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Recurrent High-Lethality Suicide Attempts Associated with Online Crash Gambling in Mozambique: A Case Report from a Low-Resource Setting

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Case Report

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Abstract

Background:
To report and analyse the intersection between the neurobiology of crash gambling addiction, psychosocial collapse, and extreme suicide risk in a low-resource context.

Case presentation:

A 45-year-old man in Mozambique, diagnosed with Severe Gambling Disorder (DSM-5-TR), engaged with the digital platform “Aviator.” He experienced a rapid escalation of betting driven by high-frequency intermittent reinforcement cycles, resulting in catastrophic financial losses, dismissal for embezzlement, and progressive social isolation. The patient undertook five high-lethality suicide attempts, including extreme-risk behaviours, influenced by the suicide of a peer with a similar gambling pattern, illustrating social contagion.

Discussion and conclusions:

The analysis integrates evidence of dopaminergic dysfunction (D2/D3 receptors and dopamine transporter) and prefrontal cortex hypoactivation with the Interpersonal-Psychological Theory of Suicide (IPTS). The near-miss mechanics and rapidity of crash games accelerate functional collapse, favouring habit-based over reflective decision-making. The convergence of perceived burdensomeness, thwarted belongingness, and acquired capability for suicide, potentiated by social contagion and familial vulnerability, underpins the observed extreme suicide risk. Clinical management, despite the unavailability of opioid antagonists, was effective through psychopharmacological stabilization, environmental containment, and structured family support. This case highlights the urgent need for regulation of digital gambling platforms in vulnerable settings and the systematic assessment of suicide lethality in individuals with gambling disorder, integrating neurobiological, clinical, and public health approaches.

Introduction

Similar to substance use disorders, gambling disorder is classified in the DSM-5-TR as a non-substance-related addictive disorder, associated with dysfunctions in reward pathways and executive functioning (1, 2). Recent evidence suggests dysregulation of dopaminergic neurotransmission, including alterations in D2/D3 receptors and dopamine transporter (DAT), although findings are heterogeneous and predominantly observational (3).

Individuals with gambling disorder exhibit an increased risk of suicidal ideation (OR = 2.17) and suicide attempts (OR = 2.81), with suicide mortality up to 15 times higher than the general population, even after partial adjustment for comorbidities (4). The proliferation of online gambling platforms, particularly crash games, is characterized by ultra-fast betting cycles and immediate feedback, which may reinforce compulsive behaviours (5).

In Mozambique, the scarcity of epidemiological data limits the characterization of problem magnitude, within a context of socioeconomic vulnerability and restricted mental health care access. This report describes a case of functional collapse and extreme suicide risk, potentially exacerbated by high-frequency intermittent reinforcement mechanisms.

Case Presentation

A 45-year-old married man with five children, employed as a public sector administrative worker, was admitted following hospital transfer for severe psychological distress and persistent suicidal ideation.

History and Progression

The patient reported progressive engagement with the “Aviator” platform since 2023, which features an escalating multiplier system requiring withdrawal prior to the “crash.” This pattern generated rapid reinforcement cycles and chasing-loss behaviour. Over two years, he accumulated debts far exceeding his income capacity, resorting to loan sharks and formal banking loans.

Critical Precipitant

During financial escalation, the patient embezzled public funds to sustain gambling. Discovery led to initiation of disciplinary and legal proceedings.

Peer Influence and Contagion

A clinically significant factor was shared suicidal ideation with a peer exhibiting similar gambling behaviour. The peer ultimately completed suicide on January 15, 2026, acting as an additional precipitant, potentially increasing the patient’s tolerance to fear and pain associated with suicidal behaviour and intensifying feelings of hopelessness.

Clinical Findings

Mental state examination revealed:

- Markedly depressed mood and constricted affect
- Preserved thought form, absence of psychotic symptoms
- Partially preserved insight into debt severity, coexisting with marked hopelessness

Suicide risk severity was assessed using the Columbia-Suicide Severity Rating Scale (C-SSRS) and classified as extreme. History revealed multiple high-lethality attempts:

1. Hanging interrupted by others (November, 2026)
2. Planned drowning attempt (January 19,2026)
3. Ingestion of toxic substances (January 21,2026)
4. Planned high-altitude jump (January 21,2026)
5. Exposure to aquatic danger (January 02,2026)

Family History

Suicide in a first-degree relative and maternal suicidal behaviour suggested genetic and environmental vulnerability.

Diagnosis

Severe Gambling Disorder (DSM-5-TR; ICD-11: 6C50), evidenced by loss of control, progressive increase in bet size (tolerance), recurrent deceit, and engagement in illicit acts to finance gambling.

