

# **CHAPTER TWO**

# Internet Gaming Disorder: Screening and Treatment Options for Gambling and Addiction Services

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Video games are enjoyed as a form of fun and relaxation, developing into a multibillion dollar global industry over the last four decades. It's not all fun and games, however. Some vulnerable individuals can end up forming an addiction, playing excessively, and experiencing harm as a result. In recognizing the broad range of gaming experiences and psychological outcomes, from the positive to the negative, it is important to note the great diversity in video game design. Many games are intended to be a stimulating and immersive experience that requires constant attention, with some offering a story-driven experience that is usually played only once, while others provide endless re-playability (King et al., 2010; Delfabbro et al., 2023). Like gambling, there can also be elements of randomness and chance in video games, including rewards like loot boxes that grant random items, with small chances to win ones of high value. Shooter games like Doom and Call of Duty involve action-packed fighting that depend on speed and honed motor skills. Real-time strategy games like StarCraft also depend on sustained rapid actions and quick thinking, whereas turn-based strategy games like SimCity or Civilization involve slowly and methodically generating and managing resources. Many games involve social interaction and social organization, such as online roleplaying games that involve the player assuming the role of a character in a large virtual world populated with other players (e.g., World of Warcraft). Unsurprisingly, the large time



investment often required in these types of online social games is associated with greater risk of excessive play compared to other games (King et al., 2019). Another popular type of game is "casual" games, often in the form of mobile apps like *Candy Crush* and *Angry Birds*, which often involve spending real money on in-game purchases.

According to the International Classification of Diseases 11th Revision (ICD-11), the defining features of problem gaming and gaming disorder (GD, not to be confused with gambling disorder) is the prioritization of gaming over other activities and functional impairments such as interference with normal routine, self-care, social interactions, and personal responsibilities (Brand et al., 2019). Further, people experiencing problems may feel unable to resist, control or stop gaming and may experience negative mood states (e.g., anxiety, depression) when unable to play (Kaptsis et al., 2016). As noted in the DSM-5-TR, individuals who play games problematically will often play for 12 or more hours per day, and may also include activities such as watching gaming and problem gambling share similar clinical characteristics (e.g., high rates of comorbidities and impulsivity), there are also some key distinctions. People with gaming problems are typically younger and more likely to have social anxiety, but less likely to have a substance use disorder (Sanders & Williams, 2019).

Rates of serious problems associated with gaming are slightly higher than those of gambling, with studies showing around 2% of the adult population experiencing GD (Stevens et al., 2021; Kim et al., 2022). Rates of GD are approximately 2.5 times higher in males compared to females, and younger people also have higher rates than older people (Stevens et al., 2021). According to Kim et al. (2022), the prevalence of GD differs by age, with the highest rates being found in children and adolescents (6.6%) compared to young adults (3.4%) or all adults (1.9%). However, there are currently no clear guidelines on age requirements for



diagnosing GD. There is also an overlap between GD and problem gambling, with one study indicating that around one in ten people with gambling problems also experience gaming problems (Sanders et al., 2019).

Little is known about the recovery process from GD, and there is limited international data on help-seeking rates. Some evidence suggests many will attempt to self-manage the problem (Rodda et al., 2018) and, to a lesser extent, seek advice or support from a professional such as a GP, psychologist or an addictions specialist (Park et al., 2021; Konkolÿ Thege et al., 2015). Some countries offer specialist behavioural addiction clinics for internet use disorders that are intensive and often residential (King et al., 2022), and some jurisdictions have expanded their gambling treatment systems to be inclusive of GD. Research shows engagement with gaming increased during the COVID-19 pandemic, as did treatment-seeking (King et al., 2022; Rodda et al., 2022). During the pandemic, some treatment providers offered online and telephone services to be more accessible for individuals in isolation or lockdown.

This chapter will discuss the classification of GD, its potential co-occurrences with other conditions, and its similarities and differences with gambling disorder. We will also discuss methods for screening and assessment of GD and describe various treatment approaches, including treatment goals, common motivations for change, cognitive-behavioural techniques, and referral options. Additionally, we will present the results of a study on the screening and treatment of GD by gambling counsellors and consider the implications for clinical practice.

