

INVITED REVIEW

Diagnosis and Treatment of Gambling Addiction

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Main Points

- Gambling motivations show variance.
- Gambling addiction treatment is difficult because help is not sought.
- Adolescents are the riskiest group for gambling addiction.

Abstract

Gambling disorder is defined as persistent and repetitive gambling behavior that causes clinically significant distress. With the spread of the internet, the concept of online gambling as a type of gambling disorder has been added to the picture. Although the symptoms are the same, it is not included as a diagnosis in *Diagnostic and Statistical Manual of Mental Disorders*-fifth edition. In online gambling studies, it is stated that the group with the biggest risk is adolescents. It is seen that there are differences in gambling motivations. These include the influence of subculture, the need for socialization, false beliefs, low emotional control, depression, and anxiety. It is known that there are many barriers to the treatment of gambling disorder. The most important of these is that individuals with gambling disorder do not seek treatment. In addition, co-diagnosis of individuals with gambling disorder with alcohol, substance use disorder, and/or other psychiatric disorders complicates the treatment of gambling disorder. There are different approaches to the treatment of gambling disorder. Alongside treatments that adopt a self-help approach, such as Gamblers Anonymous, short-term approaches appear to be effective in the treatment of gambling disorder. Brief psychoanalytically oriented psychotherapies, cognitive behavioral therapies, and brief motivational interview-based approaches are known as effective methods in the treatment of gambling disorder. Gambling disorder is as complex a process as human behavior. It is stated that approximately 75% of individuals with gambling disorder have a history of loss just before the onset of the gambling disorder or in their early childhood experiences. The health burden and negative effects of gambling addiction and other behavioral addictions for society are substantial. Therefore, gambling addiction and other behavioral addictions should be prevented before they develop.

Keywords: Addiction, environmental factors, gambling, online gambling, psychotherapy**Introduction**

Gambling disorder (GD) is a behavioral addiction characterized by compulsive participation in gambling activities despite serious adverse consequences. Gambling disorder is defined as a maladaptive and persistent gambling behavior that leads to negative consequences at individual and societal levels (American Psychiatric Association [APA], 2013). Gambling disorder is defined in the *Diagnostic and Statistical Manual of Mental Disorders*-fifth edition (DSM-5) as “persistent and repetitive problematic gambling behavior that causes clinically

significant impairment or distress” and was recently included in the “substance-related and addictive disorders” section (APA, 2013). Gambling disorder, also called gambling addiction (GA), is recognized as a worldwide public health problem due to its prevalence (Calado & Griffiths, 2016). It is reported that the prevalence of problematic gambling worldwide varies between 0.12% and 5.8% (Calado & Griffiths, 2016). Key features of GA include marked excitement before and during gambling, dissociative symptoms, blunted responses to natural rewards (i.e., anhedonia), cognitive distortions, and reduced cognitive control (Calluso et al., 2020). It has been

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suggested that addiction has several defining components. These can be listed as follows:

1. Continuing to act despite negative consequences,
2. Lack of self-control in the control of behavior,
3. Continuing the behavior compulsively, and
4. The state of craving for or desiring behavior without committing it (Potenza, 2006).

There are also other criteria in addition to the abovementioned criteria in GA. Until recently, addictions were assumed to be related only to alcohol and substances, but in *DSM-5*, GA was shifted from the category of Impulse Control Disorders Not Classified Elsewhere to the category of Substance-Related and Addictive Disorders (APA, 2013). Pathological gambling was named GD in *DSM-5* (Clark & Limbrick-Oldfield, 2013).

According to the *DSM-5* diagnostic criteria, GD is defined as problematic gambling behavior that causes clinically significant distress by impairing social and occupational functioning over a 12-month period. The nine criteria are listed as follows:

1. The need to gamble with more and more money in order to achieve the desired enthusiasm;
2. Irritability during attempts to stop or pause gambling;
3. Repetitive and fruitless efforts to control, quit, or pause gambling;
4. Repeated thoughts on gambling;
5. Often gambling when in distress;
6. Coming back another day after gambling and losing to win what you lost;
7. Lying to hide gambling;
8. Losses in work, professional, relationship, and education life due to gambling behavior;
9. Relying on others because of money lost in gambling (APA, 2013).

Regarding GD in *DSM-5*, the diagnostic criterion “Performing illegal acts such as dishonesty, fraud, theft, embezzlement, etc., in order to obtain the money needed to gamble” in *DSM-IV* was removed and replaced with the co-existence of four or more of the abovementioned nine criteria (APA, 2013; Reilly & Smith, 2013).

