THE VICTORIAN GAMBLING STUDY: A LONGITUDINAL STUDY OF GAMBLING AND HEALTH IN VICTORIA, 2008-2012 (2)

IMPROVED OUTCOMES FOLLOWING CONTACT WITH A GAMBLING HELPLINE: THE IMPACT OF GENDER ON BARRIERS AND FACILITATORS (4)

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PROBLEM GAMBLING AMONG ONTARIO STUDENTS: ASSOCIATIONS WITH SUBSTANCE ABUSE, MENTAL HEALTH PROBLEMS, SUICIDE ATTEMPTS AND DELINQUENT BEHAVIOURS (7)
The Victorian Gambling Study is the first large scale, general population longitudinal study of gambling behaviour conducted in Australia. It includes an examination of the number of new cases of problem gambling per year (incidence rate), gambling prevalence (in 2008), pathways to gambling risk categories, and the relationship between gambling risk and health.

Commencing in 2008 with 15,000 Victorian adult participants, data collection followed each year in what is referred to as ‘waves’. This fifth report includes findings on the gambling behaviour and health of the 3,701 Victorian adults who completed all four waves over four years.

Four previous reports have been published and can be accessed on the foundation’s website.

Initially funded by the Victorian government through the Department of Justice, the study transferred to the Victorian Responsible Gambling Foundation in 2012, and received ethics approval from the Department of Justice Human Research Ethics Committee.

The Victorian Gambling Study: a longitudinal study of gambling and health in Victoria 2008-2012

Rosa Billi, Christine A. Stone, Paul Marden and Kristal Yeung

What was the research?

The Victorian Gambling Study is the first large scale, general population longitudinal study of gambling behaviour conducted in Australia. It includes an examination of the number of new cases of problem gambling per year (incidence rate), gambling prevalence (in 2008), pathways to gambling risk categories, and the relationship between gambling risk and health.

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Initially funded by the Victorian government through the Department of Justice, the study transferred to the Victorian Responsible Gambling Foundation in 2012, and received ethics approval from the Department of Justice Human Research Ethics Committee.

How was the research conducted?

The research involved interviews with participants in four annual waves from 2008 to 2012.

Wave 1:

- The prevalence study was a cross-sectional study. It used computer-assisted telephone interviewing (CATI) via random digit dialling of 15,000 adults.
- Published in 2009, Problem Gambling from a Public Health Perspective is sometimes referred to as the ‘epi study’.
- Participants were screened for their level of gambling risk via a series of validated questions. The categories ranged from non-risk to problem gambler.

Waves 2-4:

- The study followed participants from wave 1 who consented to further research. Initially, 7,148 adults agreed to participate in the longitudinal study, however 5,003 of these adults participated in wave 2 and 5,620 participated in wave 3. A total of 3,701 adults participated in wave 4.
- Each wave consisted of annual CATI surveys which asked questions about gambling, health and wellbeing.

Qualitative study:

- A qualitative study was completed between waves 3 and 4 that consisted of face-to-face interviews with 44 participants.

Limitations of the research

- Apart from in its first year, the study was not looking at a random sample of Victorians. Therefore, findings from waves 2 to 4 are not representative of the general Victorian population.
- The study recruited very few numbers of people from cultural and linguistically diverse backgrounds or of Aboriginal or Torres Strait Islander descent. Therefore, there is no analysis available for these populations.
- The analysis of data collected from longitudinal studies takes time to complete and of course changes do occur in the world between the end of the study and findings coming out. Therefore, when findings are published, results may not be as relevant, depending on what may have changed.
- Data collection for this study occurred between 2008 and 2012. During that time and since, lots of changes have occurred in the gambling environment in Victoria. Especially note, there was a big and growing increase in advertising by online corporate bookmakers and the arrival of new devices which can be used to place online bets, like smart phones and tablets. The full impact of these changes is unlikely to be caught in the findings of this study.

What were key findings of the research?

This report includes some results which have been released in the four previous reports from the study, as well as additional findings from wave 1 and new findings from the analysis of all four waves of the study.
Key findings from wave 1, 2008

- In 2008, 73 per cent of adult Victorians participated in gambling. Note that this included a very wide range of activities, including lotteries, racing sweeps and even stock market day trading.
- 23 per cent of the population gambled more than weekly; 18 per cent several times per month; and 32 per cent less than monthly.
- The estimated problem gambling prevalence was 0.7 per cent. An additional 2.4 per cent were moderate-risk gamblers and 5.7 per cent were low-risk gamblers.
- 91 per cent of problem gamblers gambled on pokies; 34 per cent bet on races; 25 per cent gambled on table games; and 16 per cent bet on sports. Note that many problem gamblers gambled in more than one way and so were counted in each of these categories.
- 21 per cent of the general population gambled on pokies; 16 per cent bet on races; 5 per cent gambled on table games and 4 per cent bet on sports.

