Insights on Canadian Society

Who gambles and who experiences gambling problems in Canada

by Michelle Rotermann and Heather Gilmour

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Overview of the study

Gambling is common in Canada, as it is in many other countries. The majority of people who gamble do so without harm, but a minority will be adversely affected. The availability of gambling opportunities in Canada has been increasing over time, and the introduction of new gambling technologies, such as online poker and sports betting, has amplified the importance of more regular and detailed monitoring.

This study examines gambling and gambling problems among people aged 15 or older, using data from the 2018 Canadian Community Health Survey (CCHS), Gambling Rapid Response. The Canadian Problem Gambling Index, which assesses problem gambling behaviour and consequences of that behaviour for the individual or others, is used to identify those who are at risk of problem gambling.

- Nearly two-thirds (64.5%) of Canadians aged 15 or older (18.9 million) reported gambling in the past year, and 1.6% of past-year gamblers (304,400) were at a moderate-to-severe risk of problems related to gambling.

- In all age groups, males were more likely than females to report past-year gambling. Males were also more likely to be at moderate-to-severe risk of problems related to gambling.

- Higher percentages of non-immigrants (69.7%) reported gambling in the past year, compared with immigrants (51.9%). South Asian (39.8%), Chinese (45.6%) and Black (56.6%) people were less likely to report gambling in the past year than those who were White (69.1%).

- Indigenous people reported higher rates of gambling in the past year than non-Indigenous people (72.4% versus 64.2%) and were more likely to be at moderate-to-severe risk for gambling problems (4.5% versus 1.5%).

- People from lower-income households were less likely to gamble than those from higher income households, but they were more vulnerable to gambling problems. For example, 71.5% of Canadians from the highest income households reported gambling in the past year, and 1.1% were at moderate-to-severe risk for gambling problems. Of those from the lowest-income households, 53.8% gambled in the past year, with 2.7% at moderate-to-severe risk for gambling problems.

- Number of gambling activities played increased the risk for gambling-related problems.

- Most characteristics remained independently associated with problem gambling in the multivariable analysis, including participating in multiple types of gambling activities, being unmarried (single, or divorced or separated), and having fair or poor mental health.

Introduction

Gambling is common in Canada,[1] as it is in many other countries.[2] The majority of people who gamble do so without harm, but a minority will be adversely affected.[3]

People gamble for many reasons—typically for social or recreational ones.[4] At the same time, loneliness can be an important factor in the development of problem gambling.[5] Most gamblers feel that it is beneficial, but problem gamblers are much more likely than non-problem gamblers to identify winning money as their main motivation.[6]

When gambling becomes a problem, both the person who gambles and their family are negatively affected. Gambling problems can lead to marital breakdown, bankruptcy or financial hardship, suicide, crime, reduced health and increased use of alcohol and other substances.[7]

Problem gambling (more recently referred to as a gambling disorder in the Diagnostic and Statistical Manual of Mental Disorders)[8] is now recognized as a public health concern, which could help ensure that people who need treatment can get it. It has been estimated that the gambling-related burden of harm is similar in magnitude to the harm attributed to major depressive disorder, or alcohol misuse and dependence.[9]

There has been an ongoing concern that the COVID-19 pandemic has negatively impacted the mental health of Canadians. Problem gambling is a form of addiction; the stress and disruption caused by the pandemic may influence gambling activities, along with alcohol and drug consumption. Although it is too early to determine, access to a wide range of gambling platforms and sites, in the context of increased amount of time spent online during the pandemic,[10] could be associated with increased risks of problem gambling.

Most information about gambling in Canada comes from provincial surveys. The national data available are very limited and not current (CCHS Mental Health 2002). In 2018, the CCHS-Gambling Module was collected to address this data gap.

A better understanding of the characteristics and factors associated with people who gamble—and the minority who experience gambling-related problems—could help with the development of more effective education, prevention and treatment strategies. This is especially important in the context of evolving gambling technologies and legislative framework. For example the *Safe and Regulated Sports Betting Act*[11] legalized single-event sports

Table 1

Prevalence of gambling in the past year, by sex and selected charateristics, household population aged 15 or older, Canada excluding territories, 2018