Online Gambling

In the early 1990s, individuals were gambling in casinos, traveling to countries or cities where gambling was legal. However, in the mid-1990s, with the widespread use of the internet worldwide, a new type of gambling, online gambling, emerged. In online gambling, it has become possible to gamble online on any device with internet access (US Government Accountability Office, 2002).

The *DSM-5*'s addition of GD to its diagnostic criteria brought about more consideration of behavioral addictions and the creation of new diagnostic criteria. For example, in the new edition of the *DSM*, online gaming addiction is considered to be added as a new behavioral addiction (Dowling et al., 2007). The view that online gambling can also be evaluated in this context is gaining popularity among researchers (Gainsbury, 2015). Research on online gambling has shown that the accessibility of online gambling options also brings with it problems related to gambling. Easy access to gambling plays an important role in the

development and exacerbation of GA (Hing et al., 2015). According to research, online gambling differs from gambling in casinos because it has uninterrupted, interactive, and intensive use. Since digital forms of money are used in online gambling, individuals who gamble may spend more with the perception that real money is not spent. These features indicate that online gambling actually involves more risk than casino gambling (Gainsbury et al., 2015). In studies conducted with groups that gamble online, the group that plays games frequently and in large amounts in the first month and starts to gamble with online tools has been described as a risky group for developing addiction (Braverman & Shaffer, 2012). In a different study, individuals who gamble online with multiple accounts were found to have a higher risk of gambling behaviors than those who gamble with a single account. While individuals who gamble online with multiple accounts prefer sites based on price, betting options, payment rates, and gaming experience, the priorities of single account holders are reported as legality and consumer protection (Gainsbury et al., 2015). The number of studies emphasizing that adolescents are the riskiest group in online gambling studies is increasing (Derevensky & Gupta, 2007). For example, Potenza et al. (2011) found that adolescents who gamble online have lower academic achievement and especially higher level of alcohol abuse compared to those who do not gamble online. On the other hand, Griffiths and Wood (2007) determined that young people whose parents allowed them to gamble are also in the higher risk group.

Gambling Motivations

Individuals who have problems with different forms of gambling vary according to their demographic characteristics (Ledgerwood & Petry, 2010; Petry, 2003). It is noteworthy that those with primary problems with sports, animal, and card betting are mostly men, while those with primary problems with slot machines and bingo are mostly women (Petry, 2003). Primary slot and scratch/lottery ticket gamblers tend to have higher levels of anxiety, psychosis, and asocial behaviors, while pathological gamblers who bet primarily on sports are reported to be more likely to experience substance use problems (Petry, 2003).

Different preferred forms of gambling are due to various motivations. For example, sports and card players reported seeking excitement and competition, while slot machine gamblers reported playing to alleviate psychological distress (LaPlante et al., 2011; Petry, 2003). Lam (2007) found that gambling types such as lottery, casino, and animal racing bets are motivated by factors such as feelings of excitement, challenge, and chance to win, and the frequency of gambling in these games increases with the importance they give to these intrinsic factors. In other games such as live gambling, card room, and bingo, it has been demonstrated that gamblers are motivated by social factors, and the chance to be around people and to be served by others determines their frequency and motivation to play.

Neighbors et al. (2002) found that most college students gamble for money, entertainment, excitement, and social reasons or simply to have something to do. Lloyd et al. (2010) identified three types of motivations such as regulating mood, making money, and having fun in their research on online gambling motivations. It was found that all motivations increased in individuals who reported that they had problems with gambling. Factors such

as regulating mood and having fun were found to be higher in women than in men. It was determined that individuals who reported having depressive and hypomanic symptoms were more motivated to gamble for the purpose of “regulating their moods” and in order to reduce their depressive symptoms. Motivation to gamble for money was found to be unaffected by both poles of mood experience. It has been reported that the presence of a history of self-harming thoughts leads to an increase in gambling to regulate mood and a decrease in gambling for fun.

A study on online gambling among youth reveals that both delinquency and substance use are associated with the severity of online gambling, but only crime contributes to the severity of gambling among those who do not gamble online (Brunelle et al., 2012). Barnes et al. (2009) found in a study on youth that when sex, age, and socioeconomic status were controlled for, Black youth were significantly more likely to gamble frequently compared to other racial/ethnic groups but were significantly less likely to drink heavily. High rates of co-existence of alcohol and gambling problems, particularly in young men and Black youth, have been identified.

