### **Gambling Addiction**

Subjects: Behavioral Sciences

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Gambling addiction was the first addictive behavior not related to substance use that was recognized by the DSM-5. It shares diagnostics and comorbidity with other addictions.

gambling depression prosocial behavior cognitive distortion

### **1. Current State of Gambling Addiction**

Calado and Griffiths <sup>[1]</sup>, studying this problem, carried out a systematic review of the literature to analyze the prevalence of problem gambling. This research took articles published since 2000 from any country that published prevalence rates. They found that between 0.1 and 5.8% of participants had presented problem gambling in the last year and that between 0.7 and 6.5% had presented so throughout their lives. Analyzing the prevalence by continents, they found that in North America, the figure ranged between 2 to 5%; in Asia, it ranged between 0.5 and 5.8%; in Oceania, it ranged between 0.4 and 0.7%; and in Europe, it ranged between 0.1 and 3.4%. Calado et al. <sup>[2]</sup> conducted a similar review focusing on the prevalence of problem gambling in adolescents since 2000. Between 0.2 and 12.3% of participants met the criteria for problem gambling of the Diagnostic and Statistical Manual-IV adapted format for Juveniles (DSM-IV-J) <sup>[3]</sup> and other instruments; however, this study did not differentiate between problem gambling and pathological gambling when analyzing the prevalence.

In the Spanish context, according to data from the survey on Alcohol and Drugs in Spain, EDADES 2022 <sup>[4]</sup>, 1.7% of those surveyed between 15 and 64 years of age presented problem gambling or gambling disorder according to the DSM-5 criteria. This percentage was higher for men (2.4%) than women (0.9%). Considering the number of DSM-5 indicators, 2.2% presented problem gambling by meeting between one and three indicators. On the other hand, 0.4% presented a possible gambling disorder by meeting four or more DSM-5 indicators. Extrapolating these data to the Spanish population between 15 and 64 years of age, 1.3% could present problem gambling, and 0.4% could have a possible gambling disorder.

In the case of adolescents between 14 and 18 years of age, according to a 2021 survey, 17.9% could have a gambling disorder based on the answers given in the Lie/Bet scale by Johnson et al. <sup>[5]</sup>. Extrapolating these data to the entire population between 14 and 18 years of age, 3.4% could have a possible gambling disorder, and this percentage would be higher for men (5.0%) than women (1.9%).

## **2.** Relationship of Gambling Addiction to Clinical and Health Factors

Given the relevance of gambling problems, psychologists have studied their relationship with various constructs, especially with psychopathologies and other health-related factors. Depression is the mental health pathology with the highest prevalence rate worldwide <sup>[6]</sup> and shows one of the strongest connections with gambling addiction. These two pathologies have high comorbidity, which makes the study of their relationship highly relevant for understanding problem gambling <sup>[7]</sup>. Depression directly correlates with gambling behavior, and, deepening this relationship, it has been found that people with gambling addiction problems have higher rates of depression and that depression acts as a predictor of gambling addiction <sup>[7][8]</sup>.

In relation to stress, there are differences in the ways in which people cope with stress depending on whether they have problems with gambling <sup>[9]</sup>. Gambling problems appear to be associated both with higher levels of maladaptive techniques of coping with stress <sup>[10]</sup> and with lower levels of adaptive coping techniques <sup>[11]</sup>. In the clinical setting, people with gambling addiction also seem to cope with stressful situations using maladaptive techniques, such as trying to avoid stress-generating situations instead of facing them to find solutions <sup>[12][13]</sup>. The cognitive distortions that people have toward gambling and their maladaptive strategies for coping with stress seem to mediate the relationship between depression and gambling addiction. Therefore, when both pathologies occur comorbidly, one possible avenue for interventions would be to focus on these cognitive distortions <sup>[14][15]</sup>.

# **3.** Relation of Gambling Addiction with Social and Cognitive Factors

Contrary to the research interest in clinical factors, there is a lack of exhaustive research on the relationship of gambling addiction with certain social factors, such as prosocial behavior, and cognitive factors, such as the priming effect. Prosocial behavior consists of actions that are aimed at promoting cooperation, tolerance, help and solidarity and that are related to the prevention of behavioral problems, such as antisocial and criminal behavior <sup>[16]</sup>. Pathological gamblers seem to exhibit this type of behavior to a lesser extent than the general population, and prosocial behavior, in addition to other emotional, behavioral and social factors, is also a predictor of problems with gambling <sup>[18]</sup>.

In the study of human behavior, prospect theory proposed by Tversky and Kahneman <sup>[19]</sup> identifies a phenomenon known as the framing effect; the theory suggests that the different ways in which a problem is framed can influence the decisions that people make about that problem. According to this theory, people are guided by risk aversion and prefer a safe alternative to a riskier alternative when the alternatives are defined as potential gains rather than when a context-dependent benchmark is used. For Giuliani et al. <sup>[20]</sup> and Manippa et al. <sup>[21]</sup>, people value a gain in the form of money, accounting for aspects of an affective or utilitarian nature. On this basis, in a win-win situation, such as winning money in gambling, the individual will make a decision thinking about the benefits or utility of the win, which will lead him or her to choose the least risky option. On the other hand, when the alternatives are focused on potential losses, the person will take more risks in their decisions.

In this sense, the decisions made by the individual are influenced by the context in which they are presented. Thus, if we want to encourage gambling, in accordance with the framing effect, the individual should be exposed to a greater extent to messages related to what he or she can gain from gambling and to a lesser extent to messages related to what he or she can gain from gambling and to a lesser extent to messages related to what he or she can gain from gambling and to a lesser extent to messages related to what he or she can gain from gambling and to a lesser extent to messages related to what he or she can gain from gambling and to a lesser extent to messages related to what he or she can lose.

Different from the framing effect is the priming effect, which accounts for previous experiences or stimuli to which the person has been exposed when responding to a given situation. Cesario <sup>[22]</sup> defined the priming effect as an implicit memory effect. This effect acts as a conditioning. In the specific case of gambling, it is to be expected that positive experiences associated with gambling, such as winnings or benefits at economic, social, psychological levels, will generate a greater predisposition to continue gambling. In the case of alcohol consumption, different studies have pointed out how initial consumption can motivate subsequent consumption, which would occur both in drinkers and in those who try to abstain <sup>[23][24]</sup>.

Applying this framing effect to economic issues, it has been found that people tend to express more aversion to loss than the profits they can make; that is, people value what they already have more than what they can obtain, so under different framings, they tend to choose the option that minimizes losses <sup>[25][26]</sup>. Takeuchi et al. <sup>[27]</sup> found that a group of problem gamblers and a control group of healthy people showed no differences in their loss aversion.

#### 4. The Role of Cognitive Distortions in Gambling

One of the most noteworthy traits of pathological gamblers is their distorted cognition in relation to gambling <sup>[28][29]</sup>. This relationship is not clearly defined, with some theories arguing that the severity of problematic gambling and the motivations that lead people to gamble act as predictors of cognitive distortions about gambling <sup>[28]</sup>, while other theories posit that cognitive distortions are predictors of future gambling behavior <sup>[30]</sup>. Depending on which of the two theories is favored, it can be determined whether it is more effective to focus interventions on gambling behavior or on players' cognition about gambling <sup>[30]</sup>.

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