Problem gamblers have much lower social capital, poorer health status and were more likely to report negative life events such as death, divorce, retirement, injury and illness.

Key findings across the study from waves 1-4, 2009-2012

Moves in and out of problem gambling behaviour

- The estimated amount of new problem gamblers in a year (incidence rate) was 0.36 per cent. Therefore, a little over one third of problem gamblers in a year had not been problem gamblers the year before and just under two thirds of problem gamblers in a year had been problem gamblers the year before.
- Approximately two thirds of the new problem gamblers in a year were gamblers with a history of lifetime problem or pathological gambling. Therefore, most ‘new’ problem gamblers were actually people lapsing back into problem gambling after at least one year or more not doing so.
- Having a lifetime problem gambling risk emerged as the strongest predictor of problem gambling.

Demographic and health factors

- Moving over time to at-risk gambling (low risk, moderate risk or problem gambling) was associated with:
  - being male
  - speaking a language other than English
  - having year 10 education or less
  - showing signs of alcohol dependence
  - lifetime problem gambling risk and
  - anxiety and obesity.
- Being female was a protective factor for the development of higher risk gambling (moderate and problem gambling).
- The presence of any health condition in wave 1 was associated with a later occurrence of high risk gambling (moderate and problem gambling).
- Participants with anxiety were four times more likely to develop problem gambling.
- After adjusting for the effects of smoking and lifetime gambling risk, this was the only health condition associated with the development of problem gambling.

Types of Gambling

- For all participants, frequency of gambling on electronic gaming machines (EGMs) was associated with an increase in gambling risk in later waves.
  - This relationship was ‘monotonic’ meaning that for each increase in frequency of EGM participation, there was a corresponding increase in problem gambling risk.
  - For participants who had a previous history of problem or pathological gambling, this increase was more marked than those without this history.
- Frequency of race betting is also associated with an increased problem gambling risk.
  - However, this increase occurs at a particular threshold. This means that there was no direct increase according to frequency of betting, however betting above a certain frequency was associated to later development.

Movements between levels of gambling risk

Between wave 1 and wave 4:

- 93 per cent of zero-risk gamblers remained zero-risk gamblers (that is non gamblers and non-problem gamblers)
- 27 per cent of low-risk gamblers remained low-risk gamblers
- 35 per cent of moderate-risk gamblers remained moderate-risk gamblers
- 55 per cent of problem gamblers remained problem gamblers.

When considering transitions across the study:

- moderate risk gamblers have the greatest probability of transitioning to problem gambling (9%)”
- the probability of problem gamblers remaining problem gamblers is 71 per cent
- the probability that problem gamblers transition to moderate risk gambling is 22 per cent
- the probability that problem gamblers will become non gamblers is close to zero and
- the probability that problem gamblers will become non-problem gamblers is 3 per cent.

How this research might be useful?

This study suggests that problem gambling may be a long term condition, and likely to require long term support for recovery.

Movement in and out of the problem gambling risk state suggests that relapse appears to be common.

The study provides valuable insights into the behaviour of a large number of gamblers over time. It provides unprecedented findings for analysis into how gamblers change or don’t change their behaviour over time and provides detail about how other aspects of their lives may be affected by their gambling. Such a study cannot be definitive, however, when contextualised with other research, it can provide a solid and much better base of knowledge for those concerned with addressing problem gambling and reducing gambling-related harm.

In particular, the study suggests prevention and intervention programs should be targeted toward at risk groups. Risk factors include not speaking English as a first language, signs of alcohol...
dependence, a history of problem gambling, experiencing anxiety, and education up to year 10 or less. However, specific gambling behaviours and history also increase the likelihood of certain people entering into problem gambling. Moderate risk gamblers and those who have previously been problem or pathological gamblers are particularly at risk.

The presence of other health conditions is associated with progression to higher risk gambling, highlighting the need to work with other health sectors such as primary care, drug and alcohol and mental health.

This study provides a number of findings related to transitions and predictors which have not been undertaken before. These, along with other findings, require replication. Therefore, further research is required to confirm the findings in this study.

**Want to know more?**

The full report from the study is located [here](#).