Milosevic and Ledgerwood (2010) examined gambling addicts by dividing them into three different groups in their compilation study on the classification of gambling addicts. The classification in this study includes the behaviorally conditioned, the emotionally vulnerable, and the impulsive antisocial groups, which was first proposed by Blaszczynski and Nower (2002). The motivation of each group to gamble differs from each other. The motivations of the behaviorally conditioned group for gambling may stem from their subcultures, as well as socializing, false beliefs, and low emotion control. The motivations of the emotionally vulnerable group were described as neuroticism, depression, anxiety, coping with stress and other life events, or momentary escape. As for impulsive antisocials, it has been identified as a way to cope with impulsivity, passive-aggressive defenses, emotional instability, and boredom. Gambling motivations vary according to variables such as gender, age, social class, and the type of gambling.

Gambling Disorder Treatment Approaches

Although there are some pharmacological options for the treatment of problematic gambling and GD psychotherapeutical interventions seem to be more effective in long and short terms (Menchon et al., 2018), studies on problematic gambling have shown that less than 10% of addicts engage in behaviors such as seeking professional help or participating in self-help groups like Gambling Anonymous (Slutske, 2006). There are studies that found that help-seeking behavior differs between men and women. According to these studies, men ask for help less than

women, engage in problematic gambling for longer years than women, and also seek help at a younger age than women. On the other hand, in studies conducted with men and women who applied for help, it was reported that the treatment of women was more successful than men (Slutske et al., 2010). Potenza et al. (2019) mention that there are several barriers to the treatment of GD. The most important of these is that gambling addicts do not seek treatment. On the other hand, since GD usually co-occurs with other psychiatric disorders, it is not diagnosed and treated when comorbid disorders are treated (Potenza et al., 2019). Many studies draw attention to the fact that individuals with GD are also diagnosed with alcohol and drug addiction (el-Guebaly et al., 2012; Lorains et al., 2011; Yip & Potenza, 2014). Rash and Petry (2014) conducted a compilation study on psychotherapy methods used in the treatment of GD. In their studies, they stated that in addition to self-help programs, cognitive behavioral psychotherapies, cognitive therapies, and short and motivational interview techniques are frequently used in the treatment of GD. On the other hand, many researchers have emphasized that short psychoanalytically oriented psychotherapies are also beneficial in the long term in GD (Mooney et al., 2019; Rosenthal, 2015).

Psychoanalytically Oriented Psychotherapies

In psychoanalytically oriented psychotherapies, the main focus of psychotherapy is to find out what gambling means for the individual, and to understand this, in other words, to analyze the unconscious processes that lead to gambling. Clarkson et al. (2016) developed a short psychoanalytic psychotherapy program for GD. As in classical psychoanalysis, in order for the individual to be accepted into the short psychoanalytic psychotherapy program, the individual must have the following characteristics.

1. Psychological thinking capacity: Does the individual want to know himself or herself better? Are they interested in their personal histories (development stories)? Can they relate to their personal history and current problematic behavior?
2. Do they express a clear desire to participate in a regular psychotherapy program?
3. Did you have any personal psychotherapy experiences in the past?
4. Do they have verbalization skills? What do they want to change and how do they hope to change it? Are there associated verbalizations?
5. Do they have the capacity of self-reflection and expression? Do individuals have the capacity to question themselves, identify associations, and verbalize them within their psychic world?
6. Do they have the capacity to imagine and can they describe the psychic world? Does the individual have the capacity to

Table 1.
The 12-Session Model

Sessions 1 – 3	Identifying at least one problem other than GD in an individual’s life and investigating the effect of this problem on GD. Associating this situation with the personal history of the individual, determining the goals.
Sessions 4 – 9	Working on the determined pattern with the individual and discussing how the phenomenon is experienced in the therapeutic relationship. (Transfer)
Sessions 10 – 12	Researching whether the goals set in the first sessions have been achieved and working on ending the therapeutic relationship.

GD = gambling disorder.

symbolize? Can he establish a connection between external reality and internal reality through metaphors?

The fact that some, if not all, of the abovementioned features found in an individual make him a suitable candidate for psychoanalytic psychotherapy (Clarkson et al., 2016). The Brief Psychoanalytic Psychotherapy model proposes a 12-session process. This flow is given in Table 1.

In the short psychoanalytic psychotherapy model, it has been revealed that ego-defense mechanisms such as projection, regression, rationalization, manipulation, and displacement are the mechanisms that should be studied frequently. On the other hand, attachment styles formed by the individual in the early stages may also emerge during the therapeutic relationship. Explaining transference characteristics in this process also plays an important role in studying GD in psychoanalytic psychotherapies and ensuring well-being (Clarkson et al., 2016).

