



# Conceptual Framework of Harmful Gambling:

AN INTERNATIONAL COLLABORATION,  
THIRD EDITION

PSYCHOLOGICAL FACTORS

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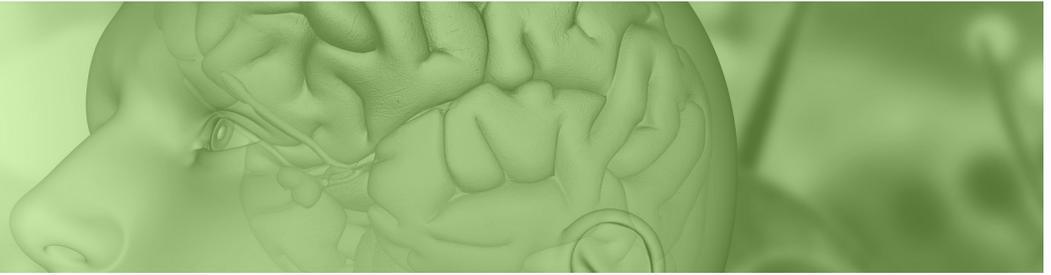
GAMBLING RESEARCH  
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Psychological



## 1 PSYCHOLOGICAL FACTORS

The psychological basis for harmful gambling is rooted in a number of different factors and is influenced by an individual's biology and the broader environment. Depending on the person's psychological characteristics, he or she may be more or less likely to be susceptible to developing harmful gambling habits. This susceptibility could be aggravated by other psychological disorders or addictions; for example, someone might seemingly gamble for entertainment purposes without realizing that underlying psychological issues, such as using gambling to cope with negative emotions, could lead to a chronic gambling habit.

In this section we discuss psychological factors that contribute to harmful gambling, including: personality and temperament, coping styles, self-perceptions,

social learning, lifespan development, co-morbid disorders, subjective well-being, adverse childhood experiences, and judgment and decision making. There is a considerable amount of research that supports the existence of relationships between these risk factors and gambling problems, although the strength of the evidence varies from factor to factor, as outlined below.

It is important to note that until recently research on the psychological factors influencing gambling-related harm has been almost entirely cross-sectional (i.e., limited to one point in time). Although there is now some longitudinal research supporting the role of psychological characteristics in gambling, more research is needed to provide further support and insight into these factors.

### 1.1 PERSONALITY AND TEMPERAMENT

Personality and temperament are broad constructs and refer to individual differences in thoughts, feelings, and actions. Certain personality and temperament characteristics are frequently associated with harmful gambling. A consistent finding is that people with higher levels of impulsivity, including *delayed discounting* (where immediate outcomes have more value than outcomes that are more remote in time), are more likely to engage in gambling and report harmful levels

of gambling.<sup>1-3</sup> *Negative urgency* (i.e., the tendency to act recklessly when stressed) has emerged as a particularly important aspect of impulsivity that is associated with gambling and harmful gambling in both cross-sectional and longitudinal studies.<sup>4-7</sup>

The relationship between the Five-Factor Model of personality and gambling has been investigated, with lower conscientiousness, lower agreeableness, and higher neuroticism being associated with harmful gambling.<sup>8</sup> A sixth personality dimension, honesty-

humility (at lower levels), has also been linked to greater involvement in gambling.<sup>9</sup> Other personality and temperament traits that have been associated with harmful gambling include sensation-seeking,<sup>10-12</sup> novelty-seeking,<sup>13, 14</sup> low levels of willpower (or *trait self-control*),<sup>15</sup> low behavioural control,<sup>16</sup> and emotional vulnerability, including harm avoidance and others.<sup>17-19</sup>

Personality disorders also co-occur frequently with harmful gambling. A recent meta-analysis found that almost half of people seeking treatment for gambling problems had a personality disorder at the same time.<sup>1</sup> Personality disorders that are most likely to co-occur with harmful gambling are narcissistic, antisocial, avoidant, obsessive-compulsive, and borderline.<sup>20</sup>

## 1.2 COPING STYLES

People with gambling problems tend to use avoidance and emotional coping when they experience difficulties, as opposed to using a problem-solving approach.<sup>21</sup> In turn, the use of avoidant coping strategies has been associated with increased levels of harmful gambling among both adults<sup>22</sup> and adolescents.<sup>23-25</sup> The lack of

problem-solving abilities may be caused by deficits in aspects of working memory, planning, cognitive flexibility (i.e., the ability to switch thinking from one concept or idea to another), and time management/estimation, all of which have been reported to be more prevalent among people with gambling problems when compared to healthy volunteers.<sup>26</sup>