### **Clinical Classification of Gaming Disorder**

The International Classification of Diseases (ICD) is an international classification system for diseases, disorders, and other health conditions developed by the World Health



Organization (2019). The most recent version, ICD-11, includes a diagnosis for gaming disorder (GD), which is defined as a pattern of persistent or recurrent gaming behaviour (digital gaming or video gaming). GD is characterized by impaired control over gaming, increasing priority given to gaming to the extent that gaming takes precedence over other interests and daily activities, and continuation or escalation of gaming despite negative consequences. To meet the diagnosis of GD, the behaviour must be severe enough to significantly impair personal, family, social, educational, occupational and/or other important areas of functioning. The behaviour must have also been present for at least 12 months. Disruptions can include diet, sleep, physical exercise, and other health-related behaviours, which can lead to negative physical and mental health outcomes, especially when very long periods of time are spent gaming. Additional clinical features that are not essential for diagnosis but may be present include psychological tolerance and withdrawal effects.

When the DSM-5 was published in 2013, it included Internet Gaming Disorder (IGD) as a condition for further study, and this category is also listed in the 2022 revision, DSM-5-TR (American Psychiatric Association, 2013). Like Gambling Disorder, the DSM-5-TR criteria for IGD shares features with the substance use disorder criteria. To meet the criteria for IGD, an individual must exhibit five or more of these symptoms: (1) preoccupation, (2) withdrawal symptoms when not gaming, (3) tolerance or the need to spend increasing amounts of time gaming, (4) unsuccessful attempts to stop or reduce gaming, (5) loss of other interests due to gaming, (6) continued use of gaming despite negative consequences, (7) deception regarding the amount of time spent gaming, (8) use of gaming as a way to escape negative moods, and (9) jeopardized or lost relationships, work or study opportunities, or career opportunities due to gaming. Severity is also specified as mild, moderate or severe with varying levels of disruption to functioning.

A range of other mental health disorders and addictions can frequently co-occur with GD. A systematic review of six studies involving adult populations (Burleigh et al., 2019) found significant positive associations between gaming problems and the use of tobacco, alcohol, caffeine and cannabis, and these activities often occurred simultaneously with gaming. This review identified comorbid GD with gambling disorder (11% in one study) as well as high rates of co-occurring alcohol use disorder (20-30%). Like other mental health and addictive disorders, meta-analyses indicate GD is related to depression, with around one in three reporting depressive symptoms (Ostinelli et al., 2021). Individuals with GD are also at greater risk of anxiety disorders, including social phobia, obsessive-compulsive disorder, and attention-deficit disorder (González-Bueso et al., 2018).

### Screening and Assessment for Gaming Disorder

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Gaming, in general, is not necessarily a concern inherently and may be a genuinely positive part of one's recreational and social life—as well as being a useful coping strategy at times. Some common experiences that may be misunderstood or misinterpreted as problematic include mood changes while gaming, a desire to play or continue playing, and feeling immersed in the game (King et al., 2020a). As these experiences can be a normal response to gaming, further information is required to determine if gaming is problematic. Assessment should focus on functional impairments stemming from excessive gaming, such as harm to self, family, social activity, work or study, or negative impacts on sleep and health. Many dimensions of gambling assessment tools, such as those related to preoccupation, loss of control, tolerance, and using gaming as a means of escape, can be applied to gaming. Other factors to consider include continued use despite negative consequences and difficulty stopping, amount of time spent gaming, type of games played, and motives for gaming. It can also be useful to gather





information about financial expenditure on games (e.g., hardware, software, and in-game purchases), social aspects of gaming, and any mental or physical health problems that may be related, including gambling on gaming products (e.g., loot boxes).