Cognitive Behavioral Therapies

Cognitive behavioral therapies (CBT) mainly focus on irrational thought processes and beliefs that lead to the continuation of compulsive behaviors through semi-structured, problem-focused interviews with cases. During therapy, individuals learn about addictive behaviors and their patterns and develop new strategies to cope with them (Pfund et al., 2021). During CBT, the therapist undertakes the task of helping and guiding the individual to realize dysfunctional thoughts, cognitive processes, beliefs and emotions and to change them with alternative behaviors and purposeful and systematic methods. Gambling therapy usually involves keeping a diary of important events and feelings, thoughts, and beliefs, recording dysfunctional cognitions, assumptions, evaluations, and beliefs, and developing new behavior and reaction patterns. It focuses on developing new strategies to use financial issues properly, especially in GD. It plays an important role in the development of such behavioral patterns and in recognizing irrational emotions, thoughts, and cognitions and replacing them with healthy ones, especially not gambling and preventing gambling (Ede et al., 2020). Although many GAs remain untreated, it is suggested that recovery can be achieved by transforming gambling-related cognitive distortions into functional thoughts with CBT. It is reported with experimental studies that studies conducted in this direction are effective (Gehlenborg et al., 2021). It has been shown to be an effective method in the treatment of GD with CBT when used in combination with exposure behavioral techniques, group psychotherapy programs, and cognitive restructuring in individual psychotherapies, inpatient and outpatient groups (Gambling Research Exchange Ontario [GREO], 2020).

Mindfulness-based interventions that were based on CBT can be described briefly as incorporating eastern approaches to the mind – body with a cognitive behavioral framework (Hayes & Feldman, 2004). In the treatment of gambling behavior, Bishop et al. (2004)'s assumptions on two components of mindfulness—self-regulation and orientation to experience—seem to be very important. Self-regulation includes sustained attention, switching the attention direction from one object to another, and inhibition of elaborative processing. For the gamblers instead of living the present moment about gambling through a filter of beliefs, assumptions, and expectations, display gambling

behaviors, they have the ability to regulate themselves to switch their attentions to other options and not to perform the gambling behavior. The other component is orientation to experience. Orientation to experience refers to the adoption of a sense of curiosity, openness, and acceptance of present moment experience (Bishop et al., 2004). For mindful gamblers, this capacity may result in the decision not to initiate or prolong a gambling episode even when confronted by highly arousing or distressing emotions (de Lisle et al., 2012).

Short Motivational Interviewing Techniques

Motivational interviewing techniques focus on the problematic behaviors of individuals and on increasing their motivation in reducing the problematic behaviors. Short motivational interviews are one-session interviews, usually between 20 and 75 minutes (Guo et al., 2014). Short motivational interviews yield successful results in reducing the frequency of gambling and preventing financial losses. In addition to being used as a stand-alone intervention method, its use with CBT generally gives more effective results (Çakmak & Tamam, 2018).

The main focal points in short motivational interviews are as follows:

1. Disclosure of screening results for gambling behavior (usually determinations made with the South Oaks Gambling Screening Test);
2. Giving information about gambling;
3. Examination of the consequences of the gambling behavior of the case; and
4. Discussing the underlying causes of gambling behavior (Stea et al., 2015).

In short motivational interview techniques, the clinician supports individuals in finding motivational resources to reduce and change their gambling behavior. The difference of short motivational interview techniques from other therapeutic approaches is that they do not have to be done with a mental health worker and can be carried out with a health worker such as a doctor or nurse who has been trained in this subject (Yakovenko et al., 2015).

Remote or Self-Help Techniques

Remote or self-help techniques are used in the treatment of GD as an approach that removes the barriers to seeking help due to its features such as being less costly for individuals with limited access to face-to-face treatment options and being completely anonymous (Çakmak & Tamam, 2018; GREO, 2020; van der Maas et al., 2019). It includes booklets and presentations on remote or self-help techniques, information on gambling, some techniques on how to prevent cravings, and information on risk analysis. Interviews made by phone, text, or e-mail are also considered within this scope (Matheson et al., 2019). It has been determined that individuals with risky gambling behavior who benefit from distance or self-help techniques find it easier to avoid gambling and gambling-related harms. This assistance option has been found to be particularly effective in women and other special groups (disability, retired, etc.), who are more likely to face barriers to accessing treatment (Boughton et al., 2017).

