Conceptual Framework of Harmful Gambling:
AN INTERNATIONAL COLLABORATION,
THIRD EDITION

GAMBLING RESOURCES FACTOR

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1 GAMBLING RESOURCES

In the following sections, we discuss resources that can reduce the risk of developing gambling-related harm and that can reduce such harms after they occur, along with factors relevant to the successful implementation of these resources: service access and use; harm reduction, prevention, and protection; and interventions including psychotherapy, pharmacotherapy, mutual support, and self-help.

The strength of the evidence for the benefits of gambling resources varies considerably. Most evidence to date consists of evaluations of psychotherapy, although there is also growing evidence for mutual support and self-guided treatments. Although gaps remain, a number of reviews support the benefits of some of these resources. On the other hand, there is less evidence for the impact of biological treatments, as well as harm reduction and prevention programming.

1.1 SERVICE ACCESS AND USE

Prevention and resolution of problems are approached differently depending upon the environment. This is generally true for a variety of personal struggles, and specifically true in relation to gambling harms. Environments may differ in the extent to which public attitudes encourage individual self-determination, self-care, and healthy living. Environments can also vary in the support available for people who are at risk or currently experiencing harms associated with gambling.

For example, doctors, teachers, clergy, and financial institution employees may be expected to support people who are struggling with a variety of problems—including gambling-related harm. There may be similar expectations for families to support or care for family members dealing with gambling-related problems. Finally, an important question is the extent to which someone is expected to solve problems on his or her own without support. The answer can vary based on the specific society and its cultural values.

Therefore, a variety of psychological and environmental factors influence the degree to which people access gambling resources. Researchers have long observed that even resources with a track record of success are underused. Estimates suggest that only 7 to 12% of problem gamblers seek treatment for their difficulties.\(^1\)

Many barriers to service access and use have been identified. These include practical issues (e.g., geographical, financial, and time constraints) and psychological concerns (e.g., shame, guilt, concerns regarding stigma or privacy).\(^2\) Culturally and linguistically appropriate support may be particularly challenging to find. Most recent research suggests that gamblers are unaware of the services available to them, and
that the cost of services and cultural relevance are particularly important to making use of services." The preferred mode of gambling – whether land-based or online – may also influence help-seeking behaviour."}

1.2 HARM REDUCTION, PREVENTION, AND PROTECTION

The legal and social environment may support harm reduction policies that limit exposure to gambling risks. Yet, there is little research on how useful other programs and policies such as public awareness campaigns are in promoting responsible gambling behaviours. As outlined in Section 2.2.1 Accessibility, a variety of harm reduction approaches have been proposed and introduced in different jurisdictions.

Some jurisdictions have well-developed public health models and school-based prevention programs that address gambling. Others use a variety of approaches such as self-exclusion programs within gambling venues; limiting the number and location of gambling outlets in a region; restricting trading hours; banning smoking in venues; preventing credit betting; enforcing age restrictions; offering voluntary or mandatory pre-commitment; reducing maximum bet limits; removing Automated Teller Machines (ATMs); and, lowering prize levels.

However, jurisdictions can also promote more exposure to gambling even as they try to reduce harm. Direct advertising and marketing by industry operators, and indirect promotion through the portrayal of gambling in films, television, and other media can make gambling seem to be an attractive and glamorous leisure activity. In some countries, such as Australia, the telecast of sports events includes reporting the odds offered by online and telephone sports betting operators, coupled with gambling-oriented commercials. Online betting company logos and advertisements are placed in prominent positions on the sporting field and players’ uniforms often include advertising linking them to the gambling industry.

Overall, research on prevention programs is limited. Two comprehensive reviews suggest that the most commonly used prevention initiatives are the least effective, whereas more promising efforts have not been implemented sufficiently. Yet, most of these initiatives have not been evaluated by researchers, which prevents definitive statements regarding their impact. A more recent review highlighted the promise of several strategies – including pop-up messages and restrictions on bet sizes, bank machines, tobacco use, and operating hours – as well as the need for formal evaluations of these strategies. Such evaluations can provide invaluable guidance for policy development in this area. For example, pop-up messages that often involve warning messages of potentially risky play seem to be most effective when they are presented in the centre of electronic gaming machine screens, when they interrupt play, and when they require players to actively remove them.