Characteristics	Total				Men (ref.)				Women			
			95% confidence interval				95% confidence interval				95% confidence interval	
	Number '000	%	from	to	Number '000	%	from	to	Number '000	%	from	to
Total	18,885.9	64.5	63.4	65.6	9,841.8	68.8	67.2	70.3	9,044.1	60.4‡	58.8	61.9
Age group												
15 to 24	1,776.9	43.9*	40.7	47.2	995.3	47.9*	43.3	52.6	781.6	39.7*‡	35.1	44.4
25 to 44	6,251.9	64.6*	62.5	66.5	3,357.7	69.1*	66.1	72.0	2,894.2	60.0*‡	57.3	62.6
45 to 64 (ref.)	7,152.1	72.3	70.4	74.1	3,694.6	76.3	73.9	78.6	3,457.6	68.5‡	65.6	71.2
65 or older	3,705.0	65.4*	63.6	67.1	1,794.2	70.8*	68.1	73.4	1,910.8	60.9*‡	58.6	63.2
Province												
Newfoundland and Labrador	317.5	74.6*	69.7	79.0	156.1	75.4*	68.4	81.3	161.5	73.9*	67.3	79.6
Prince Edward Island	81.3	67.4	62.3	72.1	40.3	70.2	62.2	77.1	41.0	64.9*	57.8	71.4
Nova Scotia	511.2	66.9	63.6	70.0	256.4	69.8	64.5	74.7	254.8	64.2	59.3	68.8
New Brunswick	437.2	72.1*	66.7	77.0	210.9	72.4	64.7	78.9	226.3	71.9*	66.0	77.1
Quebec	4,712.1	69.1*	67.1	71.0	2,464.9	72.8*	69.8	75.7	2,247.1	65.4*‡	62.7	68.0
Ontario (ref.)	7,130.7	62.2	60.0	64.4	3,730.8	67.2	64.2	70.1	3,399.9	57.5‡	54.4	60.5
Manitoba	625.7	63.0	59.1	66.8	316.1	65.8	60.1	71.1	309.6	60.4	55.0	65.6
Saskatchewan	613.6	70.9*	67.1	74.3	330.6	76.9*	71.9	81.3	283.0	64.9‡	59.1	70.3
Alberta	2,195.3	64.6	62.1	67.0	1,190.9	70.7	67.1	74.1	1,004.4	58.6‡	55.1	61.9
British Columbia	2,261.3	59.0	56.3	61.8	1,144.8	61.7*	57.3	65.8	1,116.6	56.6	53.1	60.0

Table 1

Prevalence of gambling in the past year, by sex and selected charateristics, household population aged 15 or older, Canada excluding territories, 2018