Gamblers Anonymous is also considered among the self-help techniques. Based on the 12-step model of Alcoholics Anonymous,

Gamblers Anonymous seeks to assist lasting change in GD with the support and guidance of more experienced members. These group meetings, which are carried out completely anonymously, are especially preferred by men (Venuleo & Marinaci, 2017). Here are the steps in the Gambler Anonymous group process:

- I. Acknowledgment of loss of control over gambling behavior;
- II. Recognizing a higher power that will give power;
- III. Belief that this power will aid healing;
- IV. Examining past mistakes and making changes;
- V. Acknowledging that he/she is solely responsible for the mistakes made;
- VI. Promising to make efforts to change these accepted mistakes;
- VII. Seeking help from higher power to correct these errors;
- VIII. Making a list of the people that he/she has hurt/offended because of his/her gambling behavior;
- IX. Asking forgiveness from the people he/she hurt/upset;
- X. Learning to live a new life with new principles of behavior;
- XI. Helping other people with these newly learned life principles;
- XII. Helping and conveying information to other gamblers who have problems (Çakmak & Tamam, 2018).

Preventing Gambling Disorder

The health burden and negative effects of GA and other behavioral addictions for society are substantial. Therefore, GA and other behavioral addictions should be prevented before they develop (Çakmak & Tamam, 2018). Williams et al. (2012) suggest that children's awareness of behavioral addictions should be increased from the first moment they start their education life, depending on their age and developmental period, and such education should be added to the curriculum. Moreover, in addition to the immediate enactment of laws regarding GD and the deterrent penalties, the treatment options of individuals with GDs should also be determined by law.

Moore and Jadlos (2002) emphasized that GD is as complex as human behavior. In their study, they found that approximately 75% of individuals with GD had a history of loss just before the onset of the GD or in their early childhood experiences. They pointed out that these individuals used gambling as an escape to cope with these losses. They emphasized that as one of the leading factors in the prevention of GD, training should be organized in order for the clients with GD and a history of trauma to recognize that traumatic experiences are the most important etiological factor in the development of their GD.

Doiron and Nicki (2007) made volunteer participants at risk of developing GD watch a presentation titled "Stop and Think," which lasted approximately 20 minutes and included information about gambling and problematic gambling. After this presentation, they found that the risk of developing a GD was reduced and positive results were obtained on the participants' gambling behavior. Ariyabuddhiphongs (2013) conducted research on three different groups within the scope of GD prevention and treatment programs: at the time of initiation of gambling, at the time of gambling, and during treatment. In this study, it was determined that none of the psychotherapy programs applied to individuals with GD or individuals who are gambling were more effective than the motivation

of the individual to control their own gambling behavior. Forsström et al. (2020) also found that long-term education programs and personalized feedback studies are the most effective methods on gambling behavior.

Conclusion

Gambling disorder is now included as a diagnosis in *DSM-5*. It is stated that the biggest risk group in online gambling, which is considered as a type of GD, is adolescents. It is seen that there are differences in gambling motivations. These include the influence of subculture, the need for socialization, false beliefs, low emotional control, depression, and anxiety. It is known that there are many barriers to the treatment of GD. The most important of these is that individuals with GD do not seek treatment. In addition, co-diagnosis of individuals with GD with alcohol, substance use disorder, and/or other psychiatric disorders complicates the treatment of GD. There are different approaches to the treatment of GD. Alongside treatments that adopt a self-help approach, such as Gamblers Anonymous, short-duration approaches also appear to be effective in the treatment of GD. Brief psychoanalytically oriented psychotherapies, CBT, and short motivational interview-based approaches are known as effective methods in the treatment of GD. As in other mental disorders, the GD psychotherapy and treatment interventions need to be patient-tailored which satisfies the personal need of the individual.

Watson et al. (2004) suggested some regulatory guidelines especially in the growing industry of online gambling. These regulatory guidelines include licensing framework, age and identity verification, and marketing and advertising. They suggested that in order to have an online gambling license, the land-based casinos must have at least 5 years of lawful operation as a firm, maintaining a physical location of a certain size for visibility. Especially in online gambling, the most important issue is the verification of age and identity of the gamer. In these cases, the firms should establish appropriate technologies that can determine the physical location and appropriate jurisdictions in order to enter the online gaming. Marketing and advertisement should have limits too. These limits can be automatic expiration and deletion feature of the game and also online-gambling web sites should not offer free credits to encourage online gambling. The online gambling websites must have the laws and regulations as land-based casinos.

There is a growing body of academic research that considers the responsible gambling tools that can help prevent excessive gambling. Especially in online gambling, game pop-up messages encourage informed player choices and self-regulation, which resulted in keeping gambling behavior within safe limits (Edgerton et al., 2016; Malischnig, 2014).

The health burden and negative effects of GA and other behavioral addictions for society are substantial. Therefore, GA and other behavioral addictions should be prevented before addiction develops.

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