**How to cite this research**


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### Improved outcomes following contact with a gambling helpline: the impact of gender on barriers and facilitators

Simone N. Rodda, Nerilee Hing and Dan I. Lubman

**What was the research?**

This research explores how someone’s gender influences their experience and outcomes from calls to Australian problem gambling helplines. The role of gender differences, as opposed to other demographic characteristics, was examined as a factor in barriers and facilitators in seeking help, as well as whether it affected outcomes.

This article is based on a larger study of help seeking for problem gambling funded by Gambling Research Australia, which was published as Gamblers at risk and their help seeking behaviour. The research was undertaken by a team led by Simone Rodda of Turning Point Alcohol & Drug Centre and Monash University.

**How was the research conducted?**

The researchers surveyed callers to problem gambling helplines capturing, demographic information, readiness to change, problem gambling level, frequency of gambling, barriers and facilitators to seeking help, usage of the helpline, reasons for seeking help and professional and non-professional help seeking behaviours before and after contacting the helpline.

In total, 350 participants were recruited from helpline services across Australia by helpline counsellors. However, there was considerable drop out between recruitment and surveying, with only 218 surveys completed. These surveys included both people with gambling problems and affected family members. This article uses data from 170 callers who had a gambling problem.

**What were key findings of the research?**

**Characteristics of helpline callers**

- Callers were more likely to be male than female. Approximately 60 per cent of callers were male.
- There were gender differences in the age of callers. Male callers were more likely to be aged under 30 than female callers, while female callers were more likely to be aged over 50. More than half of female callers were aged over 50.

**Gambling and gambling problems**

- Most of the sample (80%) gambled on gaming machines at least once a month. Male callers were more likely to gamble with betting agencies on track or to participate in sports betting or online gambling.
- Almost all (94%) participants were classified as problem gamblers on the Problem Gambling Severity Index (PGSI).
- A majority of participants had made changes to better control their gambling over the previous six months (56%) and over a longer period (28%).

**Calling the helpline**

- A majority of men (62%) sourced information about the helpline from gambling venues, compared with a lower percentage of women (43%). However, for women, venues were still the most common source of information about the gambling helpline. Women were also more likely to locate information about helplines from directories or the internet than men.
- The most frequent reasons for calling the helpline were for information (39%), referral to another service (32.9%) or for immediate telephone counselling (25%). There were no gender differences in reasons for contacting the helpline.
- The majority of participants were satisfied (32%) or extremely satisfied (61%) with their contact with the helpline. There were no gender differences in satisfaction with the helpline.
Barriers and facilitators to help-seeking

- Concern that gambling may develop into a major problem was the most frequently endorsed reason for calling the helpline, endorsed by almost all (97 per cent) participants.
- Other facilitators of seeking help or reasons to contact the helpline included negative emotions resulting from gambling (92 per cent) and financial problems (91 per cent).
- Male callers were more likely to report concerns that gambling would develop into a major problem, concerns over the welfare of others, and difficulty with their living situation as facilitators for contacting the helpline.

The most frequently endorsed barriers to contacting the helpline were a preference to solve the gambling issue on their own and feeling ashamed for themselves or their family.

- Male callers were more likely to delay contact with the helpline because of pride or denial there was a problem.

Outcomes of helpline contact

After contacting the helpline, 100 of the 170 participants engaged in further professional help.

- This included: face-to-face counselling (43 per cent); general help services, financial or relationship counselling (14 per cent); and peer support groups (9 per cent).
  - 19 per cent of callers said they had sought to self-exclude following their helpline call.
- Callers also sought help from significant others following their contact with the helpline.
  - 100 of the 170 callers sought help from partners, other family members or friends after speaking to the helpline.
- Only 10 per cent of callers did not seek some form of further help after their call to the helpline.
- Rates of professional help seeking and help seeking from significant others were similar for male and female callers.

How this research might be useful?

This study suggests that gender needs to be considered when providing assistance to people with gambling problems, and in the promotion of help services. For example, to encourage men to seek help for gambling problems, promotions of help services could target barriers of pride and denial, which are more common in male callers.

Findings suggest there may be subgroups of people with gambling problems (for example, younger men or women aged over 50) who may have different needs. Prevention programs could target these sub-groups to better address those at risk of developing gambling problems. Further research is needed to confirm these findings and inform future programs.

The lack of differences in outcomes for men and women is also of interest. Some of the previous research quoted in the study had suggested women were more motivated to change their behaviour after contact with the helpline. This study, while not measuring motivation, finds outcomes that show no gender difference.

This study would support an argument for paying closer attention to gender in terms of increasing the number of people who seek help through support services.

The results of this study are positive for gambling helplines, with high rates of satisfaction and a majority of callers getting further help after calling the helpline. However, it is possible that callers who did not have a positive experience with the helpline were less inclined to participate in the research.