Characteristics	Total Number '000	Total %	Total 95% CI from	Total 95% CI to	Men (ref.) Number '000	Men (ref.) %	Men (ref.) 95% CI from	Men (ref.) 95% CI to	Women Number '000	Women %	Women 95% CI from	Women 95% CI to
Household income quintile												
1 (lowest 20%)	2,895.6	53.8*	51.0	56.6	1,353.7	56.6*	52.1	61.0	1,541.9	51.6*	48.0	55.1
2	3,412.5	63.0*	60.4	65.5	1,812.3	68.4*	64.4	72.0	1,600.2	57.8*‡	53.9	61.7
3	3,624.4	68.0*	65.4	70.5	1,888.6	71.6	68.2	74.8	1,735.8	64.4‡	60.9	67.8
4	3,871.9	69.1	66.7	71.4	2,035.1	72.9	69.5	76.1	1,836.8	65.3‡	62.1	68.4
5 (highest 20%)(ref.)	3,993.7	71.5	69.3	73.6	2,189.6	74.9	71.9	77.8	1,804.1	67.7‡	64.5	70.8
Marital status												
Married or common-law (ref.)	12,052.2	67.6	66.2	69.0	6,541.7	73.1	71.1	75.0	5,510.5	62.1‡	60.1	64.0
Single (never married)	4,384.7	55.6*	53.4	57.8	2,413.0	57.8*	54.7	60.8	1,971.7	53.1*‡	50.0	56.3
Separated or divorced	1,634.4	73.2*	70.2	76.0	693.0	78.3*	73.9	82.0	941.4	69.9*‡	65.8	73.7
Widowed	782.6	60.5*	57.1	63.8	170.8	64.2*	56.4	71.4	611.8	59.5	55.7	63.2
Immigration status												
Non-immigrant (ref.)	14,363.7	69.7	68.5	70.8	7,306.4	73.1	71.5	74.6	7,057.4	66.4‡	64.9	68.0
Immigrant	4,291.4	51.9*	49.2	54.5	2,441.5	59.1*	55.2	62.8	1,850.0	44.7*‡	41.3	48.2
Years since immigration: <= 10	1,041.3	43.1*	37.8	48.6	643.4	51.8*	44.4	59.2	397.9	33.9*‡	27.5	41.0
Years since immigration: > 10	2,893.2	58.5*	55.4	61.6	1,591.1	65.5*	60.9	69.7	1,302.1	51.8*‡	47.7	56.0
Sexual orientation												
Heterosexual (ref.)	17,868.5	65.0	63.9	66.1	9,353.1	69.3	67.7	70.9	8,515.4	60.8‡	59.2	62.4
Sexual minority	553.4	59.5	53.0	65.7	308.6	64.3	53.8	73.5	244.8	54.5	47.0	61.8
Indigenous identity												
Non-Indigenous (ref.)	17,826.3	64.2	63.1	65.3	9,317.9	68.8	67.1	70.4	8,508.5	59.9‡	58.3	61.4
Indigenous	779.2	72.4*	68.3	76.2	391.6	74.1	67.5	79.8	387.6	70.8*	65.1	76.0
First Nations living off reserve (single identity)	406.1	76.0*	69.5	81.5	204.9E	78.6*	68.5	86.1	201.2	73.6*	64.4	81.1
Métis (single identity)	324.0	69.6	62.9	75.5	162.8	70.6	60.7	78.8	161.2	68.6	58.7	77.1
Inuit (single identity)	13.4E	72.3E	40.0	91.1	F	F	…	…	F	F	…	…
Racialized group												
White only (ref.)	14,451.6	69.1	68.0	70.2	7,292.8	72.9	71.2	74.5	7,158.9	65.7‡	64.2	67.1
South Asian only	599.1	39.8*	33.7	46.3	412.4	52.6*	42.9	62.2	186.7	25.9*‡	19.2	33.9
Chinese only	583.5	45.6*	38.8	52.5	309.9	52.3*	41.7	62.7	273.6	39.8*	31.2	49.0
Black only	424.7	56.6*	47.8	64.9	262.1E	65.1	52.2	76.1	162.7E	46.7*‡	36.5	57.2
Other	1,761.0	53.6*	49.3	57.8	1,019.9	59.4*	53.1	65.4	741.1	47.2*‡	41.6	52.9
Self-perceived mental health												
Fair or poor	1,448.8	61.7	57.9	65.5	9,209.6	69.2*	67.6	70.9	8,180.6	60.2‡	58.6	61.8
Good, very good or excellent (ref.)	17,390.1	64.7	63.5	65.8	619.6	62.7	56.6	68.4	829.2	61.1	56.1	65.8
Daily smoker												
Yes	2,575.3	76.8*	74.0	79.4	1,490.9	77.1*	72.8	80.9	1,084.5	76.4*	73.0	79.5
No (ref.)	16,309.7	62.9	61.7	64.0	8,351.0	67.5	65.7	69.2	7,958.7	58.7‡	57.1	60.3
Heavy drinking												
Yes	4,448.2	77.2*	75.2	79.2	2,706.0	79.4*	76.8	81.8	1,742.2	74.1*‡	70.8	77.2
No (ref.)	14,350.9	61.4	60.2	62.6	7,095.8	65.5	63.6	67.4	7,255.1	57.8‡	56.2	59.5

… not applicable
E use with caution
F too unreliable to be published
* significantly different from the reference category (ref.) (p < 0.05)
‡ significantly different from the corresponding estimate for men (p < 0.05)
Note: Because of small sample size, estimates pertaining to multiple-identity Indigenous people were too unreliable to be published (F) and were removed from the table. Information about Indigenous status was not available. Racialized group of the respondent was based on responses to: "You may belong to one or more racial or cultural groups on the following list. Are you White, South Asian, etc.?" The Other category includes those who identified multiple racial or cultural origins, other racial or cultural origin, as well as less common racialized groups, e.g., Middle Eastern only or Korean only. This variable excludes all respondents who identify as Indigenous. More recent iterations of the Canadian Community Health Survey include variables about population groups designated as visible minorities based on the Employment Equity Act, which defines visible minorities as "persons, other than Aboriginal peoples, who are non-Caucasian in race or nonwhite in colour." Heavy drinking refers to males who reported having five or more drinks, or women who reported having four or more drinks, on one occasion, at least once each month in the past year.
Source: Statistics Canada, Canadian Community Health Survey, 2018 Gambling Rapid Response.

betting in Canada in 2021 and led to the launch of Ontario's iGaming market in April 2022.

Two-thirds of Canadians reported gambling in the past 12 months

Gambling can take many forms, such as buying instant lottery tickets, betting at a casino table, playing at electronic gambling machines or sports betting (see Data sources, methods and definitions for a complete list). In the 2018 Canadian Community Health Survey–Gambling Rapid Response (CCHS–GAM RR), respondents who reported any of these activities at least once in the past 12 months were considered to have gambled.

According to the 2018 CCHS–GAM RR, nearly two-thirds (64.5%) of Canadians aged 15 or older (18.9 million) reported gambling[12] at least once in the past year.

People aged 45 to 64 were the most likely to have gambled in the past year (72.3%), while those aged 15 to 24 were the least likely (43.9%) (Table 1). In all age groups, males were more likely than females to report past-year gambling.