Standardized tools are invaluable for assessing gaming disorder as part of a standard structured or unstructured clinical interview (King et al., 2020b). Most available tools broadly measure DSM-5 proposed criteria for IGD (King et al., 2020b), and few have been tested with treatment-seeking populations. The 15-item AICA-S-gaming (Wölfling et al., 2012) includes a clinical interview to assess an individual on domains including loss of control; tolerance; withdrawal; continued use; loss of interests; emotion regulation; jeopardizing relationships and craving. Screening can also be self-administered and delivered online or via paper form. Two short screens that could be incorporated into routine service delivery include the 9-item Internet Gaming Disorder Scale (Pontes & Griffiths, 2015) and the Lemmens Internet Gaming Disorder-9 (Lemmens et al., 2021) could be appropriate. The four items on the GDT measure (1) impaired control over gaming, (2) increased priority of gaming over other interests, (3) continuation despite mounting negative consequences, and (4) functional impairment due to gaming.

Clinicians might also consider screening tools to examine gaming experiences or comorbidities. To identify and understand cognitions about gaming, the Internet Gaming Cognition Scale (King & Delfabbro, 2016) examines gaming beliefs in terms of reward, rules, self-esteem and identity. Motivation or reasons for gaming could be assessed with the 27-item Motives for Online Gaming Questionnaire (MOGQ) (Demetrovics et al., 2011), which measures experiences such as enjoyment of gaming and social aspects like being around other people. It has seven subscales: social, escapism, competition, coping, skill development,



fantasy, and recreation. The other relevant screening questions cover self-efficacy, quality of life, relationship quality and mood disorders, inclusive of anxiety or depression.

### **Treatment Approaches for Gaming Disorder**

In accordance with the overlap between gaming disorder with gambling disorder and other addictions, the treatment approaches also share similar features. Available evidence supports the efficacy of cognitive behavioural therapy (CBT) (Kim et al., 2022; Stevens et al., 2019). There is also some support for mindfulness techniques, solution-focused therapy, and motivational interviewing (Kim et al., 2022; Zajac et al., 2020) and a small but growing body of research on the effectiveness of residential programs such as retreats involving support groups (Zajac et al., 2020). Studies involving adolescents have found family therapies to be effective when the focus is on improving family functioning and communication styles (Zajac et al., 2020). Psychological approaches typically assume a degree of insight and readiness or willingness to change, but many of those referred to treatment are resistant to changing personal gaming habits. Motivational interviewing can help to develop insight and potentially identify a desire for positive change in these cases.

A range of delivery modalities are available, and referral options should be carefully considered to ensure the most effective treatment plan. This section examines treatment goals and the reasons behind the need for change, as well as various treatment approaches and specific behaviour change techniques. It also offers suggestions for a variety of delivery methods and options for making a successful referral.



### **Treatment Aims and Reasons for Change**

One of the main aims of GD treatment is to develop goals to reduce gaming time or abstain altogether for a specified period. Treatment goals may also be extended to improve quality of life and wellbeing in the realms of physical and mental health, relationships and engagement with work, study, hobbies, and/or interests. A review by King and Delfabbro (2014) found that the most common long-term aim of treatment is learning to control gaming and/or game in moderation, involving setting limits on duration or frequency. Park and colleagues (2020) reported 88% of individuals engaging in a brief intervention chose reduced gaming as their goal, while only 12% chose total abstinence. To control engagement with gaming, it may be necessary to have support in place to help individuals stick to their limits, while also avoiding games that are less compatible with these limits due to their open-ended nature and/or unpredictable rewards.

The extreme time investment and psychological harm associated with gaming disorder can have serious consequences for relationships, work and study, and psychological and physical health. It can be challenging for people with GD to realize that their behaviour is harmful and to agree to seek help or endeavour to change, even when it is causing significant problems. Interactive screening and brief intervention may be appropriate in these cases, as well as techniques like normative comparison and motivational interviewing to focus on the consequences of current behaviour (pros and cons). For those that do seek treatment, reasons include wanting better productivity and achievement outcomes, and a desire for balance in life and a more meaningful focus (Park et al., 2020). Physical health goals like improving sleep habits and being less sedentary can also be a factor in seeking treatment.



