate that the risk of suicide among people with gambling disorder is 15 times higher than in the general population, with young men being particularly vulnerable.

Using data from 13,578 participants in the NESARC survey, this study found that both problem and pathological gambling are significantly associated with suicidal behavior. Problem gambling was linked to increased odds of suicidal ideation (AOR = 1.64, 95% CI = 1.19–2.26) and suicide attempts (AOR = 2.42, 95% CI = 1.60–3.67). Pathological gambling showed even stronger associations with suicidal ideation (AOR = 2.86, 95% CI = 1.98–4.11) and suicide attempts (AOR = 2.77, 95% CI = 1.72–4.47). The study highlights the need for clinicians to routinely screen for suicidality in individuals across varying levels of gambling severity, including subclinical groups (Moghaddam 2015)

***3.5.1.2 Severe Depression and Self-Destructive Behavior***

The cycle of loss and debt leads to low self-esteem, hopelessness, and severe depressive symptoms. Cases may include self-harm and other self-inflicted injuries, as well as total abandonment of social and professional life.

***3.5.1.3 Acute Psychotic Episodes or Dissociative States***

Though less common, extreme stress, sleep deprivation, and mental collapse due to financial losses may precipitate brief psychotic episodes, especially in predisposed individuals.

***3.5.1.4 Comorbidities with Substance Use and Personality Disorders***

Compulsive sports betting often coexists with alcohol use, cocaine abuse, ADHD, and personality disorders such as borderline or antisocial personality disorder, worsening the overall prognosis.

# 4. Treatment Approaches

A mini-review highlights the limited evidence for treating problem gambling with psychiatric comorbidities. Findings suggest that common treatments remain generally effective, with some tailored approaches showing promise. Future research should focus on comorbidity-specific interventions and treatment sequencing based on disorder severity (Dowling 2016). The treatment of gambling disorder, including sports betting or online gaming addiction, is multidimensional, involving psychotherapeutic, pharmacological, and psychoeducational interventions. The ideal approach must be individualized, taking into account factors such as symptom severity, psychiatric comorbidities, family support, and sociocultural context.

## 4.1 Cognitive-Behavioral Therapy (CBT)

CBT is the most empirically supported psychotherapeutic approach for gambling disorder. It aims to modify dysfunctional beliefs about luck and chance, identify emotional and environmental triggers, and develop coping strategies to prevent relapse.

Common techniques include: cognitive restructuring, social skills training, relapse prevention, scheduling alternative activities, and impulse control strategies.

## 4.2 Motivational Interviewing

Particularly useful in early stages of treatment, motivational interviewing helps patients acknowledge the problem and increase their readiness for change, promoting adherence to subsequent therapeutic and pharmacological interventions.

## 4.3 Group Therapy and Mutual Support

Groups such as Gamblers Anonymous (GA), following the 12-step model, offer psychosocial support, encouragement for abstinence, and a sense of belonging. Evidence suggests that regular participation is associated with improved impulse control and lower relapse rates.

## 4.4 Pharmacological Treatment

Although there is no medication specifically approved for gambling disorder, some drugs have been used off-label with promising results, especially in patients with comorbid conditions (e.g., depression, OCD, ADHD, mood disorders):

Selective Serotonin Reuptake Inhibitors (SSRIs): such as fluoxetine or sertraline, effective in patients with obsessive-compulsive or depressive symptoms.

Mood Stabilizers: such as lithium or topiramate, used in individuals with high impulsivity or comorbid bipolar disorder.

Opioid Antagonists (e.g., naltrexone): reduce the rewarding effects of gambling, particularly in individuals with a family history of addiction.

## 4.5 Technological Interventions

Self-help apps, online CBT platforms, and website-blocking tools are increasingly used, with promising results in remote monitoring, reducing lapses, and improving insight.

## 4.6 Family-Based Interventions

Psychoeducation and family support are essential, particularly in cases with high levels of family dysfunction or codependency. Informed families can help limit access to financial resources and monitor risky behaviors.

# 5. CONCLUSION

This study demonstrated that the expansion of the online sports betting market in Brazil—intensified by increasing digital inclusion and recent legislative regulation—has had significant impacts on the population’s mental health, particularly among young individuals and those from lower socioeconomic classes. The ease of access, uninterrupted availability, and immediate reinforcement mechanisms of these platforms create a highly conducive environment for the development of addictive behaviors.

The data analyzed reveal a strong association between frequent use of these platforms and significant functional impairments, including chronic debt, severe depressive symptoms, suicidal ideation, and various psychiatric comorbidities. The reviewed scientific literature also highlights the central role played by digital marketing strategies and behavioral technologies—such as push notifications and cash-out systems—in intensifying betting behaviors and diminishing the subjective perception of risk.

In this context, there is an urgent need to formulate and implement intersectoral public policies that promote critical digital education, more effectively regulate advertising and platform operations, and expand public access to prevention and specialized treatment services. Additionally, the importance of multidimensional and individualized therapeutic approaches is emphasized, capable of addressing the clinical, social, and cultural specificities of affected individuals. There is also a need for more robust scientific research with appropriate methodology to address how much technological evolution can influence this process (given the ease of access to betting platforms), and also on the specific psychiatric disorders involved both in the addiction process and in the future harms of this comorbidity.

Therefore, it is imperative that the phenomenon of online sports betting be understood not merely as an economic or entertainment issue, but as an emerging public health concern, requiring constant monitoring, ongoing research, and integrated responses from the scientific community, policymakers, and healthcare professionals.

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Details of the AI usage are given below:

1. It was used ChatGPT and Gemni for help with some terms that could have some variations in English, considering that the article was written in Portuguese and translated

2.

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