In 2018, nearly three-quarters (74.6%) of residents of Newfoundland and Labrador, and about 7 in 10 residents of New Brunswick (72.1%), Saskatchewan (70.9%) and Quebec (69.1%) reported having gambled in

the past year. By contrast, residents of Ontario (62.2%) and British Columbia (59.0%) reported lower-than-average participation. It is likely that gambling rates across Canada reflect sociodemographic, cultural and interprovincial variation in access to casinos, race tracks, Video Lottery Terminals, and lotteries.

The percentage of Canadians who reported gambling in the past year differed by household income. Those with the highest income (top 20% of the income distribution) were more likely to have gambled than those with lower incomes (households in the three lowest income quintiles). Other studies have also found that gambling participation increases with income.[13]

Chart 1

Average household expenditure on games of chance per year, and spending on games of chance as percentage of total annual household expenditures, by income quintile, Canada, excluding territories, 2019
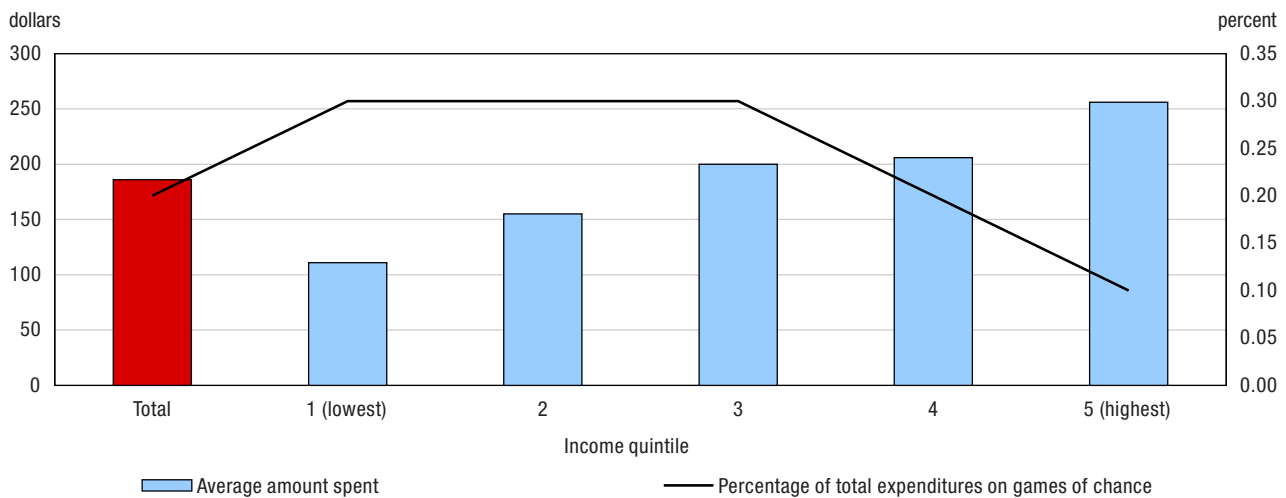
Note: All households ranked from lowest to highest, according to the value of their before-tax income. The ranked population is then divided into five groups of equal numbers of units (quintiles). Games of chance include government-run lotteries and other games of chance. The expenditure figures are not adjusted for any winnings. As well, households consistently under-report the amount of money they spend on gambling. Comparisons with Lottery Corporation figures, for example, have shown that households under-report their government lottery purchases by more than 50%.
Source: Statistics Canada. Table 11-10-0223-01 Household spending by household income quintile, Canada, regions and provinces; available at: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110022301.

The 2018 CCHS-GAM RR did not collect information about the amount spent on gambling. However, data from the Survey of Household Spending suggest that wealthier households spend more on gambling (in absolute terms) than those with lower income (Chart 1). For example, in 2019, the highest-income households (Quintile 5) spent an average of $256 on games of chance each year, while the lowest-income households (Quintile 1) averaged $111. On the other hand, lower-income households have smaller discretionary incomes (that is, whatis left over from disposable income after payment for rent or mortgage, transportation, food, utilities, and other essential goods and services), so more modest spending on games of chance accounts for a larger share of total spending by lower-income households (0.3% of Quintile 1 versus 0.1% of Quintile 5 total household expenditures).

Immigrants may have different gambling behaviours than non-immigrants. For example, US research has shown that the prevalence of gambling and problem gambling is lower among first-generation immigrants than that of native-born Americans.[14] Similar results were observed in Canada.

In 2018, higher percentages of non-immigrants (69.7%) reported gambling in the past year compared with recent immigrants, who landed 10 years ago or less (43.1%) and longer-term immigrants, who arrived more than a decade ago (58.5%).

