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Gambling participation and at-risk behaviour in problem gambling among Victorian adults

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Edited by Katharine Day Typeset by Lisa Carroll

#### Overview

This paper presents estimates of the prevalence of gambling participation (any expenditure on gambling activities in a typical month in 2015), annual gambling expenditure and gambling-related problems among Victorians aged 18 years and over, based on Wave 15 of the nationally representative Household, Income and Labour Dynamics in Australia (HILDA) Survey.<sup>1</sup>

#### Key messages

- One-third of Victorians (36%, or around 1,587,709 adults) spent money on gambling activities in a typical month in 2015.
- Victorian adults who gambled were mostly: male (55%); aged fifty or over (56%); Australian-born (75%); employed full-time (46%) or retired (25%); married or in a de facto relationship (62%); and living in a major city (74%).
- Lotteries were the most common activity to spend money on (76% of people who gambled or 27% of all Victorian adults), followed by electronic gambling machines (EGMs)/'pokies' (21% of people who gambled or 8% of all Victorian adults) and race betting (17% of people who gambled or 6% of all Victorian adults).
- Victorians who gambled spent an average of \$1,268 annually on gambling activities in 2015; EGMs accounted for the highest annual expenditure (\$1,288), followed by bingo (\$1,252) and race betting (\$1,211).
- Around 18% of Victorians who gambled (or 8% of all Victorian adults) were classified as being at risk of, or already experiencing, gambling-related problems.
- Future waves of the HILDA Survey will be analysed to measure changes in gambling participation and related problems over time.



<sup>1</sup> The HILDA Project was initiated and is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). Wave 15 was administered in 2015.

# Background

Gambling is a major public policy issue in Australia, affecting the health and wellbeing of many individuals and families in a range of ways. Recent estimates suggest that Australians lose approximately \$25 billion on legal forms of gambling every year, representing the largest per capita losses in the world (Queensland Government Statistician's Office, 2019). When we consider the social costs of gambling, including adverse impacts on emotional, physical, relationship and family wellbeing, estimates suggest the cumulative cost to be about \$7 billion in the state of Victoria alone (Browne et al., 2017). Further, gambling-related harms not only affect the people directly involved but also their families, peers and the wider community (Goodwin, Browne, Rockloff, & Rose, 2017).

This paper aims to improve understanding of gambling participation and related problems among adults living in Victoria, Australia. Findings presented here provide a baseline measure using Wave 15 of the nationally representative HILDA Survey; future waves of HILDA will provide representative, longitudinal data to explore gambling behaviours and related problems over time.

#### Method

This paper reports on data from the Self-Completion Questionnaire (SCQ) of Wave 15 (2015) of the HILDA Survey. This was the first wave to include a gambling module, canvassing participation, expenditure, and problems among people who gamble regularly. Among the 4,453 Victorian HILDA participants, a total of 3,807 completed the SCQ. The gambling module was completed by 3,763 of these Victorian participants (84.5% response rate), of which 3,602 were adults (aged 18 or older). This analysis focuses on adults because monetised gambling is illegal in Victoria for people under the age of 18 years.

Participants were asked whether they spent any money on 10 different gambling activities in a typical month (lotteries, instant scratch tickets, electronic gambling machines (EGMs), race betting, sports betting, keno, casino table games, bingo, private betting and poker). They also reported how much, on average, they spent on each gambling activity (per month; including money spent online and in land-based venues).

Risk or experience of gambling-related problems was measured via the Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001), a nine-item measure designed to capture risk or experience of gambling problems in the previous 12 months. Only those participants who responded to all of the nine PGSI items (n = 1,287) were included in analyses involving this measure.

In order to generalise findings to the Victorian population, HILDA Survey data were weighted to reflect the probability of households and individuals being selected into the survey, using the SCQ weighting values provided in the HILDA dataset. A detailed explanation of the methodology used for data collection and analysis can be found here: Armstrong & Carroll (2017) and Wooden & Wilkins (2017); and details about the weighting process are available here: Watson (2012).

# Key findings

# Prevalence of gambling among Victorian adults

The 2015 HILDA gambling module was completed by n = 3,602 Victorian participants (aged 18+). Of these, n = 1,298 participants (approximately 36%) reported having spent money on one or more gambling activities in a typical month in 2015 (i.e. gambled regularly); equivalent to approximately 1,587,709 adults in the state of Victoria. Table 1 provides a breakdown by sex and age.

