The phenomenon of the three monkeys of Turkish society: A systematic review of gambling addiction

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Abstract: While addiction is recognised as a serious problem in modern society, gambling addiction has become a growing concern globally, especially in recent years. Because gambling addiction has the potential to negatively affect individuals' financial stability, social relationships and psychological health. Today, with the diversification and increased accessibility of gambling opportunities, the risk of being exposed to gambling addiction has also increased. Therefore, research on gambling addiction and the measures to be taken are of great importance for the well-being of individuals and public health. The aim of this review is to analyze the research articles that examine gambling addiction in Türkiye, which is covered up legally and socially, but causes havoc in every sense. Studies on gambling addiction between 2017 and 2024 were searched through PubMed, Scopus, Web of Science (WoS) and TR-Index databases. As a result of the search, a total of 264 articles were found. After following the PRISMA steps, 18 studies that were relevant to the topic and scope and up-to-date were identified for inclusion in this review. As a result of the findings, the scarcity of research focusing on psychotherapy in the context of gambling addiction is noteworthy. The existing studies predominantly utilize correlational survey design, leaving a noticeable gap in the literature regarding psychotherapeutic interventions (individual and/or group). Future research could prioritize developing and evaluating evidence-based intervention programs that draw on established therapeutic approaches in the field as well as functional therapies. There also appears to be a need for intervention trials, longitudinal and mixed-methods studies to measure the sustained effectiveness of treatment modalities and to identify the most appropriate strategies to alleviate the public health burden of gambling addiction.

Keywords: Addiction, Gambling, Review, Türkiye.

Introduction

Addiction, while being a significant issue in modern society, leads to various adverse consequences and signifies a state where an individual loses control and becomes dependent on harmful habits. Although often associated with chemical substances, in recent years, behavioral addictions have garnered considerable attention and importance (Karim et al., 2012). Among these, gambling, defined as the act of playing games of chance such as card games, dice, or slot machines with the aim of winning money or other valuables, has become an issue of increasing concern. While it has been embraced by many worldwide as a popular form of entertainment, when continued uncontrollably, it can transition from amusement to addiction, quite negatively impacting an individual's life (Williams et al., 2017).

Gambling addiction is characterized by an individual's excessive desire to gamble and typically occurs when the individual loses control and feels an increasing need to gamble. This addiction can lead to financial difficulties, job loss, family problems, and psychological issues (Eby et al., 2016). However, symptoms of addiction can often manifest as increased time and money spent on gambling, constant thoughts about it, seeking money or credit for gambling, and personal or social problems arising from it (Hodgins et al., 2011). But gamblers often tend to conceal their gambling habits due to social exclusion and/or labeling, can making diagnosis challenging (Hing et al., 2016a). As a matter of fact, this situation can be seen frequently in Türkiye. Because gambling, which is both forbidden and perceived negatively by society, may lead individuals to hide their habits. While gambling is considered a crime due to legal regulations, social norms may negatively label individuals who gamble. This can lead gamblers to avoid seeking help or to deny the problem.

An important factor contributing to the growing concern over gambling addiction is the rapid increase in gambling opportunities in recent years, which escalates the risk of exposure to gambling addiction (Gainsbury, 2015; Hing et al., 2022). Because with the widespread use of the internet, online bet sites and casinos (which are mostly illegal in Türkiye) have become popular, which has contributed to the spread of gambling addiction. This not only negatively impacts individuals financially, psychologically, and socially but also has extensive individual and societal implications (Latvala et al., 2019). Therefore, understanding the prevalence of gambling addiction and effectively combating this problem/disorder has become an important necessity for mental health professionals, government, and the well-being of society.

Epidemiology and Risk Factors

The American Psychiatric Association (APA) defines gambling disorder as a mental health condition characterized by persistent and recurrent problematic gambling behavior, resulting in significant impairment or distress (APA, 2013). Globally, gambling disorder (GD) has

emerged as a mounting concern, with an estimated prevalence rate of approximately 1% in the general population (APA, 2013). This encompasses an obsession on gambling, an escalating need to wager increasing sums of money to attain desired excitement, repeated futile attempts to curtail or cease gambling, and gambling as a coping mechanism for circumventing problems or negative emotions (Browne et al., 2021).

There are several risk factors that contribute to the development of GD. Financial turmoil is a prevalent consequence of GD, as individuals afflicted with the disorder often exceed their means in gambling, leading to indebtedness and financial instability. Legal complications can also arise, particularly when individuals resort to illegal gambling activities or engage in criminal behavior to sustain their gambling habits (Spapens, 2008). Among the factors influencing GD, the impact of marital status on GD may be related to the presence or absence of social relationships and support systems. For example, singleness or loneliness can increase the likelihood of an individual turning to harmful habits such as gambling (Güney et al., 2023; Hing et al., 2016b). However, it can be said that married individuals also have this tendency quite often. The reasons for this may include relationship problems within marriage, such as lack of communication or emotional disconnection, which can result in disappointment when marital expectations are not met. Consequently, individuals may seek escape routes such as gambling. Additionally, within marriage, individuals may sometimes be pushed into social isolation, further increasing the likelihood of turning to gambling (Güney et al., 2023). Similarly, individuals under stress may be more likely to engage in risky behaviors such as gambling to cope with challenging situations (İncekara & Taş, 2022; Koç et al., 2023).

At this point, the level of literacy can influence individuals' understanding of the risks of gambling and their ability to make informed financial decisions (Koç et al., 2023). Because the lack of financial literacy may prevent them from accurately assessing the long-term financial consequences of gambling and thus make them more vulnerable to GD. In light of this, education and awareness raising can be an important strategy in combating GD. Employment status can also a determining factor in GD. Indeed, unemployment, financial difficulties and stress at work may encourage individuals to seek escape routes such as gambling. Therefore, they may cause individuals to turn to activities that provide instant gratification, such as gambling, to enhance their emotional well-being (Caler et al., 2017; Hing et al., 2016b). On top of that, genetic predisposition can also a factor influencing the risk of GD. Genetic components can cause individuals to have different responses on brain chemistry and reward systems, which may lead some to be more prone to reward-oriented behaviors such as gambling. However, genetic predisposition alone may not be the determining factor for GD, but in interaction with environmental factors, it may emerge as a risk factor (Potenza et al., 2019; Solé-Morata et al., 2022).

Furthermore, co-occurring mental health conditions such as depression, anxiety and substance use disorders may be associated with increased susceptibility to GD because these conditions can often be associated with psychosocial stress and affect individuals' capacity for emotional stability and mental health. Behavioural disorders, such as GD, can be used as a coping mechanism for emotional distress or difficulties. Thus, conditions such as depression, anxiety and substance use disorders can undermine individuals' ability to cope with psychological challenges, leading to the development of risky behaviors such as GD and the risk of GD is likely to increase with these mental conditions (Hartmann & Blaszczynski, 2018). As a result, GD can accelerate interpersonal incompatibility that manifests itself socially, biologically and psychologically and can lead to negative profound effects on mental health and represents a multidimensional problem full of various risk factors and consequences (Eby et al., 2016). This situation especially given the increasing accessibility of gambling activities in various global contexts, effective preventive and therapeutic interventions are considered deemed important, even imperative to address this evolving public health problem.

Pathological and Problematic Gamblings in GD

Pathological and problematic gamblings represent two delineated forms of GD within the literature. Pathological gambling manifests as persistent and recurrent maladaptive gambling behavior, resulting in significant impairment or distress, whereas problematic gambling denotes a less severe manifestation of gambling disorder that cannot fully meet the criteria for pathological gambling but still elicits adverse outcomes for the individual (Gori et al., 2022). Both forms of GD can precipitate financial strain, legal entanglements, and interpersonal discord, exerting a notable impact on mental health and well-being (Hollingshead et al., 2016). For this reason, GD is recognized as a distinct condition characterized by persistent and recurrent problematic gambling behavior, culminating in substantial impairment or distress (Torrado et al., 2020). Typically diagnosed based on criteria stipulated in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) or the International Classification of Diseases, 11th revision (ICD-11) (cf. Table 1).