### **Cognitive Techniques for Gaming Reduction**

Cognitive techniques for reducing time spent gaming involve identifying, challenging and replacing erroneous beliefs about gaming. Some cognitive biases associated with GD are similar to those that develop within gambling disorder. These include expectancy beliefs, such as the belief that the benefits will outweigh the downsides, and all-or-nothing thinking, such as the thought that failing to stick to their goal of one hour means that they might as well play for the rest of the day. Another is the sunk cost bias, wherein time and/or money invested in the game provides a rationale for continuing to spend time and money in the game. Although gaming can be more skill-based than gambling, which means the illusion of control is likely to be less applicable to most gaming situations, some gamers may nevertheless develop faulty beliefs about the need to play games in certain 'correct' or 'optimal' ways in order to maximize their gaming experience (King & Delfabbro, 2018), which may not be compatible with gaming reduction goals. Overall, cognitive therapy focuses primarily on beliefs related to self-control, perceptions of triggers and urges, managing high-risk situations, and exploring identity and lifestyle balance.

Cognitive therapy can also address association of self-worth with gaming and the role of social influences (King & Delfabbro, 2014). Self-esteem and self-worth can become entangled in the game to the point where their primary sources are in-game achievements. Cognitive therapy can be helpful in identifying other sources of self-worth and personal strengths that are distinct from the gaming experience. Gaming can also become a primary means of social engagement and social acceptance (King & Delfabbro, 2014). This sense of belonging may develop and be sustained through repeated gaming over a long period of time and be reinforced through game mechanisms such as social ranking systems. Social influence



can also make it difficult to reduce gaming because of social pressure to maintain play and the likelihood that reduced play can impact other players (e.g., team or clan-based games) and make the individual less competitive for future gaming. Treatment can teach social, communication and refusal skills to build self-efficacy in managing social influence. Cognitive therapy may also target the fear of missing out, a feeling of discomfort or anxiety that arises when an individual perceives that others are enjoying something they cannot access (Wegmann et al., 2017).

An important part of treatment is to assist people to identify and address gaming-related triggers and temptations. Support could involve teaching relaxation and self-monitoring, scheduling alternative activities and reducing exposure to gaming triggers (Wölfling et al., 2019). Psychoeducation can be a useful part of cognitive therapy because players are often unaware of the mechanisms for problems developing. King et al. (2018) suggest it is helpful to discuss the nature of gaming products and how they are designed to obtain and maintain one's attention and encourage continued play and identify strategies to reduce temptation to play. Clinicians may find it helpful to understand how games are designed with features that are like those that make gambling addictive, such as time-sensitive and variable ratio reinforcement schedules. It may also be helpful to provide psychoeducation on how problems develop and why change takes persistence and perseverance.

# **Behavioural Techniques for Gaming Reduction**

Behaviour Change Techniques (BCTs) are professionally delivered interventions designed to modify a person's behaviour that are often prescribed in treatment manuals and by clinicians as part of their therapeutic approach. Michie et al. (2013) identified 99 discrete BCTs that represent the active ingredients of all psychological treatments, meaning they can be





expected to elicit change when delivered alone or as part of a package of techniques. Different BCTs may be more or less relevant depending on the therapeutic approach being used. For example, reinforcement learning (rewards and penalties) may be used in contingency or with cognitive behavioural therapy but would not be used in motivational interviewing. Other techniques, such as goal setting and planning, are typically part of most therapeutic approaches.

The selection of BCTs may be based on the client's level of need and readiness to change. For clients unsure about changing their gaming behaviour, it may be helpful to select BCTs that involve examining the pros and cons of change or providing information about the potential negative consequences of continued gaming. Social comparison, where the clinician compares the client's gaming time to others, may also be helpful. For clients actively trying to change their gaming behaviour, a range of BCTs may be used, including techniques that involve exploring identity and consequences, self-monitoring, environmental change, and problem solving (see Table 1). The clinician may use prompts, instructions, or persuasion when delivering BCTs, depending on the client's readiness and the specific technique used.