**Table 1:** Completion of the Wave 15 HILDA gambling module, and the subsample who reported expenditure on one or more gambling activities

		Completed HILDA gambling module (N = 3,602)		Self-reported any expenditure on gambling (N = 1,298)		
Category		Sample size (n)	% of total	Sample size (n)	% of total	
Sex	Male	1,677	46.6	719	55.4	
	Female	1,925	53.4	579	44.6	
Age in years	18-29	832	23.1	132	10.1	
	30-49	1,232	34.2	437	33.6	
	50-64	867	24.1	415	32.0	
	65+	671	18.6	314	24.2	

#### Characteristics of Victorians who gamble

The characteristics of Victorian adults who reported having gambled in a typical month in 2015 are described below:

- Sex: 55% male; 45% female
- Age group: 10% 18-29 years; 34% 30-49 years; 32% 50-64 years; 24% 65+ years
- Relationship status: 62% married or de facto; 38% single
- Country of birth: 75% Australia
- Main language: 90% English
- Education: 40% completed <= Year 12; 38% Certificate or Diploma; 22% Bachelor's degree or higher</li>
- Employment: 46% employed full-time; 19% employed part-time; 25% retired; 8% unemployed, not looking for work; 2% unemployed, looking for work; 1% full-time student
- Main income source: 69% wage, salary or business; 22% government pension, allowance or benefit; 9% superannuation, annuity or investments
- Location of residence: 74% major city; 22% inner regional; 4% outer regional/remote
- Housing tenure: 20% own house outright; 55% own with mortgage; 22% rent.

Compared to the general Victorian adult population, people who reported regular gambling were more likely to: be male; be aged 50 and older (and less likely to be aged 18-29); be partnered (married/de facto); report an English-speaking background; be employed full-time or retired (and less likely to be employed part-time, studying full-time, or unemployed and looking for work); draw their main source of income from a pension, allowance or benefits; live outside a major city; and own their house outright or with a mortgage (see the Appendix on page 9).

#### Participation in different gambling activities

Table 2 provides the activity-specific sample sizes and population estimates for Victorian adults who spent money on gambling in a typical month in 2015.

Victorians who gambled in a typical month in 2015 (n = 1,298) most commonly spent money on lotteries (76%), EGMs (21%), race betting (17%), instant scratch tickets (12%) and sports betting (10%).

These findings equate to around 27% of all Victorian adults having spent money on lotteries in a typical month in 2015, followed by EGMs (8%), race betting (6%), instant scratch tickets (4%), and sports betting (4%).

Table 2: Participation in gambling activities among Victorian adults who gambled in a typical month in 2015

Activity	Sample (n)	Estimated number of Victorian adults who gamble [95% CI in '000]	% of the total Victorian adult population (%)	% of the Victorian adult population who gamble (%)
Lottery	988	1,214,072 [1,127,353-1,300,791]	27.2 [25.3-29.2]	76.5 [73.4-79.3]
Electronic gaming machines (EGMs)	275	340,554 [276,429-404,678]	7.6 [6.3-9.2]	21.5 [18.1–25.2]
Race betting	231	275,293 [223,773-326,812]	6.2 [5.1-7.4]	17.3 [14.5-20.6]
Instant scratch tickets	148	188,192 [135,975-240,409]	4.2 [3.2-5.5]	11.9 [9.0-15.5]
Sports betting	133	163,928 [116,848-211,008]	3.7 [2.8-4.9]	10.3 [7.9-13.5]
Bingo	47	48,920 [26,489-71,351]	1.1 [0.7-1.7]	3.1 [2.0-4.8]
Casino table games	32	40,342 [21,610-59,074]	0.9 [0.6-1.4]	2.5 [1.6-4.0]
Keno	28	34,921 [19,214-50,627]	0.8 [0.5-1.2]	2.2 [1.4-3.5]
Private betting	28	38,247 [19,111-57,383]	0.9 [0.5-1.4]	2.4 [1.4-4.0]
Poker	21	26,751 [13,436-40,067]	0.6 [0.4-1.0]	1.7 [1.0-2.8]
Any gambling	1,298	1,587,709 [1,494,635-1,681,783]	35.6 [33.5-37.7]	100.0

Notes: Percentages and CIs based on weighted data. Respondents reported spending money on one or more activities.

### Number and combination of gambling activities

Estimates suggest that around two-thirds (67%) of Victorian adults who gambled (or around 23% of all Victorian adults) spent money on one (sole) gambling activity in a typical month in 2015. One in five adults who gambled (22%; or 8% of all Victorians) spent money on two gambling activities and the remaining 11% (or 4% of all Victorians) spent money on three or more different gambling activities in a typical month in 2015.