Treatment

Management was adapted to a low-resource context:

- Safety: Admission to a psychiatric unit with continuous supervision and lethal means restriction
- Pharmacotherapy: In the absence of opioid antagonists (naltrexone/nalmefene), chlorpromazine (100 mg three times daily) and diazepam (10 mg three times daily) were used to control acute anxiety, agitation, and impulsivity; diazepam was administered cautiously and for a short duration due to the risk of dependence
- Psychological Intervention: Focused on cognitive restructuring and identification of triggers associated with electronic gambling devices
- Safety Plan
- Discharge Planning: Family involvement for financial supervision and restriction of digital access

Discussion and conclusion

Unlike traditional forms of gambling, crash games feature extremely rapid decision-reward cycles, often within seconds, qualitatively altering neurocognitive dynamics of addictive behaviour (2). This immediacy interacts with a neurobiological substrate vulnerable in gambling disorder, marked by dysfunction in reward systems and executive control. Neuroimaging evidence demonstrates prefrontal hypoactivation, particularly in regions linked to inhibitory control and decision-making, alongside ventral striatal alterations implicated in reward anticipation and processing (2).

High-frequency bet–outcome cycles in crash games may attenuate engagement of prefrontal-dependent reflective processes, favouring impulsive responses mediated by the mesolimbic dopaminergic system

(6). This pattern promotes a shift towards progressively automated behaviour, characterised by erosion of prospective risk evaluation and habit predominance over conscious decision-making.

The escalating multiplier mechanics also incorporate the near-miss phenomenon, wherein losses close to the gain point are processed similarly to wins at the neural level, engaging reward circuits including the ventral striatum and insula despite objectively negative outcomes (2). This dissociation between objective outcome and subjective processing sustains gambling behaviour, increasing motivation to continue despite repeated losses.

While these neurobehavioural mechanisms explain gambling escalation, they do not alone account for suicidal behaviour. The Interpersonal-Psychological Theory of Suicide (IPTS) provides an additional framework, positing that suicidal desire arises from the convergence of thwarted belongingness and perceived burdensomeness, with progression to lethal behaviour dependent on acquired capability (7, 8).

In this case, financial collapse, job loss, and engagement in illegal acts may have crystallized perceived burdensomeness, while progressive isolation due to shame, stigma, and secretive behaviour contributed to thwarted belongingness. Acquired capability for suicide was likely potentiated by multiple prior high-lethality attempts, exposure to peer suicide, and family history, producing extreme risk.

In low-resource contexts like Mozambique, these mechanisms are amplified. Limited access to mental health care, absence of specialized interventions for addictive disorders, and fragile digital regulation systems create high vulnerability. Financial and social collapse, coupled with weak familial and community support, enhance burdensomeness and isolation—central IPTS constructs.

From a public health perspective, this case underscores the need to adapt regulatory frameworks to digital gambling platforms, including limitation of high-frequency reinforcement mechanisms, implementation of self-exclusion strategies and loss-control measures, and systematic monitoring of financially vulnerable individuals. It also highlights the importance of structured suicide risk assessment using validated instruments such as the Columbia-Suicide Severity Rating Scale (9), alongside timely clinical interventions even in resource-limited settings.

Lessons Learned

- Crash games carry high addictive potential due to reinforcement frequency, accelerating financial collapse.
- Suicide risk in gambling disorder is severely underestimated and should be assessed with lethality-focused tools, not ideation alone.
- Peer suicide in gambling acts as a contagion factor, increasing lethality of subsequent attempts.
- In low-resource settings, environmental management (family financial control) is as critical as clinical stabilization.

Declarations

Ethics declaration

Not applicable

Consent for publication

Written informed consent for publication of this case report, including anonymised clinical details, was obtained from the patient.

Availability of data and materials

Is not applicable to this article as no datasets were generated or analysed during the current study. All relevant clinical information is included within the manuscript.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

Afonso Mazine Tiago Fumo conceptualised the study, led manuscript development, conducted the clinical synthesis of the case, wrote the discussion, and provided overall clinical supervision.

Inês Providência Florêncio Tivane Filimone was the primary attending clinician for the case and contributed to initial manuscript drafting.

Whitney Celeste Caiado Povo da Barca contributed to clinical management and critically revised the manuscript for important intellectual content.

António Francisco Agostinho contributed to clinical care and critical revision of the manuscript.

Regina Simão Ciriro Neves contributed to clinical care and manuscript revision.

Cândida Nunes João Sampaio Chaúque contributed to clinical care and manuscript revision.

Kady Ismael de Almeida Pereira, clinical psychologist, contributed to psychological assessment, patient management, and manuscript revision.

Domingas da Luz Rosário Ferrão contributed to overall supervision, critical revision of the manuscript, and final approval of the version to be submitted.

All authors read and approved the final manuscript and agree to be accountable for all aspects of the work.

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