Diagnosis and Evaluation

As stated above, GD is recognized as a mental health condition by both the DSM-5 and ICD-11. The DSM-5 delineates GD as a persistent and recurring problematic gambling behavior leading to significant distress or impairment (APA, 2013). Diagnosis of this condition is contingent upon several criteria, including the escalating need to gamble with larger sums of money to attain desired excitement, repeated unsuccessful endeavors to curtail or cease gambling, and employing gambling as a coping mechanism to evade problems or negative emotions (Catania & Griffiths, 2022). Similarly, the ICD-11 categorizes GD as a behavioral addiction,

characterized by a pattern of persistent or recurrent gambling behavior occurring either online (i.e., on the internet) or offline. It entails impaired control over gambling, prioritizing gambling over other life interests and daily activities, and persisting in gambling despite adverse consequences or a desire to cease or reduce gambling (Kim & Hodgins, 2019). The diagnostic criteria for GD for both are visualized and described in detail in Table 1 below.

Table 1. The criteria for the diagnosis of GD according to DSM-5 and ICD-11

	DSM-5	ICD-11
Diagnostic Criteria	*Repeated problematic gambling behavior	*Increased time and money spent on gambling
	*Impaired control over gambling	*Inability to control gambling behaviors
	*Preoccupation with gambling	*Continued gambling despite negative consequences
	*Need to gamble with increasing amounts of money	*Neglect of other interests or responsibilities
	*Restlessness or irritability when attempting to cut down or stop gambling	*Impairment of personal or professional relationships
	*Gambling as a way to escape from problems or relieve dysphoria	*Coping with severe stress or emotional difficulties
	*Chasing losses	*Development of tolerance to gambling
	*Lying about gambling activity	*Withdrawal symptoms after reducing or stopping gambling
	*Jeapardizing significant relationships, job, or opportunities due to gambling	*Seeking additional money or resources for gambling
Diagnostic Category	Gambling Disorder	Gambling Disorders and Related Behaviors
Coding	312.31 (F63.0)	6C50

As seen, the diagnostic criteria for GD in both the DSM-5 and ICD-11 demonstrate similarities, as they emphasize the persistent and recurrent nature of problematic gambling behavior, the escalating need for larger sums of money to achieve desired excitement, and the negative consequences associated with continued gambling (Grant & Chamberlain, 2016). These definitions and criteria are of paramount importance in the diagnosis and treatment of GD.

Pathogenesis and Therapeutic Approaches

The development of GD is a combination of demographic, psychosocial and biological factors (Caler et al., 2017). From a sociocultural context, the possible negative social stigma associated with gambling in Türkiye leads to frequent concealment of gambling experiences. This is recognized as a social condition associated with the prevalence of gambling and lack of legal regulations in Türkiye (Çakıcı et al., 2019). In addition to these social conditions, the religious perception that gambling is a sin may also be associated with individuals' sensitivity to social norms and perceptions. Therefore, individuals may prefer to hide their gambling habits as a way to adapt to social expectations and prevent possible negative consequences (Savolainen et al., 2021). The acceptability and perception of gambling in society can vary from country to country. In Islamic countries such as Iran and Saudi Arabia, gambling is strictly forbidden and the penalties can be quite severe (Van-Ry, 2013), whereas in Western European countries, where religion does not have much influence on social life, gambling is permitted and often regulated by the state. For example, in countries such as the UK, Germany and France, the gambling industry operates legally and is usually taxed. The acceptability and perception of gambling within society in these countries often depends on individual preferences and social norms (Reith, 2002).

Likewise, in Türkiye, where gambling and casinos are prohibited and illegal, different types of gambling habits have emerged in recent years. This means that gambling through local, unregulated and illegal betting sites has increased the tendency to gamble and different risks and habits that are not found in traditional casino environments have emerged. In Türkiye, there are many disputes regarding the legal status of gambling that concern both private and public law. Especially in Turkish Law, the regulations on gambling are not included in a single legal text and many legal regulations are scattered in different sources of legislation (Erkin, 2022). In this context, the legal status of gambling in Türkiye is considered to represent an important situation and difference that can be addressed. As a matter of fact, especially during the pandemic, the increase in illegal online betting sites exacerbated this relationship by increasing the frequency of gambling, thus fueling compulsive gambling tendencies among individuals (Çebi &

Karaaziz, 2022). In terms of gender, males are more susceptible to GD than females, while younger individuals are at higher risk (Merkouris et al., 2016; Potenza et al., 2019). In addition, individuals with lower education and income levels may be more susceptible to GD than those with higher income levels (Hing et al., 2016b).

Psychological factors such as personality traits, cognitive distortions and mental health conditions also play a role in the onset of GD. In terms of personality traits, this is because the tendency to exhibit risk-taking behaviors is associated with GD. Risk-taking individuals may be less susceptible to thrill-seeking and high-risk activities (Çelik et al., 2022; Dowling et al., 2015; Vayısoğlu et al., 2019). Such personality traits may be more pronounced in individuals who tend to place high stakes in gambling activities and enjoy such risky behaviors. Further, impulsivity or a low level of self-control is considered a risk factor for GD. This may mean that individuals seeking instant gratification may take more risks and spend more time and money on gambling activities. Impulsivity has been associated with hasty decision-making and a reduced ability to consider long-term consequences, which may contribute to the development of GD (Castrén et al., 2018; Kazğan et al., 2021). Besides, low self-esteem and emotional difficulties are also personality traits that have been associated with GD. Individuals' lack of self-confidence and inadequate ability to cope with emotional difficulties may make it difficult for them to cope with the inevitable challenges of gambling (Çavuş et al., 2023; Torrado et al., 2020). This can lead to gambling being used as a mechanism to fill emotional gaps or cope with stress. Furthermore, attention deficit and low stress tolerance are also personality traits associated with GD. Under stress, individuals may take decisions more quickly, which may increase the tendency to make sudden and risky bets in gambling activities (Çavuş et al., 2023). Likewise, with a low stress tolerance, the ability to cope with the negative consequences of gambling may be reduced, which may contribute to the maintenance of GD.

In addition to that, cognitive distortions, such as beliefs in controlling chance events or overestimation of winning probabilities, are also linked to GD development (Li et al., 2017). Such cognitive distortions, in fact, fuel the mechanisms used to maintain or promote behaviors such as GD. The uncertainty that is often present in gambling activities can lead individuals to overestimate their chances of winning and believe that they can control it. These misperceptions can create a kind of attraction to gambling, making it easier for individuals to gamble. These cognitive distortions may therefore increase the risk of GD and contribute to the development of GD. Concurrent mental health problems, such as psychological distress, can often be associated with GD (Hartmann & Blaszvzynski, 2018), and biological factors (including genetics and neurobiology) can also contribute to the development of GD. Genetic involvement in GD, family and twin studies, heritability estimates vary between 25-65% (Solé-Morata et al., 2022).   On the other hand,

neuroimaging studies have revealed alterations in brain function and structure among individuals with GD, particularly in regions associated with reward processing, decision-making, and impulse control (Clark et al., 2019). To summarize, in essence, the development of GD appears to be shaped by the interaction of demographic, psychological, biological and other factors. Biological predispositions, including genetic susceptibilities and neurochemical imbalances, significantly contribute to the etiology of GD. Meanwhile, psychological factors such as impulsivity, sensation seeking, and maladaptive coping mechanisms can interact with environmental stressors to influence the onset and progression of GD. Furthermore, demographic factors such as age, gender, socioeconomic status, and cultural background can exert varying effects on the susceptibility and expression of GD. Environmental influences, including familial attitudes towards gambling, peer influences and accessibility to gambling opportunities, can be said to play an important role in shaping the trajectory of GD.