The combination of activities that people reported spending money on is presented in Table 3 on page 5. For example, among people who reported having spent money on EGMs in a typical month in 2015, 54% also spent money on lotteries, 21% on scratch tickets, 20% on race betting, and 11% on sports betting.

Table 3: Combination of gambling activities

	Participation in other activities (%)						
Activity (n)	Lottery	Scratch tickets	EGMs	Race betting	Sports betting	Casino table games	Bingo
Lottery (988)	-	10.2	15.2	11.7	5.9	1.6	1.8
Instant scratch tickets (148)	66.0	-	38.5	17.0	6.3	4.9	2.4
EGMs (275)	54.3	21.3	-	20.1	10.7	6.0	4.4
Race betting (231)	51.6	11.6	24.9	_	29.4	4.6	1.6
Sports betting (133)	43.7	7.3	22.2	49.4	_	9.1	2.2
Casino table games (32)	48.0	22.6	50.5	31.4	37.0	-	0.0
Bingo (47)	45.5	9.2	30.4	9.2	7.3	0.0	_

Notes: Percentages based on weighted data and to be read across rows. Data for Keno, private betting and poker are not included due to small sample sizes (<30). Caution should be exercised when interpreting numbers for casino table games and bingo.

#### Expenditure on different gambling activities

Estimates of annual expenditure were calculated by multiplying regular gamblers' self-reported typical monthly spend by 12.2 Victorian adults who gambled reported spending \$1,268, on average, on gambling activities in the previous 12 months in 2015 (Table 4).

Among participants who reported spending money on each activity, EGMs accounted for the highest average annual expenditure (\$1,288), followed by bingo (\$1,252) and race betting (\$1,211).

Table 4: Average annual expenditure on activities by Victorian adults who gamble

Activity	Valid sample size (n)	Average annual expenditure (interquartile range) (\$)	95% CI for mean (\$)
EGMs	272	1,288 (240-1,200)	(999-1,577)
Bingo	46	1,252 (312-1,800)	(740-1,765)
Racing	228	1,211 (240-1,200)	(935-1,488)
Casino table games	31	1,082 (240-1,200)	(684-1,481)
Sports	129	768 (240-600)	(556-981)
Lottery	977	734 (240-960)	(658-810)
Instant scratch tickets	148	238 (60-240)	(156-320)
Any gambling	1,284	1,268 (240-1,200)	(1,144-1,393)

Notes: Values based on weighted data and capped expenditure. Expenditure calculations exclude participants who reported 'any spend' in a typical month but had missing values for expenditure. Keno, private betting and poker are not included due to small sample sizes (<30). Caution should be exercised when interpreting numbers for casino table games and bingo.

<sup>2</sup> The estimates do not represent *total gambling* expenditure for the year, which would include amounts from higher and lower spend months, or expenditure on activities where participation was less often than monthly. Please note that to reduce the impact of outliers on estimates of gambling expenditure, estimates were winsorised, whereby values were capped at the top and bottom 1%.

#### Gambling-related problems

According to the PGSI, an indicator of gambling-related problems, a total of 226 Victorian adults who gambled regularly (around 18% of the sample) were classified as being at some risk of, or already experiencing, gambling-related problems (low-risk, moderate-risk and problem gamblers with PGSI scores 1+); equivalent to around 276,567 Victorian adults (Table 5). Among Victorian adults who gamble, approximately 9% were classified as low risk, 6% as moderate risk and 3% as problem gamblers.<sup>3</sup>

Table 5: Prevalence of at-risk gambling among Victorian adults who gambled a

Risk group	Victorian adults who gambled ( <i>n</i> )	% of Victorian adults who gambled [95% CI] (N = 1,287)	Estimate for Victorian adults [95% Cl in '000]	% of Victorian adult population [95% CI] (N = 3,555)
Non-problem gambler	1,061	82.4 [79.5-85.0]	1,294,517 [1,215-1,374]	29.4 [27.6-31.3]
Low-risk gambler	113	9.1 [7.4-11.2]	143,280 [111-175]	3.3 [2.6-4.1]
Moderate-risk gambler	74	5.9 [4.3-8.1]	92,716 [62-124]	2.1 [1.5-2.9]
Problem gambler	39	2.6 [1.7-3.8]	40,571 [24-57]	0.9 [0.6-1.4]
Any risk/experience	226	17.6 [15.1-20.5]	276,567 [227-326]	6.3 [5.3-7.5]

Notes: Percentages based on weighted data. 'Any risk/experience' includes low-risk, moderate-risk and problem gamblers. Percentages may not total 100% due to rounding. <sup>a</sup> One-third (36%; *n* = 1,287) of Victorian HILDA participants, who responded to all PGSI items, reported having gambled in a typical month in 2015.