## 1.3 SELF-PERCEPTIONS

The perception of self is created as the person monitors his or her behaviour, emotions, and mental states in relation to others. In some cases, low self-esteem is associated with heavy gambling,<sup>27, 28</sup> although not all studies have found this.<sup>29</sup> Gambling in and among a group of people— such as at the table games or a casino— allows individuals to demonstrate a number of characteristics about themselves with the ultimate aim of gaining prestige. Therefore, it can be seen as an opportunity to increase self-esteem. Some of these features include the ability to play the game with skill, the willingness to take risks, the means to spend money on such games, and the capacity to maintain composure despite suffering losses or winning. Some people may also perceive themselves to be *professional gamblers*, which is associated with harmful gambling.<sup>30</sup>

Such group-based gambling games provide an arena for flamboyant self-display intended to impress fellow players and onlookers. People who gamble for these reasons are likely to spend relatively large amounts of money. Additionally, having a financially focused self-concept is related to harmful gambling.<sup>31, 32</sup>

Unfortunately, with high financial stakes, gamblers risk getting into a harmful, addictive game playing cycle either because they believe themselves to be on a winning streak or in a desperate attempt to win back large losses. Gambling may also change how someone perceives him or herself, with harmful levels of gambling more likely to make people feel that their gambling behaviour has changed their self-concept for the worse.<sup>33</sup>

## 1.4 SOCIAL LEARNING

The social learning sub-factor highlights the importance of the social environment(s) in which a person functions and the influence on gambling behaviour.

The result of these influences is, at the extremes, either a higher tendency towards addictive gambling behaviour, or a rejection of gambling altogether.

Information on gender differences in the socialization to gambling is included in Section 3.1.6 Gender.

In contrast to individuals who gamble because of social learning from family members, there are people whose negative experiences with the psychological, physical, and financial toll of gambling addiction among family members or friends can lead to less gambling or no gambling at all. However, even in households where one or both parents do not gamble, substantial proportions of children will engage in one or more gambling activities.<sup>34</sup>

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## 1.5 LIFESPAN DEVELOPMENT

Age is often related to gambling and harmful gambling.

In most, but not all, jurisdictions, younger people are more likely to gamble and have gambling-related problems, although this appears to be changing.

For example, a study with almost 5,000 participants found that while gambling frequency increased in teenage years, the highest involvement occurred in the twenties and thirties. People in older age groups were less involved.<sup>35</sup> Still, harmful gambling can also occur among older populations.<sup>36, 37</sup> Younger age of first gambling is also linked to a higher probability of

harmful gambling.<sup>12</sup> However, gambling involvement and harmful gambling tend to be fluid with earlier involvement not predicting later involvement.<sup>38, 39</sup>

The relationship between lifespan developmental factors and gambling is complex, since people in different age groups have been exposed to different gambling opportunities and attitudes as legalized gambling has expanded (see Section 3.1.3 Socio-Cultural Attitudes). Availability of leisure time and disposable income also vary across the lifespan. This can impact the inclination to gamble and the risk of engaging in harmful gambling.

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## 1.6 COMORBID DISORDERS

Comorbid mental health disorders have been linked to problem and pathological gambling. In particular, strong links have been found with mood disorders such as major depression, anxiety disorders, and substance use disorders in community samples.<sup>40</sup> Among people seeking treatment for gambling problems, almost 75% have a comorbid mental health disorder, with mood and substance use disorders being most frequent.<sup>20</sup> Harmful gambling and nicotine use are also highly associated.<sup>41</sup> Links with lower base rate disorders such as eating

disorders,<sup>42-44</sup> psychosis,<sup>45-48</sup> attention deficit disorder,<sup>49, 50</sup> obsessive compulsive disorder,<sup>51</sup> post-traumatic stress disorder,<sup>52</sup> and other behavioural addictions including compulsive shopping,<sup>53</sup> video games,<sup>54</sup> and problematic internet use<sup>55</sup> have also been observed. In addition to being highly comorbid, experimental studies have also demonstrated that substance use (alcohol, nicotine) can increase harmful gambling behaviours.<sup>56-58</sup>