Public awareness and information campaigns have yet to include specific safe gambling guidelines. These efforts to influence attitudes and knowledge prior to gambling seem to have less impact compared to strategies that target the features of gambling products and venues during gambling (e.g., warning messages), or resources made available following gambling (e.g., self-exclusion). For example, kiosks in gambling venues known as responsible gambling
centres have been associated with greater knowledge but not with a change in behaviour,\textsuperscript{14} whereas self-exclusion, although under-used, does result in less gambling and improved well-being.\textsuperscript{15-17}

\section*{1.3 RISK ASSESSMENT}

There is no overall agreement on a classification of structural characteristics or the exact number of risk dimensions that exist.\textsuperscript{18, 19} Nevertheless, a number of risk assessment tools have been developed with the aim of estimating the harms associated with any specific gambling product. Risk assessment instruments rate various forms of gambling on a scale from relatively harmless to relatively harmful. These ratings are based on factors identified through research on contributors to harmful gambling. The factors may be given different weights depending on how important they are for the overall risk potential. Each factor in any given form of gambling is rated on this scale and the sum of the weighted ratings is calculated. If a particular form of gambling is found to be unacceptably risky, some of the rated factor(s) can be modified so as to lower the risk potential.

For example, AsTERiG (\textit{Tool to evaluate the risk potential of different gambling types})\textsuperscript{19, 20} generates a score based on ten factors: event frequency; multigame/stake opportunities; chance to win more than what has been staked; light and sound effects; variable stake size; availability; jackpot; cash out interval; near-miss; and continuity of the game. Two further instruments, GamGard\textsuperscript{21} and Tools for Responsible Games (TRG – Airas)\textsuperscript{22} were developed by a British firm and Finnish researchers, respectively. GamGard includes ten factors while the TRG includes 50 indicators across nine dimensions.

Gambling companies belonging to the World Lottery Association are currently the main users of GamGard,\textsuperscript{23} while AsTERiG and TRG are used only by a few European companies. Some regulatory authorities also use GamGard to identify more harmful types of gambling. Technological developments may require the introduction of new variables into these schemes. As an alternative or complement to risk assessment instruments, gambling companies increasingly use artificial intelligence systems to identify patterns of at-risk and problem gambling among their customers.

\section*{1.4 INTERVENTIONS}

Although not everyone who experiences gambling-related harms needs formal treatment services, some people do often benefit from them. The availability of treatment can vary substantially across jurisdictions, and a comprehensive treatment system should include a variety of treatment methods and intensities that are supported by research evidence. These treatments may include individual, group, telephone, or web-based psychotherapy, outpatient day programs, or residential services. In some jurisdictions, many of these services are available as part of mental health treatment systems, and in others, they are offered as part of addiction treatment or are free standing services. This has implications for who can access treatment and at what level of distress and harm they access it.
A growing body of research has focused on the value of specific intervention strategies, primarily psychotherapy. Results continue to show the value of cognitive behavioural treatment approaches and motivational interviewing, with more limited benefits for pharmacological and other approaches.

Relatively little research has compared different types of gambling interventions (e.g., psychotherapy versus pharmacotherapy, self-help versus mutual support). Studies have consistently shown that in person treatments are more helpful than other treatment types, and that all treatments (particularly mutual support and self-help) are beneficial for those who participate fully.\(^{24}\) Indeed, the amount of improvement increases with the number of exercises completed and sessions attended across treatment types, highlighting the importance of being engaged in the treatment, as well as the nature of the treatment itself.