Table 6 presents further detail regarding PGSI risk group distribution within each gambling activity. Approximately two in five participants who reported spending money on EGMs (42%) and sports (43%), and one in three who spent money on casino table games (39%) and race betting (36%), were classified as being at risk of gambling-related problems. Participants, however, often reported having engaged in multiple activities (as described earlier), and further analysis is required in order to draw meaningful conclusions regarding the distribution of risk categories across gambling activities.

Table 6: Proportion of Victorian adults who gamble on each activity, by PGSI risk category

	Risk group (%)				
Activity	Non-problem [95% CI]	Low risk [95% CI]	Moderate risk [95% CI]	Problem gambler [95% CI]	Any risk [95% CI]
Lottery	85.8 [83.2-88.3]	7.7 [6.1-9.2]	4.4 [2.6-6.1]	2.2 [1.3-3.1]	14.2 [11.7-16.8]
Instant scratch tickets	79.8 [71.9-87.8]	7.8 [2.9-12.7]	9.9 [5.0-14.9]	np	20.2 [12.2-28.1]
EGMs	57.1 [50.8-63.4]	18.5 [11.7-25.4]	16.3 [10.9-21.7]	8.1 [4.9-11.3]	42.9 [36.6-49.2]
Race betting	64.4 [55.6-73.2]	17.9 [12.9-23.0]	12.1 [6.1-18.0]	5.6 [1.2-9.6]#	35.6 [26.8-44.4]
Sports betting	57.5 [48.0-67.0]	20.6 [12.3-28.9]	14.1 [6.2-22.0]	7.8 [3.7-11.9]	42.5 [33.2-52.0]
Casino table games	61.0 [41.1-80.9]	np	16.9 [1.2-32.7]#	17.3 [4.3-30.3]#	39.0 [19.1-58.9]
Bingo	81.2 [70.0-92.3]	9.5 [0.7-18.3]#	np	np	18.8 [7.6-30.0]#
Overall	82.1 [79.4-84.8]	9.3 [7.3-11.3]	6.1 [4.2-7.9]	2.6 [1.6-3.6]	17.9 [15.2-20.6]

Notes: Percentages based on weighted data. 'Any risk' includes low-risk, moderate-risk and problem gambler. Percentages for first and last columns may not total 100% due to rounding. Data for Keno, private betting and poker are not included due to small sample sizes (<30). For the same reason, caution should be exercised when interpreting numbers for casino table games and bingo. # Relative Standard Error (RSE) between 30% and 50%; np = data not presented due to small sample size or RSE >50%.

<sup>3</sup> Another recent study (Browne et al., 2016; Victorian Responsible Gambling Foundation (VRGF), 2017) found that low- and moderate-risk gamblers account for 85% of gambling harm in Victoria, and although harm from problem gambling is the most severe, harm from low- and moderate-risk gambling causes a greater burden on the community because the number of people affected is much greater.

# Comparison with national estimates

Findings for Victoria are largely consistent with the national HILDA data (Armstrong & Carroll, 2017; Wooden & Wilkins, 2017). Estimates suggest that around 36% of Victorian adults (39% of Australian adults) spent money on one or more gambling activities in a typical month in 2015.

Estimates for the overall adult population suggest that the most common gambling activity to spend money on in a typical month was lotteries (27% of Victorian adults; 30% Australian adults). This was followed by expenditure on EGMs (8%), races (6%), scratch tickets (4%) and sports (4%) in Victoria, and by scratch tickets (9%), EGMs (8%), races (6%) and sports (3%) among all Australian adults.

On average, past-year expenditure on gambling per regular participant was estimated as \$1,268 for Victoria, similar to \$1,272 among Australian adults. There were some (non-significant) differences between Victoria and Australia in terms of highest spend on different activities but the magnitude was generally the same. For instance, annual average expenditure by Victorian adults on EGMs was \$1,288 (\$1,292 Australia), bingo \$1,252 (\$863 Australia), racing \$1,211 (\$1,308 Australia), poker \$1,125 (\$1,785 Australia), and sports \$768 (\$1,032).