White people (69.1%) were more likely to have reported gambling in the past year than South Asian (39.8%), Chinese (45.6%) and Black (56.6%) people. This association remained largely the same when income level was taken into account. For example, among individuals with the highest income (top 40% of the income distribution), White people (71.8%) were more likely to have gambled in the past year than those who were South Asian (53.9%), Chinese (57.2%) and members of "Other" (60.9%) populations.[15] Black Canadians (71.5%) were as likely to have gambled in the past year as White Canadians (data not shown).

Several studies in Canada, the United States and New Zealand have previously found that Indigenous populations were more likely to gamble than non-Indigenous people.[16] Reasons have been proposed for this difference, including cultural beliefs, increased exposure to gambling, and gambling as a temporary way to escape from or cope with the effects of racism and trauma.[17] Poverty and neighbourhood disadvantage are additional factors related to problem gambling.[18]

Data from the CCHS–GAM RR is largely consistent and finds that a greater proportion of Indigenous people overall (72.4%) reported gambling in the past year, compared with their non-Indigenous counterparts (64.2%). There were also differences between identity groups. For example, gambling rates among First Nations males (78.6%) and females (73.6%) were higher than those reported by the non-Indigenous population.

Gambling was also more common among those who smoked daily and who reported heavy drinking. Specifically, over three-quarters of people who reported smoking cigarettes daily (76.8%) or drinking alcohol excessively (77.2%) also reported gambling. The corresponding estimates for non-daily smokers (62.9%) and less frequent drinkers (61.4%) were lower.

By contrast, rates of past-year gambling did not differ by sexual orientation or by self-perceived mental health status.

Just over half of Canadians bought a lottery or raffle ticket in the past year

Some gambling activities were more popular than others. In 2018, over half of Canadians had bought a lottery or raffle ticket (51.8%) in the past year, and one-third (33.0%) reported buying or playing instant lottery tickets or instant online games (Table 2). About 1 in 10 (12.6%) reported using electronic gambling machines, also known as Video Lottery Terminals, while 1 in 13 reported placing bets at casino tables (7.5%) or on sports (7.9%). Bingo and speculative financial market activities were considerably less common, at less than 4% each.

According to the 2018 CCHS-GAM RR, more than one-quarter of Canadians (27.3%) reported participation in only one of these gambling activities in the past 12 months (Table 2). Another 23.2% reported two activities, 8.7% reported three, and the remaining 5.2% reported four or more. The

number of gambling activities played can increase one's risk for gambling-related problems. This relationship, known as dose-response, has been observed between the number of gambling activities, as well as frequency of play and problem gambling.[19]

There were substantial differences between the genders in terms of gambling activity preference. For example, men were nearly four times as likely as women to have put money into speculative markets (5.7% versus 1.5%), over three

times as likely to have bet on sports (12.1% versus 3.9%), twice as likely to have bet at a casino table (any location, online or anywhere else) (10.2% versus 4.8%) and were more likely to have bought a lottery or raffle ticket (55.4% versus 48.4%). By contrast, higher proportions of females reported having played bingo (5.7% versus 2.1%) and instant lottery tickets or instant online games (34.8% versus 31.1%) than men. Only electronic gambling machines (in person or

online) were played by comparable numbers of women and men (12.3% and 12.9%, respectively).

Given recent developments in the gambling industry, it will remain important to keep track of these trends in the near future. For example, certain activities that are becoming easier to access, such as sports gambling, may become more popular. If that is the case, a priority for both research and policy will be determining if greater popularity for such activities is associated with an increase in the prevalence in gambling problems.

Table 2
Type of gambling activities among past-year gamblers, by sex, household population aged 15 or older, Canada excluding territories, 2018

	Total			Men (ref.)			Women		
		95% confidence interval			95% confidence interval			95% confidence interval	
	%	from	to	%	from	to	%	from	to
Type of gambling									
Lottery or raffle tickets	51.8	50.7	52.9	55.4	53.8	57.0	48.4*	46.9	49.8
Instant lottery tickets or instant online games	33.0	31.9	34.1	31.1	29.6	32.7	34.8*	33.3	36.3
Electronic gambling machines (in person or online)	12.6	11.9	13.3	12.9	11.8	14.0	12.3	11.3	13.3
Casino table games (online or in person, any location)	7.5	6.8	8.2	10.2	9.2	11.4	4.8*	4.1	5.7
Sports betting	7.9	7.4	8.5	12.1	11.2	13.2	3.9*	3.3	4.6
Bingo (excluding instant games)	3.9	3.5	4.3	2.1	1.7	2.6	5.7*	5.1	6.4
Other	2.6	2.2	3.0	3.2	2.6	3.9	2.0*	1.6	2.4
Speculative financial market activities	3.5	3.1	4.0	5.7	4.9	6.6	1.5*	1.1	1.9
Number of gambling activities played									
1	27.3	26.3	28.4	29.8	28.2	31.4	25.0*	23.8	26.3
2	23.2	22.2	24.1	23.2	21.8	24.7	23.1	21.9	24.3
3	8.7	8.1	9.4	9.1	8.2	10.0	8.4	7.6	9.3
4 or more	5.2	4.7	5.7	6.6	5.8	7.4	3.8*	3.2	4.5