Drawing from these explanations, gambling is associated with a range of psychological and mental health issues. Individuals who engage in gambling are at risk of developing GD, which can significantly impact their lives. Several treatment modalities and therapies have been devised to assist individuals with GD, including Cognitive-Behavioral Therapy (CBT) (Kuru et al., 2017) and motivational interviewing (MI) (Yakovenko et al., 2015). What's more, self-help groups such as Gamblers Anonymous abroad have proven to be effective in providing social support and reducing relapse rates (Rodda et al., 2017). In Türkiye, the Green Crescent Counseling Center (YEDAM) offers assistance for gambling addiction, similar to its support for other forms of addiction and it offers outpatient intervention services catering to gambling-addicted clients. Accomplished mental health professionals provide assistance concerning motivation to abstain, relapse prevention, and coping strategies for gambling urges (Yılmaz, 2015). This includes family interviews to address issues such as financial management, family dynamics and parental strategies, as well as support for any mental health issues that arise following cessation of gambling behavior/habit (Ögel, 2018). Accordingly, the establishment of effective treatment models and therapies is deemed imperative in mitigating the adverse effects of gambling and aiding individuals with GD in attaining sustained recovery.

The aim of this review is to make a systematic evaluation of the studies on gambling addiction in Türkiye between 2017 and 2024 in order to preserve the existing literature. This time period was chosen because of the increase in research on gambling addiction and the significant developments (the emergence of different forms of gambling) in this field. Therefore, the selection between these years was based on the idea that the current research conducted in the last seven years would best reflect and capture the current situation in the field of gambling addiction (Dinç et al., 2020; Erdoğdu, 2019; Kaya & Başkan, 2020). This assessment seeks to identify practical insights that may enhance future academic and applied
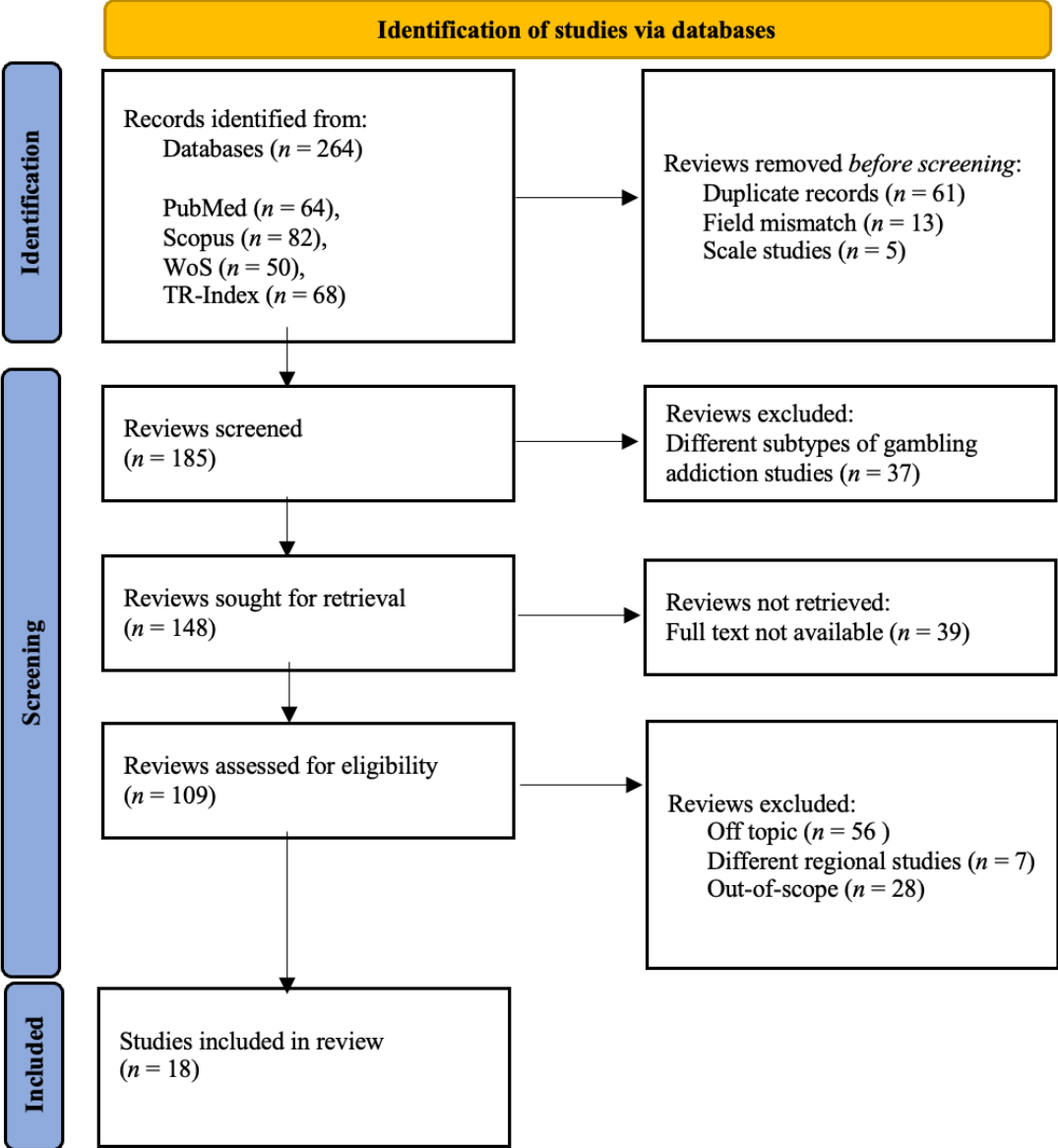
research concerning critical issues such as gambling addiction, with a particular emphasis on sample groups, research methodologies, and findings. Within this framework, the evaluation process endeavors to deepen existing knowledge in the field of gambling addiction and to offer guiding insights for future research endeavors.

Method

PubMed, Scopus, Web of Science (WoS) and TR-Index databases were used in the literature search. Turkish and English searches were conducted using the keywords "gambling", "gambling addiction", "gambling behavior", "compulsive gambling", "problematic gambling" and "Turkey/Türkiye". In this study, it was aimed to include studies conducted in Türkiye and research studies on gambling addiction were included. The other inclusion criterion was the availability of full texts of the articles. Book chapters, reviews, thesis and scale studies and meta-analyses were excluded. Studies that were not conducted in the fields of psychology, health and medicine were another exclusion criterion.

The initial search resulted in 264 articles (PubMed: 64, Scopus: 82, WOS: 50 and TR-Index: 68). However, since it was aimed to analyse current studies. The time period was determined as 2017-2024 and Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; Page et al., 2021) guidelines were adhered to for all aspects concerning the selection of articles in this review. 18 studies were included and the flow diagram explaining the screening process in detail was presented in Figure 1.