This project should be viewed in the context of the larger study Gamblers at risk and their help seeking behaviour, which provides more information about help seeking behaviours and barriers and facilitators to seeking help.

Want to know more?
The full report from the study is located here.

How to cite this research
Gaming machine density is correlated with rates of help-seeking for problem gambling: a local area analysis in Victoria, Australia

Monica J. Barratt, Michael Livingston, Sharon Matthews and Susan L. Clemens

What was the research?

The study establishes an association between the number of poker machines in a local government area and the amount of harm generated from problem gambling. This was done after allowing for a range of other local factors that might influence levels of problem gambling.

The rate of face-to-face counselling for gambling related problems and the rate of telephone counselling for problem gambling were used to provide a way of measuring problem gambling related harm at a local government area level.

The research was conducted by a team led by Monica Barratt of the National Drug Research Institute at Curtin University. The study was funded by the Victorian Department of Justice via a grant from the Gambling Research Program and data was collected from 2006-2007.

How was the research conducted?

This study used a methodology called cross-sectional ecological design to investigate the extent to which the characteristics of a local government area were associated with rates of telephone and face-to-face counselling for problem gambling.

The local area characteristics examined included: gaming machine density, remoteness of the area (eg capital city suburb, small town regional, mostly rural etc), demographic features and socio-economic status, levels of social support available, alcohol accessibility and levels of drug and property crime. Assaults including domestic violence were also examined.

Data (collected from 2006-2007) was analysed from 77 local government areas in Victoria. Melbourne and Indigo were excluded due to their distinctive differences from other areas. Data from some small areas was merged. In the end, 70 local government areas were analysed.

Limitations of the research

Several limitations of the study should be noted.

- Problem gambling related harm at the local level was likely to be underestimated by using the rates of help seeking as a proxy measure, since only 8-15 per cent of problem gamblers sought help in Australia according to the Productivity Commission report in 2010.
- Results may be biased as the rates of help seeking were masked by a range of factors at the local level. Factors such as the accessibility of help services and actual help seeking behaviour (e.g. where people gambled or where they sought help) make the study possibly less accurate, though the researchers have attempted to control these factors.
- The cross-sectional design of the study means it cannot assess changes over time and thus make stronger statements about cause and effect. For example, it is difficult to assess whether in any given local government area, more harm is a direct consequence of the addition of EGMs.

What were key findings of the research?

This study confirmed the association between a higher density of machines being associated with a greater amount of harm.

Because the association between gaming machine density, expenditure and rates of self-identified problem gamblers was positive, the study supports the exposure model of gambling problems which suggests increased access to gaming results in increased problems.

Because the study looked at populations accessing help, it also produced important findings regarding the way different members of the population seek help.

- Lower socio-economic status was associated with higher rates of face-to-face counselling.
- Lower rates of personal wellbeing were associated with higher rates of telephone counselling.

Therefore, those with less resources preferred to speak personally with counsellors while those with deep or acute problems were more likely to access telephone counselling.

How this research might be useful?

This study was the first study to investigate the local distribution of telephone and face-to-face counselling as proxy measures of gambling-related harm. In doing so it supports previous research that has found a link between gaming machine density and problem gambling using gaming machine expenditure as a proxy measure of harm. It supports the continued examination of the impact that an increased amount of EGMs can have on a local population.

Findings related to the exposure model provides more knowledge to regulators who assess the impacts of applications for more machines in local areas.

Moreover, the findings of this study suggest that reductions in the rate of problem gambling-related harm at a local area level may be associated with reductions in gaming machine density. This has implications for policy makers who may be considering caps on the number of machines in given areas.
Finally, the findings about access to counselling underline the importance of providing face-to-face services for those in lower socio-economic groups and telephone counselling to those with immediate problems.

The principal implication of this study is to provide further confirmation that reductions in EGM density are likely to reduce gambling problems at a local area level.

Problem gambling among Ontario students: associations with substance abuse, mental health problems, suicide attempts, and delinquent behaviours

Steven Cook, Nigel E. Turner, Bruce Ballon, Angela Paglia-Boak, Robert Murray, Edward M. Adlaf, Gabriela Ilie, Wendy den Dunnen and Robert E. Mann

What was the research?

This study examines the relationship between gambling problems and substance use, mental health issues and delinquent behaviour among students in grades seven to 12 in Ontario. As such it is a study into gambling co-morbidities, looking into the relationship between gambling problems and other personal problems.

The research was conducted by the Centre for Addiction and Mental Health and the University of Toronto with funding from the Problem Gambling Institute of Ontario. The self-report questionnaires were administered to participating students by the Institute for Social Research at York University.