# Table 1

# Behaviour Change Techniques Relevant to GD.

Technique	Definition	Example
Distraction	Identify ways to redirect attention away from triggers that may lead to unplanned gaming.	Use planned distractions to manage gaming urges, such as socializing or going for a walk and talk.
Avoidance	Suggest strategies for avoiding social, physical, or contextual triggers that may lead to gaming.	Unsubscribe from gaming sites and social media platforms that may serve as triggers for gaming behaviour.
Goals and planning	Set specific time or frequency goals for gaming. Consider using a behavioural contract and detailed plan for addressing temptations to improve goal adherence.	Develop a specific and agreed-upon goal for gaming, including the when, where, and how of gaming behaviour.
Habit formation	Encourage the practice and repetition of desired behaviours.	Alter waking times and incorporate regular meals and exercise to support behaviour change efforts.
Identity	Explore the gap between the client's actual and ideal selves, and how their gaming habits align with their personal values. Discuss lifestyle changes to refocus on other interests.	Write about personal values and strengths and how they can be leveraged to support behaviour change effort.



Technique	Definition	Example
Problem solving	Explore behavioural influences such as cravings and develop strategies to remove obstacles or enhance facilitators.	Learn how to recognize and identify the urge to game, so that it can be addressed as early as possible in the process.
Reduce neg- ative emotions	Offer guidance on ways to manage and reduce negative emotions that may be related to gaming or other behaviours.	Acquire skills for managing distress or relaxing to handle withdrawal symptoms that may arise when not gaming.
Restructure environment	Examine physical and social environments and identify changes that could support the adoption of new behaviours.	Arrange for devices to be out of sight or not easily accessible (e.g., put in another room, uninstall apps).
Rewards and penalties	Recommend using reinforcement techniques such as rewards or penalties to support the adoption of new behaviours.	Choose a reward for sticking to agreed-upon gaming limits for milestone periods (e.g., 1 week, 1 month).
Self-belief	Identify past successes to boost confidence in ability to change. Visualize success and prompt positive self-talk.	Identify and focus on the positive aspects of behaviour change.
Self-monitoring	Collaborate to create a system for tracking and recording their gaming behaviour, triggers, and temptations.	Use an app to monitor and track thoughts, feelings, or behaviours related to gaming.
Shaping knowledge	Advise about gaming triggers and how to do personal behavioural experiments to test different strategies.	Try out new activities/hobbies that are alternatives to gaming and notice the feelings that arise.



Technique	Definition	Example
Social support	Recommend seeking practical or emotional support from friends or family to help with behaviour change efforts.	Request support from family or friends in adhering to goals and plans related to gaming.
Substitution	Encourage the substitution of unwanted gaming with desired or neutral behaviours.	Brainstorm gaming alternatives like feel-good activities, learning opportunities, and new experiences.

According to a study by Park et al. (2020), behaviour change often involves overcoming challenging barriers to implement strategies for change. These barriers may be related to gaming itself, such as social pressure and temptation to obtain game rewards, or they may be related to the implementation of strategies, such as difficulties with time management, poor routines, procrastination, and difficulties effectively planning for how to occupy spare time. By using BCTs such as positive self-talk, visualization, and goal setting, individuals can develop the skills and strategies they need to address these barriers and successfully alter their gaming behaviours.

# **Online Support for Gaming Reduction**

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People who seek in-person treatment typically have more severe gaming problems, and different approaches may be warranted for those with less severe symptoms. Online support for gaming may be delivered through websites, email, computer software, social media messaging, smartphone apps, virtual reality, and video conferencing (Park et al., 2022). It can also be offered as a preliminary step in treatment, where the person seeks to better understand whether they have gaming disorder and treatment options before making a greater commitment. Recent reviews suggest online support shows some promise in addressing gaming symptoms (Park et al., 2022; Gorowska et al., 2022) and it's possible that it is the only help needed for those with less severe symptoms.

#### **Screening and Referral to Other Treatment**

The high frequency of comorbidities in addiction suggests other treatments may also be required. Research suggests comorbid disorders can interfere with treatment and make change



more difficult (King & Delfabbro, 2018). Clinicians and clients might find it difficult to know where to begin or which presenting issue the client is most ready and willing to address. Potential areas of focus include evaluating risk and what is causing the most harm (e.g., if related to suicidal ideation), and addressing the least complex problem with the aim of developing self-efficacy about the change process. Some clients prefer to treat multiple problems concurrently, and it may be that the intensity of treatment varies. For example, depression might be treated with in-person CBT via a brief online intervention that is supported by the in-person therapist. The presence of other psychiatric disorders like substance use, impulsivity or mood disorders may also indicate the usefulness of referral to a psychiatrist or medical doctor for possible pharmacotherapy. Multiple pre-post studies indicate some promise for Bupropion (Zyban), an anti-depressant commonly used to help quit smoking.