* significantly different from the reference category (ref.) (p < 0.05)
Source: Statistics Canada, Canadian Community Health Survey, 2018 Gambling Rapid Response.

Lottery or raffle tickets are not only the most popular form of gambling, but also the most frequently played

Lottery or raffle tickets are not only the most popular form of gambling in Canada, but also the activity played most often (Table 3). Among those who reported gambling in the past

year, nearly one-quarter reported buying lottery or raffle tickets less than once per month (24.4%), while about one in seven reported purchasing tickets one to three times per month (13.6%). A similar percentage reported purchasing these types of tickets one to three times per week (13.8%). Instant win

lottery (scratch) tickets or online games ranked second in terms of frequency of play, while electronic gambling machines ranked third.

Table 3
Frequency of gambling activities by persons reporting gambling in the past 12 months, by gender, household population aged 15 or older, Canada excluding territories, 2018

Type of gambling activity	Total %	95% confidence interval from	to	Men (ref.) %	95% confidence interval from	to	Women %	95% confidence interval from	to
Lottery or raffle tickets									
Never	48.2	47.1	49.3	44.6	43.0	46.2	51.6 *	50.2	53.1
Less than monthly	24.4	23.5	25.4	23.2	21.8	24.7	25.6 *	24.3	26.9
One to three times per month	13.6	12.9	14.3	15.7	14.6	17.0	11.5 *	10.7	12.4
One or more times per week	13.8	13.1	14.5	16.4	15.4	17.5	11.3 *	10.4	12.3
Instant lottery tickets or online instant games									
Never	67.0	65.9	68.1	68.9	67.3	70.4	65.2 *	63.7	66.7
Less than monthly	19.8	18.9	20.7	17.0	15.8	18.3	22.4 *	21.1	23.7
One to three times per month	8.5	7.9	9.1	9.1	8.1	10.3	7.8	7.1	8.6
One or more times per week	4.7	4.3	5.2	5.0	4.4	5.6	4.5	3.9	5.2
Electronic gambling machines (in person or online)									
Never	87.4	86.7	88.1	87.1	86.0	88.2	87.7	86.7	88.7
Less than monthly	9.8	9.2	10.4	9.4	8.5	10.5	10.1	9.2	11.1
One to three times per month	2.3	2.0	2.6	2.8	2.3	3.4	1.7 *	1.4	2.2
One or more times per week	0.5	0.4	0.7	0.6	0.4	0.8	0.5^E	0.3	0.7
Casino table games (online or inperson)									
Never	92.5	91.8	93.2	89.8	88.6	90.8	95.2 *	94.3	95.9
Less than monthly	6.3	5.7	7.0	8.5	7.6	9.6	4.3 *	3.6	5.1
1 to 3 times per month	0.9	0.7	1.2	1.3^E	1.0	1.9	0.5^E *	0.3	0.8
1 or more times per week	0.2^E	0.2	0.3	0.4^E	0.3	0.6	F	…	…
Sports betting									
Never	92.1	91.5	92.6	87.9	86.8	88.8	96.1 *	95.4	96.7
Less than monthly	6.1	5.6	6.6	9.0	8.2	10.0	3.2 *	2.7	3.9
One to three times per month	1.1	0.9	1.3	1.8	1.5	2.2	0.4 *	0.3	0.6
One or more times per week	0.8^E	0.6	1.1	1.3^E	0.9	1.9	F	…	…
Bingo (excluding instant games)									
Never	96.1	95.7	96.5	97.9	97.4	98.3	94.3 *	93.6	94.9
Less than monthly	2.6	2.3	2.9	1.6	1.2	2.0	3.6 *	3.1	4.1
One to three times per month	0.6	0.5	0.8	0.3^E	0.2	0.5	1.0^E *	0.7	1.3
One or more times per week	0.7	0.5	0.9	0.2^E	0.1	0.4	1.1 *	0.9	1.4
Other									
Never	97.4	97.0	97.8	96.8	96.1	97.4	98.0 *	97.6	98.4
Less than monthly	1.8	1.5	2.2	2.4	1.9	3.0	1.3 *	1.0	1.7
One to three times per month	0.4^E	0.2	0.7	F	…	…	0.3^E	0.2	0.6
One or more times per week	0.3^E	0.2	0.5	0.3^E	0.2	0.5	0.4^E	0.2	0.7
Speculative financial market activities									
Never	96.5	96.0	96.9	94.3	93.4	95.1	98.5 *	98.1	98.9
Less than monthly	2.0	1.6	2.3	3.0	2.4	3.7	1.0^E *	0.7	1.3
One to three times per month	0.8	0.6	1.0	1.4	1.1	1.8	0.2^E *	0.1	0.4
One or more times per week	0.8^E	0.6	1.0	1.3^E	0.9	1.8	F	…	…

