

The Temporal Relationship Between Faulty Gambling Cognitions and Gambling Severity in Young Adults

Summary Report for the Manitoba Gambling Research Program

Investigators:

Ryan Nicholson, University of Manitoba

Dr. Tracie Afifi, University of Manitoba

Chad Graves, University of Manitoba

Dr. Michael Ellery, University of Manitoba

Funding:

Small Grant (\$24,552)

Research Priority:

Explore what risk and protective factors (individual, social, environmental) influence the movement back and forth between no risk and problem gambling risk levels.

Significance

Research on gambling in young adults has found 67-97% of this age group participated in some form of gambling^{1,2} with prevalence rates estimating that 5% of young adults are pathological gamblers,³ a rate of three times higher than the general population.⁴⁻⁶ Problem gambling during young adulthood is associated with a number of negative consequences, including poor academic performance, depression, suicide, and the development of multiple addictions.^{2,7-10}

Disordered gambling in young adults is hypothesized as being related to mistaken gambling related cognitions focus on the gambler's own beliefs regarding their control or influence over gambling outcomes¹¹ with many gamblers believing they have some degree of control when, in fact, most forms of gambling capitalize on randomness. Recent research has demonstrated a positive relationship between gambling severity and gambling cognitions.¹²⁻¹⁴ Few studies have examined the temporal order of this relationship using longitudinal data. The purpose of this study is to understand the directionality of the relationship between gambling cognitions and gambling severity in a longitudinal sample of young adults.

Research Questions

- 1) Are gambling problems associated with faulty gambling cognitions cross-sectionally?
- 2) Do gambling problems predict later faulty gambling cognitions, after adjusting for initial cognitions?
- 3) Do faulty gambling cognitions predict later gambling problems, after adjusting for initial gambling problems?

Methodology

Young adults (N = 578), initially aged 18 to 21 years, completed the Manitoba Longitudinal Survey of Young Adults at two time points approximately two to three years apart. Measures of beliefs about randomness related to gambling, including erroneous statements about gambling randomness, superstition, and illusion of control, were assessed, as was gambling severity, measured by the Problem Gambling Severity Index (PGSI). Based on PGSI scores, participants were categorized into one of two gambling categories: 'non-gamblers and low-risk gamblers' (i.e., non-gamblers who did not gamble five or more times in the past year, non-problem gamblers scoring zero on the PGSI, and low-risk gamblers scoring 1 or 2 on the PGSI) and 'moderate to severe risk gamblers' (i.e., participants indicating three or more problem gambling symptoms according to the PGSI).

Key Findings

A cross-sectional relationship between gambling severity and gambling-related cognitions was observed with greater gambling severity being associated with increased endorsement of four of the seven mistaken cognitions assessed, and measures of superstition and illusion of control. Evidence for a bidirectional longitudinal relationship was observed with faulty gambling cognitions leading to later problematic gambling behaviors and vice versa when examining a total beliefs scale including subscales measuring superstition and illusion of control. When examining specific beliefs about randomness, initial gambling group membership predicted later endorsement of certain beliefs about randomness such as 'If you have been losing for a while, odds are you are due for a win,' 'If you flip a coin and get heads 5 times in a row, your next flip is likely to be tails,' and 'The odds of winning on a slot machine change as you are playing.' On the other hand, participants' initial belief ratings did not impact later gambling group membership.

Conclusions

Our study provides insight towards the development of increased problem gambling severity in light of related faulty gambling cognitions. The results of this study suggest a bidirectional relationship between gambling severity and erroneous gambling-related cognitions. However, over time, problem gambling severity leads to greater evidence of erroneous beliefs rather than erroneous beliefs leading to problem gambling. In light of these findings, choosing to target the treatment of erroneous beliefs as a means of preventing future problem gambling behaviors may have limited effectiveness given our finding that increased gambling severity leads to later faulty gambling cognitions.

Implications

An important implication of this study's findings pertains to the prevention and treatment of disordered gambling. Many intervention programs focus attention on challenging faulty gambling-related cognitions through intervention.¹⁵⁻¹⁸ The central assumption underlying these cognitive interventions assumes that the correction of erroneous beliefs will reduce problem gambling. These efforts to change cognitions have been successful in reducing problematic gambling behaviors as measured in the same testing session.¹⁵⁻²⁰ However, the true impact of such an intervention lies in the success of a program's ability to prevent future gambling disorders. The results of cognitive-behavioral treatment interventions have proved very promising with findings that 80% of problem gamblers successfully reduced their gambling to a non-problematic level after 12 months of treatment.¹⁵⁻¹⁸ Alternatively, efforts to prevent problem gambling behaviors by targeting cognitions have found limited success. A

review of current prevention programs, concluded that there are many prevention programs that provide marginal benefits, but there is no gold standard in gambling prevention.²⁰ Despite mixed findings of young adults having an accurate understanding of the probabilities and odds,²¹⁻²³ evidence does not suggest that statistical knowledge, or the awareness of true randomness, can protect people from developing faulty gambling cognitions.¹⁹ This suggests that prevention efforts may suffer from an overemphasis on the role of cognitions while minimizing the influence of other factors.

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This research was funded by the Manitoba Gambling Research Program of Manitoba Liquor & Lotteries; however, the findings and conclusions of this paper are those solely of the author(s) and do not necessarily represent the views of Manitoba Liquor & Lotteries.