### **Research with Gambling Counsellors in New Zealand**

Anecdotal evidence suggests a growing number of people with gaming disorder presenting to gambling harm prevention services for advice or treatment. This could be related to various factors, such as: (a) there are typically no specialist options for GD, (b) the similarities between gaming and gambling disorder, (c) gambling services are usually available at no or low cost, and (d) the common co-occurrence of gambling and gaming problems. To address this issue, we conducted a study of GD presentations to New Zealand's preventing and minimizing gambling harm (PMGH) services. The purpose was to establish the evidence related to rates of GD presentation, and screening and treatment in services. We also sought to understand current screening and treatment practices and identify barriers and facilitators to responding to GD in gambling services. Recruitment took place in 2021 as part of a larger New Zealand study on screening and treatment preferences (Park et al., 2023). We invited clinicians who treat gambling problems who had seen at least one client for gaming problems or other internet-enabled behavioural addictions in the past year to tell us their experiences of working with such cases. The survey was modelled on earlier work in attitudes of the mental health and addiction workforce towards gambling screening and treatment (Manning et al., 2020; Rodda et al., 2018) and psychiatrists' attitudes towards gaming screening and treatment (Dullur & Hay, 2017). We asked about frequency of GD consultations and caseload, approaches and attitudes towards screening, responsivity to GD, usage and confidence in treatment approaches and the use of specific techniques. We also asked about years of experience, qualifications, gaming-related history and preferences for professional development.

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A total of 28 gambling clinicians were recruited from publicly funded and free (82%) and private (18%) gambling treatment services from New Zealand. Clinicians reported a high level of experience with over two-thirds reporting more than 7 years in the field. Most clinicians were female (68%) with an average age of 52 years. In terms of qualifications, most were postgraduate degree holders (57%) or had an undergraduate degree in psychology or related discipline (41%). Just over half (54%) had attended training for the administration of gaming screening, and 39% had received three or more hours of clinical training for treating GD. There is clearly unmet demand for professional development, as indicated by strong support for training in screening (85%), treatment guidelines (88%), self-help materials (92%) and internet-delivered CBT (84%).

Discussions of gaming in gambling treatment services were relatively common, with 93% of clinicians having talked to someone about a gaming issue in the past 12 months, and 82% with someone who was an affected other of someone with gaming problems. Clinicians reported



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average caseloads of seven clients with gaming problems per month, and three per month for affected others. In the current study, all agreed that GD was a clinical disorder and that screening was an important issue. Almost all agreed that gaming often co-occurs with other issues like gambling disorder, and that services should receive government funding to screen for GD (both 93%).

We were also interested in screening practices and enablers to screening. The most frequent screening method was an unstructured interview (60.7%) followed by a standardized screening tool (14.3%) or questions delivered as part of service intake procedures (10.7%). Just 21% of clinicians were aware of what screening tools were available for detecting GD, but four out of five gambling clinicians reported being comfortable with screening. Participants were provided with a list of barriers and enablers to screening (see Park et al. (2023)). There was strong agreement that routine screening is part of the role (75%) and that there was sufficient time and resources to screen and treat gaming (86%). All participants agreed that they would use a tool for GD if they had access to it, and nearly all (96%) said that it would be a useful part of routine clinical practice. About one in five gambling counsellors thought that people accessing services would not want to be screened for GD, one in seven believed GD can be detected without a formal screen, and one in nine thought screening is only needed if a client raises gaming as an issue.

Response to the detection of GD most often included an immediate intervention (84%), providing self-help materials (71%), and psychological treatment (64%). We presented clinicians with a list of behaviour change techniques that had been administered for gambling problems including motivational, cognitive and behavioural and skills-based techniques like social skills training (see Park et al. (2023) for the full list). Gambling counsellors overall reported 16 of the 19 techniques could be suitable for the treatment of gaming. The three with low support were



financial management, exposure therapy and imaginal desensitization, which may reflect the current absence of evidence or professional development. They also rated each technique with a level of confidence in their ability to deliver it to treat GD. Techniques that most counsellors were "very confident" with were (1) motivational enhancement including goal setting (75%), information gathering (79%), information provision (68%), (2) cognitive and behavioural techniques including relapse prevention (75%), self-monitoring (64%), problem solving skills (64%), and (3) social and skills based techniques like social skills training (64%), planned social support (61%) and mindfulness therapy (57%). They also reported low rates of referral to other treatment (28%), and 79% said they would never or rarely refer to pharmacotherapy.