In terms of gambling-related problems, around 18% of Victorians who gambled (or 8% of all Victorian adults) were classified as being at risk of, or already experiencing, gambling-related problems (PGSI score 1+). This reflects potential harm among the broader Australian population, with a similar 8% (or 1.39 million Australian adults) estimated to have experienced one or more gambling-related problem in 2015.

### Summary

This paper has provided baseline estimates of gambling participation, expenditure and related harm among adults residing in the state of Victoria, Australia.

Key findings revealed that one-third of Victorian adults (36% or around 1,587,709 adults) spent money on gambling in a typical month in 2015. Around half were male (55%), aged fifty or over (56%), and employed full-time (46%).

Among those who gambled, the most common activities to spend money on were lotteries (76%), EGMs (21%) and race betting (17%), with an average of \$1,268 spent annually per person on gambling in 2015. Around one in five Victorians (18%) who gambled were classified as being at risk of, or already experiencing, gambling-related problems.

The gambling module in the 2015 HILDA Survey provided a unique opportunity to examine different aspects of regular gambling activity and related harm among Australian adults. The descriptive statistics and population estimates presented in this report will help to inform future research and policy development in Victoria (and nationally), and future waves of the HILDA Survey will be analysed to measure changes in gambling behaviours and related harm over time.

#### **Declaration of Interest**

The Australian Gambling Research Centre (AGRC) was established under the *Commonwealth Gambling Measures Act 2012* and has been in operation since 1 July 2013. It is situated within the Australian Institute of Family Studies (AIFS), a statutory research agency of the Australian Government.

# **Acknowledgements**

This research was funded by the Victorian Responsible Gambling Foundation (VRGF). Special thanks go to Rosa Billi and Kristal Yeung at the VRGF for their support and guidance throughout the research process, and to our current and former AGRC colleagues who have contributed to this project, namely Andrew Armstrong and Megan Carroll.

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# **Appendix**

**Table A1:** Socio-demographic profile of the Victorian adult population and subpopulation of people who gamble

Subpopulation categories	Victorian adults (%)	Victorian adults who gamble (%)
Sex		
Male	48.4	55.4↑
Female	51.6	44.6↓
Age group		
18-29	23.1	10.1↓
30-49	33.8	33.6
50-64	24.0	32.0↑
65+	19.1	24.2↑
ndigenous status		
Non-Indigenous	99.0	99.0
Indigenous	1.0	1.0
Region of birth		
Australia	72.2	74.7
Europe/Asia	7.3	8.5
Oceania/Africa/Middle East/Americas	20.5	16.7↓
anguage spoken at home		
English	86.5	89.7↑
Other	13.5	10.3↓
lighest education level		
Below Year 10	9.1	10.0
Completed Year 10	13.2	16.8↑
Completed Year 12	15.9	12.7↓
Certificate or diploma	32.9	38.4↑
Bachelors or higher	28.9	22.1↓
Employment		
Employed full-time	41.3	46.0↑
Employed part-time	22.5	18.6↓
Unemployed - looking for work	3.0	1.8↓
Retired	19.5	24.6↑
Full-time student	3.6	0.8↓
Unemployed - not looking for work	10.0	8.2
Relationship status		
Married/in a de facto relationship	54.4	62.2↑
Single	45.6	37.8↓

Table continued over >

Subpopulation categories	Victorian adults (%)	Victorian adults who gamble (%)
Household composition		
Single adult household	12.7	14.6
Dual adult household	23.0	26.7
Household with children	28.7	25.3
Large adult household	35.5	33.4
Housing tenure		
Own outright	19.3	20.5
Own with mortgage	52.9	54.9
Rent	25.2	21.7↓
Remoteness		
Major city	77.1	73.7↓
Inner regional	19.4	21.8↑
Outer regional/remote	3.5	4.4↑
SEIFA quintile		
Lowest	14.2	15.3
2	17.6	18.3
Middle	23.1	23.4
4	26.5	25.2
Highest	18.6	17.8
Main source of household income		
Wages/salary/business	73.5	69.1↓
Government pension, allowance, benefit	17.6	21.6↑
Superannuation, annuity or investments	8.8	9.2

Notes: Percentages based on weighted data. Percentages may not total 100% due to rounding.  $\uparrow$  and  $\downarrow$  are used to indicate values significantly above or below the general Victorian adult population at p < .05.