Figure 1. PRISMA flow diagram

Identification of studies via databases	
Records identified from: 　Databases ($n = 264$) 　PubMed ($n = 64$), 　Scopus ($n = 82$), 　WoS ($n = 50$), 　TR-Index ($n = 68$)	Reviews removed *before screening*: 　Duplicate records ($n = 61$) 　Field mismatch ($n = 13$) 　Scale studies ($n = 5$)
Reviews screened ($n = 185$)	Reviews excluded: Different subtypes of gambling addiction studies ($n = 37$)
Reviews sought for retrieval ($n = 148$)	Reviews not retrieved: Full text not available ($n = 39$)
Reviews assessed for eligibility ($n = 109$)	Reviews excluded: 　Off topic ($n = 56$) 　Different regional studies ($n = 7$) 　Out-of-scope ($n = 28$)
Studies included in review ($n = 18$)	

Identification / Screening / Included

Results

Information regarding the studies is provided in Table 2 that comprises details pertaining to the researcher and the study, sample group characteristics, research methodology, measurement instruments utilized, and the results of the respective studies. Comprehensive review of 18 studies on gambling addiction reveals a multitude of significant findings across various domains. Firstly, the prevalence of gambling disorders, including pathological gambling and problematic gaming, underscores the growing worry regarding addictive behaviors associated with gambling activities. The studies highlight the demographic profile of individuals affected by gambling disorders, with a predominant representation of males (Çelik et al., 2022; Dinç et al., 2020; Oruç et al., 2021; Şen & Pirincci, 2023) and an onset typically observed in early adulthood (Erdoğdu, 2019; Oruç et al., 2021; Şen & Pirincci, 2023; Vayısoğlu et al., 2019).

Table 2. Results of the studies included in the systematic review

Study	Sample	Research Design	Measure	Results
Soyata et al. (2019)	20 male right-handed participants satisfying DSM-5 criteria for gambling disorder were recruited from the Addiction Outpatient Clinic of the Department of Psychiatry in Istanbul University	Experimental design (a triple-blind randomized sham-controlled parallel study)	South Oaks Gambling Screen (SOGS), Canadian Pathological Gambling Severity Index (PGSI), Beck Depression Inventory (BDI), and Barratt Impulsivity Scale-11 (BIS-11)	The baseline clinical severity, depression and impulsivity levels, and cognitive performance were comparable across all groups.
Vayısoğlu et al. (2019)	A total of 339 students studying at the faculties and vocational schools in Mersin University Central Campus	Correlational survey design	Gambling Behaviour Form, South Oaks Gambling Screen (SOGS), Zuckerman Thrill Seeking Scale Form V	Individuals with pathological gambling tendencies exhibited significantly higher scores on sensitivity to boredom.
Aslan et al. (2021)	232 young adults aged 18–30 years from Gaziantep, Elazig, Malatya, Antalya, and Istanbul provinces who exhibited gambling behavior.	Correlational survey design	South Oaks Gambling Screen (SOGS), Cognition Scale for Gambling (CSG), Reasons for Gambling Scale (RGS), Childhood Negative Experiences Scale (CNES)	Cognitive structures linked to gambling, along with negative childhood experiences, were identified as indirect contributors to risky gambling behavior.
Oruç et al. (2021)	34 patients to AMATEM-Behavioural Addiction Mental Health and Diseases Outpatient Clinic	Correlational survey design	Sociodemographic form	Alarmingly, 64.7% of patients reported engaging in gambling activities on a daily basis. The pervasive harm associated with gambling behaviors, with 85.6% of participants reporting adverse consequences. Family relationships were identified as the most affected domain, closely followed by financial difficulties.
Şen & Pirincci (2023)	1724 students studying at a university in eastern Türkiye	Correlational survey design	South Oaks Gambling Screen (SOGS)	The SOGS score demonstrated a positive correlation with age, lower academic performance, alcohol consumption, limited family communication, and life dissatisfaction.

Çıtak (2023)	317 participants over 18 years of age and actively participating in at least one gambling game.	Correlational survey design	Brief Resilience Scale (BRS), Gambling Motives Scale (GMS), Personal Virtues Scale (PVS)	Distinct gambling profiles, which were categorized as follows: adventurous gamblers (14.2%), social gamblers (9.8%), professional gamblers (32.8%), pathological gamblers (24.6%), and avoidant gamblers (18.6%).
Güney et al. (2023)	5553 married women whose husbands gamble	Correlational survey design	Sociodemographic form (Region, place of residence, education level for both, employment status for both, welfare level, alcohol, drug use, number of rooms and individuals in household)	Regional disparities, household welfare status, as well as the alcohol and drug usage patterns of men, were identified as factors influencing the gambling behavior of married women's husbands.
Kaya & Deveci (2022)	53 male patients with online gambling disorder (experiment group) and 57 healthies (control group).	Correlational survey design	Semi-structured clinical interview form for DSM-5 (SCID-5), South Oaks Gambling Screen (SOGS), Relationship Scales Questionnaire (RSQ), Parental Acceptance-Rejection Questionnaire (PARQ)	Individuals with gambling disorder showed lower levels of secure attachment and higher levels of dismissive and fearful attachment in contrast to the control group. The findings underscore the significance of parental rejection and insecure attachment styles as critical factors in the risk of developing gambling disorders.
Koç et al. (2023)	232 students who are continuing their education at a state university in Türkiye	Correlational survey design	Student Information Form (SIF), Game Addiction Scale (GAS), South Oaks Gambling Screen (SOGS)	Gender, family structure, household income, feelings of success, happiness levels, experience of psychological distress, satisfaction with social relationships, smoking habits, alcohol consumption, and the presence of addiction within the social circle were significant determinants of gambling behavior.
İncekara & Taş (2022)	400 males in Istanbul	Correlational survey design	South Oaks Gambling Screening (SOGS)	Significant differences were observed in individuals' marital status, perception of family relationships, education level, and self-perceived luck.
Kazğan et al. (2021)	74 patients who applied to the University Psychiatry Clinic and were diagnosed with gambling disorder and 73 healthy individuals with similar demographic	Correlational survey design	Barratt Impulsivity Scale Short Form (BDI-11)	40.5% of the patients received additional psychiatric diagnoses, with depressive and/or anxiety-related disorders being the most common.

	characteristics and without any psychiatric disorder or medication use (control group).			
Kaya & Başkan (2020)	103 individuals gambling and residing in Istanbul	Correlational survey design	Rotter Locus of Control Scale (RLCS), Reasons for Gambling Scale (RGS)	Locus of control significantly predicts gambling motivation as well as entertainment/excitement, profit-making, socializing, and avoidance motivations.
Erdoğdu (2019)	Three adult males over the age of 18 who have been diagnosed with gambling addiction or problematic/pathological/risky gambling and have experiences with gambling problems	Interpretive Phenomenological Analysis	Semi-structured interview, South Oaks Gambling Screen (SOGS), Five-Factor Gambling Motives Scale (FFGMS), Gambling Related Cognitions Scale (GRCS)	Common psychological processes, such as loss of control and chasing losses, were recognized as significant factors in understanding the progression from initial gambling experiences to gambling addiction and subsequent changes.
Elmas et al. (2017)	244 male gamblers between the ages of 18-64	Correlational survey design	South Oaks Gambling Screen (SOGS), Toronto Alexithymia Scale (TAS-20), Difficulties in Emotion Regulation Scale (DERS)	The amount of money wagered and the total scores on the alexithymia and difficulties in emotion regulation scales were found to be significant predictors of pathological gambling.
Çavuş et al. (2023)	Totally 285 people, 158 female and 127 male, aged between 18-65	Correlational survey design	South-Oaks Gambling Screening (SOGS), Trait Shame-Guilt Scale (TSGS), Barratt Impulsivity Scale (BIS), Rosenberg Self-Esteem Scale (RSES)	Impulsivity, shame, and self-esteem were identified as significant predictors of the severity of gambling.
Dinç et el. (2020)	790 adolescents who are high school students	Correlational survey design	Temperament and Character Inventory (TCI), Relationship Scales Questionnaire (RSQ), Specific Internet, Online Gambling and Online Sexuality Addiction Scale (SIOGOSAS)	Age and average daily internet usage negatively and significantly predicted gambling addiction. Results also revealed statistically significant correlations between gambling addiction scores and the subscales of the RSQ.
Kuru et al. (2017)	A 32-year-old man diagnosed with pathological gambling and major depressive disorder (married, father of one child, university graduate, unemployed)	Case study	Beck's Depression Inventory (BDI), Gambling Symptom Assessment Scale (GSAS), South Oaks Gambling Screen (SOGS),	Successful and promising results have been achieved with CBT and pharmacotherapy in the treatment of gambling disorder with a focus on automatic thoughts. Additionally, a relapse prevention plan was devised as part of the treatment approach.

			medication and psychotherapy (Cognitive Behavioural Therapy/CBT)	
Çelik et al. (2022)	650 university students	Correlational survey design	South Oaks Gambling Screen (SOGS), Zuckerman Sensation-Seeking Scale (ZSSS), Brief Resilience Scale (BRS)	A positive correlation was observed between students' scores on the SOGS and the ZSSS. However, no significant correlation was found between students' SOGS scores and the BRS scores.