There is currently not enough research evidence at this time to support newly developed innovative treatment alternatives, including biological interventions such as neurostimulation (e.g., repetitive transcranial magnetic stimulation\(^ {25} \)) or psychosocial interventions such as cognitive remediation.\(^ {26}\)

**Psychotherapy**: Research supports the value of psychotherapy in treating problem gambling.\(^ {24}\) Cognitive behavioural approaches in particular are beneficial, regardless of the type of gambling in question.\(^ {27}\) An important systematic review and meta-analysis of 14 studies reported that the bulk of psychotherapy research in this context has evaluated cognitive behavioural therapy, and shows a medium to very large positive effect in the short-term.\(^ {28}\) A more recent systematic review of 21 studies supported these conclusions, although they noted some methodological issues that prevented a rigorous test of the long-lasting benefits in many cases.\(^ {29}\) Cognitive behavioural treatments target dysfunctional thoughts about gambling using both cognitive and behavioural strategies.\(^ {30}\) Notably, cognitive behavioural therapy provided as part of routine treatment in everyday settings appears to show the same strong effects as you would see in highly controlled treatment studies.\(^ {31}\)

Motivational interviewing approaches have gained support, although fewer studies have been conducted in this area. These studies have often included participants with less severe gambling at the outset and treatments of shorter length than might be usual.\(^ {28,29}\) An early meta-analysis indicated a modest advantage of cognitive therapy over motivational interviewing and another type of treatment, imaginal desensitization.\(^ {27}\) A more recent and focused meta-analysis of motivational interviewing for problem gambling showed a small but significant positive effect of this treatment.\(^ {32}\)

Since such a small proportion of people with problem gambling seek treatment (ranging from 7-12%), brief interventions are being evaluated more often as a possible approach to reducing gambling-related harms, especially when people have less severe gambling involvement and problems. All of the reviews noted above\(^ {28,29,32}\) included treatments that were brief in duration, and showed the potential helpfulness of even single session treatments, as well as treatments with little or no therapist interaction at all (see also Swan and Hodgins\(^ {33}\)). For example, Toneatto\(^ {34}\) had similar clinical outcomes in problem gamblers who were randomly chosen to receive a single session of psychotherapy versus six sessions of cognitive therapy, behaviour therapy, or motivational therapy. Even limited in-person or telephone-based therapist guidance has promoted abstinence from gambling during and after self-guided treatment using online or print materials.\(^ {35-37}\) Telephone-based interventions are also linked to improvements in problem gambling and the associated harms, providing further support for these cost-effective and accessible treatment alternatives.\(^ {38}\)
Most recently, a meta-analysis has supported mindfulness-based approaches in the reduction of gambling behaviours, urges, and symptoms. This analysis combined interventions incorporating mindfulness (e.g., dialectical behavioural therapy) and imaginal desensitization (which has similarities to mindfulness based procedures but does not include meditation). Other rigorous trials have found similar outcomes between cognitive-behavioural and mindfulness-based interventions.

It has often been noted that there is an ongoing need for rigorous and controlled studies of problem gambling interventions (e.g., Smith, Dunn, Harvey, Battersby and Pols), particularly those examining the maintenance of long-term therapeutic effects. Psychotherapy research for problem gambling continues to grow, with an increasing focus on identifying new treatment approaches or enhancements that may be helpful for people with gambling problems. Further, research has long recognized the high level of comorbid mental illness and addictions in those with gambling problems, and how this effects engagement in and response to treatment. Depression and alcohol use, for example, are strong predictors of negative responses to psychological treatments. The need for the development and evaluation of integrated treatment approaches is therefore seen as essential, since existing knowledge in this area is limited.

Pharmacotherapy: There is currently no medication approved for the treatment of problem gambling. An early meta-analysis of 16 studies suggested that medications are more effective than placebo control or no treatment, but that three classes of medication (opioid antagonists, antidepressant medications, and mood stabilizers) did not differ in their impact on gambling difficulties. More recent reviews have continued to highlight opioid antagonists as well as glutamatergic agents. The most recent meta-analysis demonstrated that only opioid antagonists are more effective than placebo control and with a small effect. The different medication classes generally showed similar impacts on clinical outcomes, however, causing these authors to conclude that limited support for medication to treat problem gambling currently exists.

