A Daily Diary Investigation of Self-Regulation in Gambling

Summary Report for the Manitoba Gambling Research Program

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Research Priority:
*Explore the utility and effectiveness of pre-commitment strategies and feedback tools in helping players maintain control over their gambling.*

Significance
Although it is common for people to set gambling limits, these limits are not always respected in the heat of the moment. This violation of a pre-set gambling limit is often referred to as a self-regulation failure, and problem gambling has been characterized as a deficit in self-regulation (Blaszczynski & Nower, 2002). Indeed, self-regulation is an essential skill for responsible gambling behaviour by enabling individuals to set reasonable standards for their gambling and then track their actions in relation to these set goals. Only a handful of studies have recently examined self-regulation strategies among problem vs. low risk-gamblers (Moore et al., 2012) and failures to stick to predetermined limits (Lalande & Ladouceur, 2011). However, we are not aware of any studies that have examined variables relevant to self-regulation capacity and behaviour that systematically influence individuals' success or failure in sticking to their gambling limits over time.

According to the framework of self-regulation and its depletion (Muraven & Baumeister, 2000), self-regulation failure in a certain domain is more likely when self-regulatory resources have recently been used up – or depleted - in order to deal with other cognitive, emotional and behavioural demands. However, very little is known about situational factors that reduce self-regulation capacity and thus may lead to the violation of gambling limits once a gambling episode starts.

Research Questions
Using a web-based daily diary methodology, the purpose of the current study is to apply a self-regulation framework to better understand factors that contribute to successful attempts at self-regulated gambling and/or compromise a gambler's ability to adhere to gambling-related limits. We propose that, proximal factors that deplete self-regulation resources such as managing negative affect, stressors and other temptation (e.g., alcohol, food), gamblers may find it difficult to stick to their self-imposed gambling limits. Furthermore, we anticipate that
the impact of depletion on self-regulation success or failure is moderated by trait self-control and impulsivity. Specifically, when self-regulatory resources are depleted, gamblers with low trait self-control and high impulsivity should be less likely to stick to their self-imposed gambling limits than those with high trait self-control and low impulsivity.

The current study was developed to answer the following research questions investigating 1) proximal factors that impact self-regulation; and 2) moderators of the relationship between these factors and self-regulation failures:

1. Are gambling urges more intense on days when situational demands for self-regulatory resources are higher (e.g., negative affect, stress, having to deal with other temptations)? Is the association between situational factors that deplete resources and the intensity of gambling urges significantly higher for individuals with high trait self-control and/or low impulsivity than for those with low trait self-control and/or low impulsivity?

2. Is the likelihood of gambling higher on days when situational demands for self-regulatory resources are higher? Is the association between situational factors that deplete resources and the likelihood of gambling significantly higher for individuals with high trait self-control and/or low impulsivity than for those with low trait self-control and/or low impulsivity?

3. Is the likelihood of going beyond one's self-imposed gambling limits within a gambling episode (i.e., violating a gambling limit) greater on days when situational demands for self-regulatory resources are higher? Is the association between factors that deplete resources and violation of gambling limits significantly higher for individuals with high trait self-control and/or low impulsivity than for those with low trait self-control and/or low impulsivity?

**Methodology**

In this study, we used a daily diary approach to investigate research questions on self-regulation for gambling. Participants completed 21 days of diaries and reported on: current subjective states, such as gambling urges, daily stressors, current moods, prior exertion of self-regulatory resource on resisting other temptations, as well as specifics of gambling episodes that occurred one day before, such as incidence of gambling, amount spent on gambling, net win/loss, intensity of temptation to violate gambling limits, success or failure in sticking to gambling limits, etc. Furthermore, we measured several individual difference variables, such as trait self-control, impulsivity and indices of recent gambling behaviour in the initial baseline survey.

Out of 389 individuals who contacted us for the survey, 111 participants provided usable data regarding daily activities. Overall, 1861 daily diaries were included in our dataset.

**Key Findings**

Hierarchical linear modeling was used to test whether violations in gambling limits were associated with daily proximal factors and whether these effects were moderated by individual difference variables. Consistent with the self-regulatory resource depletion framework (Muraven & Baumeister, 2000), we found that gambling limits were more likely to be violated on days when self-regulatory resources were previously exerted to resist other addictive urges and by people whose trait self-control was low. Furthermore, the effect of prior exertion of self-regulatory resources on gambling limits violation was different for people with high versus low trait self-control. Specifically, we found that on days when little self-regulatory resources were
previously exerted, participants with high trait self-control were less likely to violate their gambling limits than those with low trait self-control. In contrast, on days when self-regulatory resources were exerted on resisting many addictive temptations, participants with high trait self-control were more likely to violate their gambling limits than those with low trait self-control.

**Implications**

Our findings suggest that gambling limits are more likely to be violated on days when people have already exerted their mental energy trying to resist temptations to drink, smoke, use marijuana and other drugs. Interventions to help gamblers stick to their limits should work with clients on developing effective ways to restore their self-regulatory resources from an array of options, such as napping/sleeping or engaging in activities that promote relaxation and attentional focus (e.g., mindfulness, tension reduction strategies).

Although trying to avoid situations in which one may feel tempted to gamble is generally an effective way of reducing gambling limit violations, this strategy may actually backfire once this strategy fails and one starts to gamble, especially in situations where one’s self-regulatory resources have been depleted resisting other urges. In order to prevent this, individuals who usually try to avoid gambling venues or tempting situations may benefit from exposure to these situations so they can exercise their self-regulation ‘muscle’ and develop strategies intended to help them stick to gambling limits once they decide to gamble.

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