Further to this, significant associations are identified between gambling behaviors and a range of psychosocial factors, including dependencies as substance and alcohol use (Güney et al., 2023; Kazğan et al., 2021; Koç et al., 2023; Oruç et al., 2021; Vayısoğlu et al., 2019), psychiatric comorbidity (Çelik et al., 2022; Çıtak, 2023; Kazğan et al., 2021; Koç et al., 2023; Şen & Pirincci, 2023), family patterns (İncekara & Taş, 2022; Koç et al., 2023; Oruç et al., 2021), and adverse childhood experiences (Aslan et al., 2021). These findings show the nature of gambling disorders, influenced by both individual vulnerabilities and environmental factors. Moreover, the impact of cognitive structures (Aslan et al., 2021; Çavuş et al., 2023; Kuru et al., 2017; Soyata et al., 2019) and emotional regulation (Elmas et al., 2016; Kaya & Deveci, 2022; Soyata et al., 2019) on gambling behaviors emerges as a prominent theme across the studies. Cognitive structures related to gambling, such as motivations (Aslan et al., 2021; İncekara & Taş, 2022; Kaya & Başkan, 2020) and decision-making processes (Soyata et al., 2019), play a crucial role in driving and perpetuating gambling behaviors. Additionally, difficulties in emotion regulation, including impulsivity (Çavuş et al., 2023; Erdoğdu, 2019; Soyata et al., 2019), shame (Çavuş et al., 2023), self-esteem (Çavuş et al., 2023) and boredom (Koç et al., 2023; Vayısoğlu et al., 2019), are identified as significant predictors of gambling severity. Importantly, these studies highlight the interplay between cognitive processes, emotional regulation, and the development and maintenance of gambling disorders.

In terms of treatment approaches, CBT and pharmacotherapy emerge as promising interventions for addressing gambling addiction. CBT interventions focus on cognitive restructuring and behavioral strategies to target automatic thoughts and maladaptive behaviors associated with gambling (Kuru et al., 2017). It highlights the significance of relapse prevention planning in maintaining treatment progress and averting the resurgence of problem gambling behaviors. Additionally, it stresses the necessity for thorough and customized interventions that tackle the cognitive and emotional aspects of gambling addiction, while considering individual variances and contextual factors. On the flip side, in the USA, treatment of gambling addiction is usually delivered through CBT and support groups (Yip & Potenza, 2014), while in Australia the focus is on individual therapy and family counseling through clinical psychologists and counselors (Pickering et al., 2018). In the UK, the treatment of gambling addiction is supported by a combination of pharmacotherapy and psychotherapy offered by the National Health Service (Ronzitti et al., 2016). Thus, different treatment modalities are used in different countries and given the cultural, social and legal differences in each country, it is considered that the most effective approach to the treatment of gambling

addiction is a treatment plan that takes a multidisciplinary approach and takes into account individual needs.

Discussion

In synthesizing the findings from studies included in this systematic review on gambling addiction, several patterns and themes emerge. Firstly, there is a consistent emphasis on demographic characteristics and their association with gambling behavior. Predominantly, males are more represented among individuals with gambling disorders (Dinç et al., 2020; Kaya & Deveci, 2022; Koç et al., 2023; Oruç et al., 2021; Şen & Pirincci, 2023), with studies consistently reporting a higher prevalence among males (Merkouris et al., 2016; Potenza et al., 2019). Western countries, especially the USA and Australia, are regions where the gambling industry is well developed, and gambling opportunities are widely available (McMillen, 2005). Moreover, in countries such as China and South Korea, the gambling industry is hugely popular, indicating that the number of males with gambling addiction is higher in certain countries (Rozman, 2024). Sources of these trends include the gambling industry and easy accessibility, as well as social pressures and cultural norms. Competitiveness and risk-taking tendencies, especially among males, may increase their predisposition to gambling. Economic factors are also highly determinant here. Some individuals may see gambling as a source of income or a way of solving their financial problems, which may increase the risk of gambling addiction (Harris et al., 2015). On top of that, biological disparities in neurotransmitter systems implicated in reward processing and impulse control can contribute to the observed gender disparity in gambling disorder prevalence (Pöysti & Majamäki, 2013).

Furthermore, there is a notable correlation between certain demographic variables such as age, marital status, education level, and gambling behavior (Çavuş et al., 2023). For instance, younger individuals tend to exhibit higher rates of problematic gambling behavior (Çavuş et al., 2023; Şen & Pirincci, 2023), while education level and marital status show significant differences between those with gambling disorders and control groups (Kazğan et al., 2021). These findings suggest that demographic factors play a significant contribution in shaping gambling behaviors. Further, comorbidities and psychological factors emerge as significant contributors to gambling addiction (Elmas et al., 2016; Kazğan et al., 2021). Several studies highlight the prevalence of psychiatric comorbidities among individuals with gambling disorders (Dowling et al., 2015; Tang et al., 2020), with depression and anxiety-related disorders being the most common (Kazğan et al., 2021). Besides that, personality traits such as impulsivity, sensation-seeking, shame, and difficulties in emotion regulation are reasonably linked to the severity of gambling behavior (Çavuş et al., 2023; Elmas et al., 2016). This can suggest that there is an interplay between psychological factors and gambling addiction, with

certain traits predisposing individuals to develop problematic gambling behaviors.

Research indicates that the prevalence of gambling disorders is higher among individuals with family members who engage in gambling activities (Aslan et al., 2021; Kaya & Deveci, 2022; Oruç et al., 2021). These findings point to a potential familial transmission of gambling behaviors (McComb & Sabiston, 2010). Moreover, family factors such as household welfare status, parental rejection and attachment styles are identified as important factors affecting gambling behavior, especially in the context of online gambling (Güney et al., 2023; Kaya & Deveci, 2022; Kuru et al., 2017). Cultural and social differences play a decisive role in shaping gambling behaviors. In Western countries, individuals' gambling habits are often associated with individual freedom and personal responsibility, whereas in Eastern countries they may be linked to collective values such as preserving family honor and conforming to societal expectations (Reith, 2002). In conservative societies, families may try to discourage individuals from gambling, while in some countries families may play an important role in shaping gambling habits (Uecker & Stokes, 2016). In terms of environmental factors, ease of access to gambling opportunities may increase the likelihood of an individual developing a gambling habit. Furthermore, society's attitude that promotes gambling or normalizes gambling habits may contribute to individuals viewing gambling in a more positive light and hence the development of gambling habits (Potenza et al., 2019; Solé-Morata et al., 2022). Understanding these factors is important for understanding the etiology of gambling addiction and designing effective intervention strategies.