Overall, then, neurobiological models and the treatment studies to date provide the greatest support for opioid antagonists such as naltrexone in the treatment of problem gambling. This medication class is proposed to affect dopamine pathways implicated in reward processing, and has the most evidence for usefulness and tolerability to date. Still, experts have emphasized the importance of considering co-occurring psychiatric illness when making treatment decisions. Opioid antagonists may be particularly well-suited to people who also have substance use disorders, whereas antidepressant medications or mood stabilizers could be more appropriate for those with depressive/anxious or bipolar disorders. Combined treatment approaches that include both pharmacotherapy and psychotherapy may also be appropriate in some cases. For example, in a recent study group, cognitive behavioural therapy and antidepressant medication was associated with greater treatment adherence than either of these treatments alone.

Mutual Support: In mutual support groups, recovering problem gamblers help each other to stop gambling harmfully or to stop gambling completely. The main activity of such groups is regular meetings in which the participants take turns in talking about how their gambling problems started and progressed, and about their current recovery, while other participants provide advice. The collective knowledge and experience of the group is used to help people in a wide variety of ways, including: providing social and emotional support; maintaining the motivation to abstain; gaining insight into the nature of gambling problems; and getting practical advice on how to stay away from...
The importance of telling one’s problem gambling story, and listening to the stories of others, suggests that the narrative – as a social and cultural construction – is central to the recovery process. It helps the person gain a better understanding of his or her condition, and a direction leading to recovery. The most well-known mutual support society of problem gamblers is Gamblers Anonymous (GA), which began in the United States and has spread to many other countries. GA is modelled after Alcoholics Anonymous (AA) and shares many of its features such as the medical model of addiction and the principle of total abstinence. It differs in some ways, like having a broader view on spirituality. The “Twelve Step” approach of AA and GA – for example, that there is a higher power that gives strength in recovery and that one has to learn to live a new life – has been adopted by many treatment providers.

In some countries, such as Sweden, the Netherlands and Spain, there are mutual support societies not belonging to GA that have their own ideologies and practices. In addition, there are support and counselling groups formed on the initiative of health agencies (e.g., Piquette-Tomei et al.). Mutual support may be the only available local form of help or in some cases, the form that people prefer. It may also be a complement to traditional psychotherapy or a way of staying away from harmful gambling after the end of therapy. Mixed evidence exists for the therapeutic benefits of GA, but it has been suggested that attendance, engagement, and social support may be crucial to maximizing its positive effects. Further, a combination of traditional psychotherapy and GA attendance has been found to have therapeutic benefits. Members of GA report high levels of satisfaction and the use of GA to support relapse prevention and abstinence goals, but this must be seen in the context of these participants having themselves chosen to belong to the GA.

**Self-help:** The vast majority of people who have addictive behaviours – from substance misuse to harmful gambling – reduce or stop those behaviours, most commonly in a self-guided manner. Resources to support self-help take various forms, including: online and print exercises, workbooks and manuals; audio and video recordings; and telephone, computer, or web-based programs. These types of resources can make a difference: for example, a recent study of self-guided cognitive behavioural therapy showed improvements for all outcomes. Recent research suggests that self-guided treatments may be less effective than face-to-face interventions, although authors noted that most self-help options evaluated were brief in duration or intensity, and that longer programs had more impact. Research has increasingly highlighted the value of Internet-based self-help in delivering psychotherapy such as cognitive behavioural therapy, as well as sharing information about problem gambling, in a convenient, private, and cost-effective way. Studies of online and mobile interventions are rapidly expanding. Reviews are generally supportive of the value of these interventions. Notably, this research was not included in a recent review for several reasons, including the incorporation of therapist assistance, the lack of gambling outcomes, and interestingly, the idea of personalized feedback as secondary prevention (in part due to its frequent evaluation in non-treatment-seeking samples). These highlight the importance of how we define and evaluate these interventions, and how we interpret research syntheses in this area.
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