How was the research conducted?

The data for this study was derived from the 2009 cycle of the Ontario Student Drug Use and Health Survey (OSDUHS). This cross-sectional survey was administered to Ontario students enrolled in grades seven through 12. The 2009 survey employed a stratified, two stage cluster sample design where two classes were selected in middle schools (one in each grade from seven to eight) and four classes were selected in secondary schools (one in each grade from nine to 12).

The final number of students in this study was 4,851.

The survey included the following indicators:

Problem gambling —
- South Oaks Gambling Screen Revised for Adolescents (SOGSRA): Any student who answered positively to two or more of the six gambling indicators listed was classed as having a gambling problem.

Substance use problems —
- Alcohol Use Disorders Identification Test (AUDIT): Any student with a score of eight or more (out of 40) was considered to be drinking at a hazardous level.
- Severity of Dependence Scale (SDS) for cannabis: Any student who scored four or more (out of 15) indicated cannabis dependence.

Psychological distress —
- General Health Questionnaire (GHQ-12): Any student who scored three or more out of the 12 items listed was considered to be experiencing psychological distress. Students were also asked if they had ever considered or had attempted suicide in the last 12 months.

Delinquent behaviours:
- Students were asked questions about engaging in violent and non-violent delinquent behaviours in the last 12 months.

Limitations of the research

The following limitations should be considered when examining the findings:
- The results are based on self-reporting and therefore could be subject to bias from under or over reporting.
- The results were derived from a cross-sectional survey meaning causation cannot be inferred from the data.
- The study measured problems with gambling rather than pathological gambling. The definition for problems with gambling was broadly defined. Students had to answer positively to two gambling indicators to qualify as problem gamblers. Such a method is not unusual for youth studies but therefore means the results may not be comparable to other studies.

What were key findings of the research?

The results from this study demonstrate that substance use, psychological distress, thinking about or attempting suicide and delinquent behaviour are all important risk factors associated
with adolescent problem gambling. Moreover, problem gambling increases risk/severity in these other areas.

**Gambling problems**
- 2.8 per cent of students surveyed had a gambling behaviour problem, equating to approximately 20,500 Ontario students.
- One in 23 male students had a problem with gambling.
- Males were four times more likely than females to report problem gambling.
- Youth who reported participating in three or more types of delinquency over the past 12 months were 5.9 times more likely to meet the criteria for gambling.

**Substance use problems**

*Problem gamblers were three times more likely to report hazardous drinking than non problem gambling students*
- 21 per cent of students surveyed reported drinking at hazardous levels representing approximately 211,000 Ontario students.
- Problem gamblers were three times more likely to report hazardous drinking than non problem gambling students.
- 3 per cent of students surveyed reported cannabis dependence representing approximately 31,000 Ontario students.
- Problem gamblers were 11 times more likely to report cannabis dependence than non problem gambling students.

**Psychological distress**
- 30 per cent of students surveyed reported elevated psychological distress, representing 327,000 Ontario students.
- Problem gamblers were four times more likely to report psychological distress than non problem gambling students.
- 10 per cent of students surveyed reported considering suicide in the past 12 months representing 99,000 Ontario students.
- 2.8 per cent of students surveyed reported attempting suicide in the past 12 months representing 29,000 Ontario students.
- Students with gambling problems were four times more likely to consider committing suicide and 18 times more likely to attempt suicide than students without gambling problems.

**Delinquent behaviours**
- Problem gamblers were 3.4 times more likely to report fire setting, 19.6 times more likely to sell drugs, 4.8 times more likely to carry a weapon and 11.3 times more likely to participate in a gang fight then non problem gambling students.
- Overall, problem gamblers were 12.5 times more likely to be classified as delinquent than non problem gambling students.

**How this research might be useful?**

This study adds to the current research on adolescent problem gambling and co-morbidities and supports many previous conclusions regarding associations of certain behaviour and problems with gambling problems. The findings of this study demonstrate that adolescent gambling is associated with other risk factors including delinquent behaviour, substance use and psychological distress.

The results would support a broad approach that includes looking for gambling problems among youth reporting any of these behaviours. The severity of any of the problems may be exacerbated or even caused by gambling. Likewise, those identified with gambling problems may also have some of these other problems.

While this type of research cannot draw strong conclusions about whether, when or why problem gambling might be a cause of these other co-morbidities, it strengthens the knowledge that they are related. This makes a strong case for youth support services to conduct screening to identify these issues.

**Want to know more?**

The full report from the study is located [here](#).

**How to cite this research**