Based on all these explanations, gambling addiction constitutes an important problem not only for individuals but also for the general health of societies. In this study, it was emphasized that research on the treatment of gambling disorder fills an important gap and various intervention methods such as CBT and pharmacotherapy offer promising results (Kuru et al., 2017). The efficacy of these methods has focused on the effectiveness of CBT in addressing automatic thoughts, cognitive restructuring and behavioral interventions, and pharmacotherapy in reducing gambling behaviors and preventing relapse. On the other hand, Soyata and colleagues (2019) revealed the potential of innovative approaches in this field by examining the relationship between depression and impulsivity levels and cognitive performances of a therapeutic intervention involving transcranial stimulation. Furthermore, a qualitative case study by Erdoğdu (2019) highlighted the diversity in the treatment of gambling addiction and the importance of individualized therapy plans by discussing the use of different therapeutic approaches such as psychopharmacological, psychodynamic and CBT. These results support and demonstrate the need for a multiple and integrated approach rather than a single modality in the treatment of gambling addiction. Indeed, as gambling addiction is a multifaceted disorder and the result of many variables shaped by the interaction of

cognitive, emotional and behavioral factors, it can be difficult to effectively address all these factors with a single treatment method. Integrating diverse treatment modalities like CBT and pharmacotherapy could enhance treatment responsiveness in individuals. Alternatively, exploring novel methodologies such as the investigation of transcranial stimulation, as evidenced in their study, may enrich comprehension of the neurological mechanisms implicated in gambling addiction, thus fostering the development of innovative treatment strategies. Indeed, the importance of a personalized and multiple approach in the treatment of gambling addiction is emphasized in the study where different therapeutic approaches are discussed (Erdoğdu, 2019). For these reasons, it can be said that a multiple and integrated approach is necessary in the treatment of gambling addiction. Future research could emphasize the importance of approaching these treatment modalities from a broader perspective to further strengthen their efficacy and more comprehensively address other psychological and neurological factors associated with gambling addiction.

Conclusion

In this systematic review, the synthesis of findings from the 18 studies on gambling addiction highlights the multifactorial nature of the disorder, with demographic, psychological, biological, social, and environmental factors all playing significant roles. Understanding these factors and their interactions is considered highly important and critical for developing comprehensive prevention and intervention strategies for gambling addiction. Moreover, it is clearly evident that further research is needed to investigate the underlying mechanisms of gambling behavior and to assess the effectiveness of different treatment methods in addressing this widespread issue.

In light of contemporary developments in gambling addiction, future studies can encompass the evolving branches within this field. These can include investigations into emerging forms of gambling, such as online platforms and virtual currencies, which pose unique challenges and risks to individuals. Moreover, there is a growing recognition of co-occurring disorders, such as gaming addiction, substance abuse, and mental health conditions, necessitating a comprehensive examination of these intersections. By expanding the scope of research to incorporate these evolving dimensions, researchers can contribute to a more nuanced understanding of gambling addiction and its manifestations in contemporary society. Adolescents and young people represent a particularly vulnerable population in relation to gambling addiction, necessitating holistic studies that span various developmental stages. It is quite important to conduct comprehensive investigations tailored to each distinct period of adolescence, considering the unique cognitive, emotional, and social factors at gambling. Such studies can adopt a multidisciplinary approach, drawing upon insights from psychology, psychiatry, neuroscience, and public health, to elucidate the underlying mechanisms of

gambling behavior and inform targeted prevention and intervention strategies. By adopting a developmental perspective, researchers can better address the needs of adolescents and young adults and enhance the effectiveness of prevention efforts aimed at mitigating the risks associated with gambling addiction.

Apart from this, the predominant methodology observed among the reviewed studies entails a correlational survey design (83%, n = 15), with only a minority adopting alternative approaches. Among the pool of 18 studies meeting the inclusion criteria, a singular study constituted a controlled experimental evaluation of a treatment modality, specifically transcranial stimulation. Besides, one study was characterized as a case study, while another employed an interpretative phenomenological analysis. There is a significant gap in the Turkish literature on the content of psychotherapy and highlighting the need for future research to explore the efficacy of various treatment modalities and studies for gambling addiction. Because specifically studies examining individual or group psychotherapy sessions tailored to the needs of individuals with gambling addiction are quite limited in number and can even be said nonexistent. Therefore, going forward, researchers can prioritize the development and evaluation of evidence-based intervention programs that draw on established therapeutic approaches and effective and functional therapies in the field. By conducting rigorous empirical investigations into the effectiveness of these interventions, researchers can contribute to the development and advancement of evidence-based practices for addressing gambling addiction and improving outcomes for affected individuals. Additionally, there is a demonstrable need for intervention trials, longitudinal and mixed-methods studies aimed at evaluating the long-term effectiveness of treatment approaches and identifying the most appropriate strategies to alleviate the public health burden associated with gambling addiction.

Statement of Competing Interests
The authors do not declare any interest.

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Not required. This study used secondary de-identified data.

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Research Promotion
This review explores gambling addiction in Türkiye, an issue with significant societal impact yet limited research attention. Conducted between 2017 and 2024, it highlights a scarcity of studies focusing on psychotherapeutic interventions, primarily utilizing correlational survey designs. The findings underscore the urgent need for evidence-based intervention programs and further research to measure treatment effectiveness and identify strategies to mitigate the public health burden of gambling addiction.

References

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders (5th Ed).* American Psychiatric Association.

Aslan, H., Başgül, Ş. S., Avcu, A., & Boz, C. (2021). The effect of negative childhood experiences and gambling cognitive constructions on gambling behavior and its causes in young adulthood period. *Addicta: The Turkish Journal on Addictions*, *8*(3), 171-180. https://doi.org/10.5152/ADDICTA.2021.0104

Browne, M., Rawat, V., Tulloch, C., Murray-Boyle, C., & Rockloff, M. (2021). The evolution of gambling-related harm measurement: Lessons from the last decade. *International Journal of Environmental Research and Public Health*, *18*(9), 4395. https://doi.org/10.3390/ijerph18094395

Caler, K. R., Vargas Garcia, J. R., & Nower, L. (2017). Problem gambling among ethnic minorities: Results from an epidemiological study. *Asian Journal of Gambling Issues and Public Health*, *7*, 1-13. https://doi.org/10.1186/s40405-017-0027-2

Castrén, S., Kontto, J., Alho, H., & Salonen, A. H. (2018). The relationship between gambling expenditure, socio-demographics, health-related correlates and gambling behaviour—A cross-sectional population-based survey in Finland. *Addiction*, *113*(1), 91-106. https://doi.org/10.1111/add.13929

Catania, M., & Griffiths, M. D. (2022). Applying the DSM-5 criteria for gambling disorder to online gambling account-based tracking data: An empirical study utilizing cluster analysis. *Journal of Gambling Studies*, *38*(4), 1289-1306. https://doi.org/10.1186/s40405-017-0027-2

Clark, L., Boileau, I., & Zack, M. (2019). Neuroimaging of reward mechanisms in Gambling disorder: An integrative review. *Molecular Psychiatry*, *24*(5), 674-693. https://doi.org/10.1038/s41380-018-0230-2

Çakıcı, M., Çakıcı, E., Karaaziz, M., & Babayiğit, A. (2019). A review of problem and pathological gambling in North Cyprus. *Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi*, *1*(2), 123-128. https://doi.org/10.35365/ctjpp.19.1.15

Çavuş, F., Çıvgın, U., & Yorulmaz, E. (2023). Dürtüsellik, utanç ve kumar oynama şiddeti ilişkisinde benlik saygısının aracı rolü [The mediating role of self-esteem in the relationship between impulsivity, shame and gambling severity]. *Cyprus Turkish Journal of Psychiatry & Psychology*, *5*(3), 228-238. https://doi.org/10.35365/ctjpp.23.3.05