… not applicable
^E use with caution
F too unreliable to be published
* significantly different from the reference category (ref.) (p < 0.05)
Source: Statistics Canada, Canadian Community Health Survey, 2018 Gambling Rapid Response.

About 300,000 Canadians were at moderate-to-severe risk of a gambling problem

Gambling problems can range in severity. According to the 2018 CCHS-GAM RR, the vast majority of Canadians (95.0%) who reported gambling in the past year were non-problem gamblers, meaning they scored a 0 on the Canadian Problem Gambling Index (CPGI). Another 3.4% (636,000) were found to be at low risk (scored 1 or 2 on the CPGI).

However, 1.6% (304,000) of Canadians aged 15 or older who reported gambling in the past year were at moderate-to-severe risk of problem gambling (scored 3 or higher on the CPGI) (Table 4).

There were some differences by gender, as a higher percentage of men (2.0%) than women (1.2%) were considered to be at moderate-to-severe risk of gambling problems. Generally speaking, higher rates of gambling problems among men are consistent with higher rates of other addictive behaviours among

them, such as drug and alcohol use.[20] However, it is not entirely clear why more males than females develop gambling problems. One study suggested it might be related to marketing.[21] Others have suggested that stigma and a lack of social acceptance of gambling by women in the past have kept their participation lower.[22] Finally, other research indicates that the gender difference spans the life cycle, with adolescent boys also being at a higher risk of gambling problems than teenaged girls.[23]

Table 4
Percentage of past-year gamblers scoring low, moderate, moderate-severe, or severe on the Canadian Problem Gambling Index (CPGI), by sex, household population aged 15 or older, Canada excluding territories, 2018

Problem gambling risk	CPGI score	Total				Men (ref.)				Women			
		Number '000	%	95% confidence interval		Number '000	%	95% confidence interval		Number '000	%	95% confidence interval	
				from	to			from	to			from	to
Non-problem gamblers	0	17,804.4	95.0	94.4	95.5	9,162.1	94.1	93.2	95.0	8,642.3	95.9 *	95.0	96.6
Low-risk	1 or 2	635.9	3.4	2.9	3.9	373.5	3.8	3.1	4.7	262.5	2.9	2.3	3.7
Moderate-risk	3 to 7	238.8	1.3	1.0	1.6	143.7	1.5	1.2	1.9	95.1ᴱ	1.1ᴱ	0.7	1.5
Moderate-to-severe risk	3 or higher	304.4	1.6	1.3	2.0	196.0	2.0	1.6	2.5	108.4ᴱ	1.2ᴱ *	0.9	1.7
Severe-risk	8 or higher	65.6ᴱ	0.3ᴱ	0.2	0.6	52.3ᴱ	0.5ᴱ	0.3	0.9	13.3ᴱ	0.1ᴱ *	0.1	0.3

ᴱ use with caution
* significantly different from the reference category (ref.) (p < 0.05)
Note: The moderate-to-severe risk category combines estimates from the moderate-risk (CPGI scores 3 to 7) and severe-risk (CPGI scores of 8 or higher) categories.
Source: Statistics Canada, Canadian Community Health Survey, 2018 Gambling Rapid Response.

Table 5
Percentage of past-year gamblers at moderate-to-severe risk of gambling problems (Canadian Problem Gambling Index >=3), by selected characteristics and sex, household population aged 15 or older, Canada excluding territories, 2018