It is now well-established that the comorbid mental health and substance use disorders are common among people with gambling disorder. Less is known

about the clinical and psychological correlates of co-occurring gambling and other mental health/substance use disorders or whether the mental disorder was present before harmful gambling or vice versa (*temporal sequencing*).<sup>59</sup> Recent studies suggest that people with both gambling and mental health disorders report a greater severity of gambling, distress, are more likely to have other mental health disorders, and have a poorer response to treatment.<sup>43, 48, 60</sup> In regard to temporal sequencing, gambling can occur before and/or after the onset of psychological disorders.<sup>61-65</sup> These results suggest that a shared vulnerability could

be the cause of these high rates of comorbidity, with impulsivity identified as one potential vulnerability.<sup>62, 66, 67</sup> While this is informative, more research is needed to identify other shared vulnerabilities.

A final relatively common comorbidity is the higher than expected prevalence of gambling disorder among people with Parkinson's disorder who receive dopamine agonist treatment.<sup>68, 69</sup> Prevalence estimates range from 2.2 to 7.0%.<sup>68</sup> Patients with other risk factors for gambling disorder (e.g., impulsivity) are most at risk.<sup>68</sup>

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## 1.7 SUBJECTIVE WELL-BEING

Harmful gambling typically involves significant distress. Poorer subjective well-being is also linked with harmful gambling.<sup>70-72</sup> In contrast, stronger feelings of well-being are related to social, responsible gambling involvement.<sup>73</sup> Higher levels of negative emotions or distress are strongly associated with harmful gambling,<sup>74, 75</sup> as are higher stress levels.<sup>76</sup>

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## 1.8 ADVERSE CHILDHOOD EXPERIENCES

Adversity in childhood has been robustly linked to harmful gambling,<sup>77-80</sup> although longitudinal studies in this area are lacking.<sup>81</sup> Examples of adverse childhood experiences include not only traumatic experiences, but also involve other difficulties such as emotional and/or physical neglect; parental separation or divorce; and household substance use, mental illness, and incarceration. No one specific adverse childhood experience has been found to be most important in harmful gambling. Rather, it seems that the more adversity a person experiences in childhood, the greater the risk that he or she will experience harmful gambling.<sup>82</sup>

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## 1.9 JUDGMENT AND DECISION MAKING

People with gambling problems often display faulty beliefs about gambling, termed *gambling-related cognitive distortions*. These distortions can be measured by asking gamblers to verbalize their thoughts during play (the *think aloud* technique) or with questionnaire measures (for reviews, see Goodie and Fortune,<sup>83</sup> and Leonard and Williams<sup>84</sup>). These decision making errors are intensified in people with gambling problems, and have been shown to pre-date gambling problems in a longitudinal study.<sup>85</sup>

The field of Judgment and Decision Making lies at the intersection of psychology and economics. It aims to characterize how healthy people evaluate risks and choose between available decision options. Many of the biases described in this field are relevant to gambling behaviour; for example:

- › In estimating the likelihood of events, people tend to over-estimate rare events (termed *probability weighting*), such as their chances of winning a jackpot (see Ligneul et al.<sup>86</sup>).
- › In relating objective gains and losses to subjective (i.e. personal) value, people tend to place greater weight on losses compared to gains of equivalent size. This *loss aversion* may be reduced in people with gambling problems.<sup>87</sup>
- › In many situations, people do not undertake a cost-benefit mathematical analysis, but rely instead on shortcuts (termed *heuristics*) to make a quick decision (for examples in sports betting, see d’Astous and Di Gaspero,<sup>88</sup> and Newall<sup>89</sup>).

In gambling situations, some common errors are the biased evaluation of gambling outcomes (e.g., attributing wins to skill and losses to bad luck), the *illusion of control* over gambling outcomes (e.g., superstitions or behavioural rituals that are designed to increase wins), and failing to recognize statistical independence of turns (i.e. the *Gamblers’ Fallacy*).<sup>90</sup> These gambling-related cognitive distortions can be encouraged by different gambling types and features, such as a stop button on a slot machine leading one to believe they can control the outcomes. They may also be enhanced by alcohol<sup>56</sup> or other intoxicating substances. This has implications for regulating the availability of these substances in gambling venues. Recent interest in *nudge theory*<sup>91</sup> considers how choice can be framed to encourage people to make better decisions, with likely implications for reducing gambling harms.

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