Çebi, Z., & Karaaziz, M. (2022). Kumar oynama bozukluğunda bilişsel davranışçı terapi: Bir olgu sunumu [Cognitive behavioral therapy in gambling disorder: A case report]. *Humanistic Perspective, 4*(3), 549-551. https://doi.org/10.47793/hp.1120635

Çelik, S., Öztürk, A., Kes, E., & Kurt, A. (2022). The relationship of gambling with sensation-seeking behavior and psychological resilience in university students. *Perspectives in Psychiatric Care*, *58*(4), 2199-2207. https://doi.org/10.1111/ppc.13047

Çıtak, Ş. (2023). Latent profile analysis of gambling. *Frontiers in Psychology*, *14*, 1293933. https://doi.org/10.3389/fpsyg.2023.1293933

Dinç, M., Ekşi, H., & Aricak, O. (2020). Temperament and character dimensions of personality in individuals with online gambling disorder in a high school student sample from Turkey. *Psychiatry and Clinical Psychopharmacology*, *30*(4), 396-402. https://doi.org/10.5455/PCP.20201023074204

Dowling, N. A., Cowlishaw, S., Jackson, A. C., Merkouris, S. S., Francis, K. L., & Christensen, D. R. (2015). Prevalence of psychiatric co-morbidity in treatment-seeking problem gamblers: A systematic review and meta-analysis. *Australian & New Zealand Journal of Psychiatry*, *49*(6), 519-539. https://doi.org/10.1177/0004867415575774

Eby, L. T., Mitchell, M. E., Gray, C. J., Provolt, L., Lorys, A., Fortune, E., & Goodie, A. S. (2016). Gambling-related problems across life domains: An exploratory study of non-treatment-seeking weekly gamblers. *Community, Work & Family*, *19*(5), 604-620. https://doi.org/10.1080/13668803.2015.1112255

Elmas, H. G., Cesur, G., & Oral, E. T. (2016). Aleksitimi ve patolojik kumar: Duygu düzenleme güçlüğünün aracı rolü [Alexithymia and pathological gambling: The mediating role of difficulties in emotion regulation]. *Türk Psikiyatri Dergisi*, *27*(1), 17-24.

Erdoğdu, Y. (2019). Kumar problemleri yaşayan bireylerin kumar oynamayla ilgili deneyimlerinin yorumlayıcı fenomenolojik analizi [Interpretive phenomenological analysis of gambling-related experiences of individuals with gambling problems]. *Addicta: The Turkish Journal on Addictions*, *6*(3), 871-906. https://doi.org/10.15805/addicta.2019.6.3.0006

Erkin, E. (2022). *Türk kumar, bahis ve şans oyunları mevzuatı [Turkish gambling, betting and games of chance legislation]*. Seçkin Publishing.

Gainsbury, S. M. (2015). Online gambling addiction: The relationship between internet gambling and disordered gambling. *Current Addiction Reports*, *2*(2), 185-193. https://doi.org/10.1007/s40429-015-0057-8

Gori, A., Topino, E., Craparo, G., Bagnoli, I., Caretti, V., & Schimmenti, A. (2022). A comprehensive model for gambling behaviors: Assessment of the factors that can contribute to the vulnerability and maintenance of gambling disorder. *Journal of Gambling Studies*, *38*(1), 235-251. https://doi.org/10.1007/s10899-021-10024-3

Grant, J. E., & Chamberlain, S. R. (2016). Expanding the definition of addiction: DSM-5 vs. ICD-11. *CNS Spectrums*, *21*(4), 300-303. https://doi.org/10.1017/S1092852916000183

Güney, E., Alkan, Ö., Genç, A., & Kabakuş, A. K. (2023). Gambling behavior of husbands of married women living in Turkey and risk factors. *Journal of Substance Use*, *28*(3), 466-472. https://doi.org/10.1080/14659891.2022.2084785

Harris, N., Newby, J., & Klein, R. G. (2015). Competitiveness facets and sensation seeking as predictors of problem gambling among a sample of university student gamblers. *Journal of Gambling Studies*, *31*, 385-396. https://doi.org/10.1007/s10899-013-9431-4

Hartmann, M., & Blaszczynski, A. (2018). The longitudinal relationships between psychiatric disorders and gambling disorders. *International Journal of Mental Health and Addiction*, *16*(1), 16-44. https://doi.org/10.1007/s11469-016-9705-z

Hing, N., Nuske, E., Gainsbury, S. M., & Russell, A. M. (2016a). Perceived stigma and self-stigma of problem gambling: Perspectives of people with gambling problems. *International Gambling Studies*, *16*(1), 31-48. https://doi.org/10.1080/14459795.2015.1092566

Hing, N., Russell, A., Tolchard, B., & Nower, L. (2016b). Risk factors for gambling problems: An analysis by gender. *Journal of Gambling Studies*, *32*, 511-534. https://doi.org/10.1007/s10899-015-9548-8

Hing, N., Smith, M., Rockloff, M., Thorne, H., Russell, A. M., Dowling, N. A., & Breen, H. (2022). How structural changes in online gambling are shaping the contemporary experiences and behaviours of online gamblers: An interview study. *BMC Public Health*, *22*(1), 1620. https://doi.org/10.1186/s12889-022-14019-6

Hodgins, D. C., Stea, J. N., & Grant, J. E. (2011). Gambling disorders. *The Lancet*, *378*(9806), 1874-1884. https://doi.org/10.1016/S0140-6736(10)62185-X

Hollingshead, S. J., Kim, H. S., Wohl, M. J., & Derevensky, J. L. (2016). The social casino gaming-gambling link: Motivation for playing social casino games determines whether self-reported gambling increases or decreases among disordered gamblers. *Journal of Gambling Issues*, (33), 52-67. https://doi.org/10.4309/jgi.2016.33.4

İncekara, H. İ., & Taş, B. (2022). Yetişkinlerde kumar bağımlılığı ile ilişkili sosyodemografik değişkenlerin incelenmesi [Investigation of sociodemographic variables associated with gambling addiction in adults]. *Bağımlılık Dergisi*, *23*(4), 464-472. https://doi.org/10.51982/bagimli.1024383

Karim, R., & Chaudhri, P. (2012). Behavioral addictions: An overview. *Journal of Psychoactive Drugs*, *44*(1), 5-17. https://doi.org/10.1080/02791072.2012.662859

Kaya, E., & Deveci, A. (2022). Parental acceptance/rejection perceptions and attachment styles of men with online gambling disorder. *Journal of Gambling Studies*, *38*(3), 817-832. https://doi.org/10.1007/s10899-021-10084-5

Kaya, F. Ş., & Başkan, A. (2020). Kumar oynama motivasyonunun iç-dış kontrol odağı ile ilişkisi [Relationship between gambling motivation and internal-external locus of control]. *Bağımlılık Dergisi*, *21*(3), 210-222.