#### **Clinical Implications and Conclusion**

This chapter overviewed the screening, treatment and referral options for gaming disorder. It is evident that some people with gaming problems are attending gambling treatment services and that clinicians are providing treatments based on approaches that work for problem gambling. These findings are of interest given the lack of professional development or clinical guidelines to treat GD. This chapter also summarized what is known in terms of cognitive and behavioural therapy approaches, but the absence of clinical guidelines is a major gap in knowledge. While there have been more than 20 RCTs reported in systematic reviews (Kim et al., 2022; Stevens et al., 2019; Zajac et al., 2020), almost all have involved specific treatment programs delivered by research teams and outside of routine service delivery, and none involved gambling counsellors or people who offered treatment in community services. The state of the current evidence means we cannot ascertain whether treatment provided by gambling disorder specialist services is effective for gaming disorder.

Gambling clinicians appear well placed to deliver screening and treatment for gaming disorder. Our research indicated they were very comfortable with screening through an unstructured interview and would be willing to administer a standardized tool should it become available. Compared to our previous research with alcohol and other drugs and youth clinicians, gambling clinicians perceived significantly fewer barriers to gaming disorder screening and indicated significantly greater willingness to screen (Park et al., 2023). Furthermore, all clinicians accepted gaming disorder as a clinical diagnosis and considered it an important issue to identify in clients. These findings are different to previous studies on screening for gaming disorder. For example, Dullur and Hay (2017) found that about 60% of 142 Australian and New Zealander psychiatrists surveyed reported rarely or never screening for GD. The main barriers identified were the lack of acceptance of the concept of GD, lack of time, and lack of confidence in conducting the screening. Gambling counsellors did not report these issues, suggesting that they may be suitable to offer routine screening and treatment. Whether these findings reflect attitudes and practices at gambling services internationally remains to be determined.

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Gambling treatment services are often involved in outreach and prevention activities in the community. This work could be extended to include GD education and implementing online screening with referral pathways into services. This approach to screening, brief intervention, and referral to treatment is a public health approach already used for identifying and intervening with individuals at risk for substance use disorders, including those who have already experienced harm (Babor, 2007). This involves rapid screening in various settings, followed by a brief intervention or treatment for those at moderate risk, and referral to specialist treatment for those at severe risk (Agerwala & McCance-Katz, 2012; Room et al., 2005).

Gambling treatment services could consider offering screening and treatment for gaming disorder, although further funding may be required. Customized treatment based on the preferences and needs of individuals is crucial, and this may necessitate a multi-modal delivery system that allows individuals to vary treatment intensity through in-person, self-help, and internet-based options. Self-administered screening should be available on websites and should also be a part of outreach efforts to other mental health and addiction services. Outcome monitoring, which involves identifying a suitable framework for measuring changes in gaming symptoms and other comorbidities like gambling, substance abuse, and depression, is an essential aspect of routine treatment for gaming disorder. Service providers should receive training in gaming treatment that includes cognitive and behaviour therapy and information about gaming. A major advantage of providing treatment through gambling services is the relatively shorter waittimes in comparison to other mental health services, meaning that good infrastructure is already in place. One proposal to obtain funding for treatment is to introduce a levy on video game producers like that commonly applied to gambling operators. This long-term goal can be achieved in the meantime through governments considering co-funding gaming treatment as part of gambling treatment and harm reduction services.

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There is a growing evidence base on the assessment and treatment of GD, which appears to be cautiously in favour of CBT approaches, but the field has not yet developed best practice guidelines. Research suggests that there will be continuing demand for help options among individuals and families experiencing gaming-related problems, and gambling help services should anticipate encountering these clients.



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