Kazğan, A., Yıldız, S., Tabara, M. F., & Atmaca, M. (2021). Kumar oynama bozukluğunda metabolik sendrom ve dürtüsellikle ilişkisi [Relationship between metabolic syndrome and impulsivity in gambling disorder]. *Bağımlılık Dergisi*, *22*(3), 257-265. https://doi.org/10.51982/bagimli.896037

Kim, H. S., & Hodgins, D. C. (2019). A review of the evidence for considering gambling disorder (and other behavioral addictions) as a disorder due to addictive behaviors in the ICD-11: A focus on case-control studies. *Current Addiction Reports*, *6*, 273-295. https://doi.org/10.1007/s40429-019-00256-0

Koç, Ş., Kocakaya, R., Türkmen, A. S., & Çakıcı, A. B. (2023). University students' gaming and gambling behaviors, related factors, and the relationship between gaming and gambling. *Journal of Gambling Studies*, *39*(4), 1661-1674. https://doi.org/10.1007/s10899-023-10209-y

Kuru, E., Özdemir, İ., Şafak, Y., Tulacı, R. G., & Türkçapar, M. H. (2017). Cognitive behavioural therapy with pharmacotherapy for pathological gambling patient: Case report. *Psychiatry and Clinical Psychopharmacology*, *27*(3), 311-313. https://doi.org/10.1080/24750573.2017.1338820

Latvala, T., Lintonen, T., & Konu, A. (2019). Public health effects of gambling–debate on a conceptual model. *BMC Public Health*, *19*, 1-16. https://doi.org/10.1186/s12889-019-7391-z

Li, E., Browne, M., Rawat, V., Langham, E., & Rockloff, M. (2017). Breaking bad: Comparing gambling harms among gamblers and affected others. *Journal of Gambling Studies*, *33*, 223-248. https://doi.org/10.1007/s10899-016-9632-8

McComb, J. L., & Sabiston, C. M. (2010). Family influences on adolescent gambling behavior: A review of the literature. *Journal of Gambling Studies*, *26*, 503-520. https://doi.org/10.1007/s10899-010-9181-5

McMillen, J. (2005). *Gambling cultures: Studies in history and interpretation*. Routledge.

Merkouris, S. S., Thomas, A. C., Shandley, K. A., Rodda, S. N., Oldenhof, E., & Dowling, N. A. (2016). An update on gender differences in the characteristics associated with problem

gambling: A systematic review. *Current Addiction Reports*, *3*, 254-267. https://doi.org/10.1007/s40429-016-0106-y

Oruç, M. A., Aras, N., & Ünsal Çelebi, D. (2021). Gambling disorder: The data from Samsun province. *Addicta: The Turkish Journal on Addictions, 8*(3), 181-185. https://doi.org/10.5152/ADDICTA.2021.21122

Öğel, K. (2018) *101 soruda bağımlılık [Addiction in 101 questions]*. Yeşilay.

Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., et al. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *PLoS Medicine*, *18*(3). https://doi.org/10.1371/journal.pmed.1003583

Pickering, D., Keen, B., Entwistle, G., & Blaszczynski, A. (2018). Measuring treatment outcomes in gambling disorders: A systematic review. *Addiction*, *113*(3), 411-426. https://doi.org/10.1111/add.13968

Potenza, M. N., Balodis, I. M., Derevensky, J., Grant, J. E., Petry, N. M., Verdejo-Garcia, A., & Yip, S. W. (2019). Gambling disorder. *Nature Reviews Disease Primers*, *5*(1), 1-21. https://doi.org/10.1038/s41572-019-0099-7

Pöysti, V., & Majamäki, M. (2013). Cultural understandings of the pathways leading to problem gambling: Medical disorder or failure of self-regulation?. *Addiction Research & Theory*, *21*(1), 70-82. https://doi.org/10.3109/16066359.2012.691580

Reith, G. (2002). *The age of chance: Gambling in Western culture*. Psychology Press.

Rodda, S., Lubman, D., & Dowling, N. A. (2017). *Examining the impact of e-mental health in problem gambling*. Victorian Responsible Gambling Foundation.

Ronzitti, S., Soldini, E., Lutri, V., Smith, N., Clerici, M., & Bowden-Jones, H. (2016). Types of gambling and levels of harm: A UK study to assess severity of presentation in a treatment-seeking population. *Journal of Behavioral Addictions*, *5*(3), 439-447. https://doi.org/10.1556/2006.5.2016.068

Rozman, G. (2024). Gambling on great power relations. *South Korea's Wild Ride*, 69-89. Routledge.

Savolainen, I., Oksanen, A., Kaakinen, M., Sirola, A., Zych, I., & Paek, H. J. (2021). The role of online group norms and social identity in youth problem gambling. *Computers in Human Behavior*, *122*, 1-8. https://doi.org/10.1016/j.chb.2021.106828

Solé-Morata, N., Baenas, I., Etxandi, M., Granero, R., Forcales, S. V., Gené, M., Barrot, C., Gomez-Pena, M., Menchon, J. M., Ramoz, N., Gorwood, P., Fernandez-Aranda, F., & Jiménez-Murcia, S. (2022). The role of neurotrophin genes involved in the vulnerability to gambling disorder. *Scientific Reports*, *12*(1), 6925. https://doi.org/10.1038/s41598-022-10391-w

Soyata, A. Z., Aksu, S., Woods, A. J., İşçen, P., Saçar, K. T., & Karamürsel, S. (2019). Effect of transcranial direct current stimulation on decision making and cognitive flexibility in gambling disorder. *European Archives of Psychiatry and Clinical Neuroscience*, *269*, 275-284. https://doi.org/10.1007/s00406-018-0948-5

Spapens, T. (2008). Crime problems related to gambling: An overview. *Crime, Addiction and the Regulation of Gambling*, 19-54. https://doi.org/10.1163/ej.9789004172180.i-254.10

Şen, M. A., & Pirincci, E. (2023). Examination of hookah usage and gambling status of university students. *Journal of Substance Use*, 1-8. https://doi.org/10.1080/14659891.2023.2238310

Tang, K. T., Kim, H. S., Hodgins, D. C., McGrath, D. S., & Tavares, H. (2020). Gambling disorder and comorbid behavioral addictions: Demographic, clinical, and personality

correlates. *Psychiatry Research*, *284*, 112763. https://doi.org/10.1016/j.psychres.2020.112763

Torrado, M., Bacelar-Nicolau, L., Skryabin, V., Teixeira, M., Eusébio, S., & Ouakinin, S. (2020). Emotional dysregulation features and problem gambling in university students: A pilot study. *Journal of Addictive Diseases*, *38*(4), 550-566. https://doi.org/10.1080/10550887.2020.1800889

Uecker, J. E., & Stokes, C. E. (2016). Religious background and gambling among young adults in the United States. *Journal of Gambling Studies*, *32*, 341-361. https://doi.org/10.1007/s10899-015-9532-3

Van-Ry, K. (2013). Where Islam meets the west: A recommendation for the United Arab Emirates and Dubai in implementing casino-style gaming. *UNLV Gaming Law Journal*, *4*(1), 103-124.

Vayısoğlu, S. K., Öncü, E., & Güven, Y. (2019). Üniversite öğrencilerinde kumar oynama sıklığı ve heyecan arama davranışı ile ilişkisi [Frequency of gambling and its relationship with sensation-seeking behavior in university students]. *Addicta*, *6*(1), 69-90. https://doi.org/10.15805/addicta.2019.6.1.0041

Williams, R. J., Volberg, R. A., Stevens, R. M., Williams, L. A., & Arthur, J. N. (2017). *The definition, dimensionalization, and assessment of gambling participation*. Canadian Consortium for Gambling Research.

Yakovenko, I., Quigley, L., Hemmelgarn, B. R., Hodgins, D. C., & Ronksley, P. (2015). The efficacy of motivational interviewing for disordered gambling: Systematic review and meta-analysis. *Addictive Behaviors*, *43*, 72-82. https://doi.org/10.1016/j.addbeh.2014.12.011

Yılmaz, S. (2015). Addiction training program of Turkey. *Addicta: The Turkish Journal of Addictios, 1*(2), 127-134. https://doi.org/10.15805/addicta.2014.1.2.r010

Yip, S. W., & Potenza, M. N. (2014). Treatment of gambling disorders. *Current Treatment Options in Psychiatry*, *1*, 189-203. https://doi.org/10.1007/s40501-014-0014-5