Characteristics	Total			Men (ref.)			Women		
	%	95% confidence interval		%	95% confidence interval		%	95% confidence interval	
		from	to		from	to		from	to
Total	1.6	1.3	2.0	2.0	1.6	2.5	1.2ᴱ ‡	0.9	1.7
Age group									
15 to 24	F	…	…	F	…	…	F	…	…
25 to 44	1.7	1.2	2.4	2.4ᴱ	1.5	3.7	0.8ᴱ ‡	0.5	1.5
45 to 64 (ref.)	1.5	1.2	2.0	1.6ᴱ	1.1	2.2	1.4ᴱ	1.0	2.2
65 or older	1.7ᴱ	1.1	2.5	2.5ᴱ	1.5	4.2	0.9ᴱ ‡	0.6	1.4
Province or region									
Atlantic	1.7ᴱ	1.1	2.7	2.9ᴱ *	1.7	4.8	F	…	…
Quebec	1.9ᴱ	1.4	2.8	2.8ᴱ *	1.8	4.3	1.0ᴱ ‡	0.5	1.8
Ontario (ref.)	1.1ᴱ	0.7	1.8	1.2ᴱ	0.7	2.0	F	…	…
Prairies	2.5ᴱ *	1.8	3.5	2.7ᴱ *	1.7	4.3	2.2ᴱ	1.4	3.5

Table 5

Percentage of past-year gamblers at moderate-to-severe risk of gambling problems (Canadian Problem Gambling Index >=3), by selected characteristics and sex, household population aged 15 or older, Canada excluding territories, 2018

Characteristics	Total %	95% confidence interval from	to	Men (ref.) %	95% confidence interval from	to	Women %	95% confidence interval from	to
British Columbia	1.2ᴱ	0.8	1.9	1.3ᴱ	0.8	2.3	1.1E	0.6	2.2
Household income quintile									
1 (lowest 20%)	2.7ᴱ *	1.8	3.9	3.5ᴱ *	2.0	6.0	2.0E	1.2	3.3
2	2.1ᴱ *	1.4	3.3	2.1ᴱ	1.3	3.3	F	…	…
3	1.3ᴱ	0.7	2.3	2.2ᴱ	1.2	4.2	F	…	…
4	1.3ᴱ	0.9	1.8	1.6ᴱ	1.0	2.5	F	…	…
5 (highest 20%)(ref.)	1.1ᴱ	0.7	1.7	1.2ᴱ	0.6	2.1	F	…	…
Marital status									
Married or common-law (ref.)	1.1	0.9	1.5	1.5ᴱ	1.0	2.2	0.7E‡	0.5	1.1
Single (never married)	2.4ᴱ *	1.7	3.4	2.6ᴱ *	1.8	3.6	F	…	…
Separated or divorced	3.4ᴱ *	2.1	5.3	5.1ᴱ *	2.8	9.2	2.1E*	1.1	3.8
Widowed	1.2ᴱ	0.6	2.1	F	…	…	1.0E	0.5	2.0
Immigration status									
Non-immigrant (ref.)	1.7	1.4	2.1	2.0	1.6	2.6	1.5E	1.0	2.1
Immigrant	1.1ᴱ	0.6	1.9	1.7	0.9	3.0	F	…	…
Sexual orientation									
Heterosexual (ref.)	1.5	1.3	1.9	1.9	1.5	2.4	1.2E‡	0.8	1.7
Sexual minority	3.2ᴱ	1.8	5.7	4.4ᴱ	2.2	8.5	F	…	…
Indigenous identity									
Non-indigenous (ref.)	1.5	1.2	1.8	1.8	1.4	2.3	1.1E‡	0.7	1.6
Indigenous	4.5ᴱ *	2.8	7.1	4.2ᴱ	2.1	8.2	4.7E*	2.4	9.2
Racialized group									
White only (ref.)	1.4	1.1	1.7	1.8	1.4	2.3	1.0E‡	0.7	1.3
Non-White	2.4ᴱ	1.6	3.5	2.5ᴱ	1.6	3.9	F	…	…
Self-perceived mental health									
Good, very good or excellent (ref.)	1.3	1.1	1.7	1.8	1.4	2.3	0.8E‡	0.6	1.2
Fair or poor	5.0ᴱ *	3.2	7.7	5.3ᴱ *	3.4	8.2	F	…	…
Daily smoker									
No (ref.)	1.2	0.9	1.5	1.6	1.2	2.1	0.8E‡	0.5	1.3
Yes	4.3ᴱ *	3.2	5.8	4.3ᴱ *	2.8	6.6	4.2E*	2.8	6.4
Heavy drinking									
No (ref.)	1.3	1.0	1.7	1.5ᴱ	1.1	2.1	1.1E	0.7	1.8
Yes	2.1ᴱ *	1.5	2.9	2.5ᴱ	1.7	3.7	1.6E	0.9	2.7
Number of gambling activities									
1 (ref.)	0.5	0.3	0.9	0.8ᴱ	0.4	1.6	F	…	…
2	1.1 *	0.8	1.5	1.4ᴱ	0.9	2.3	0.8E	0.5	1.3
3	3.1 *	2.2	4.3	3.9ᴱ *	2.4	6.2	2.2E	1.3	3.5
4 or more	7.3 *	5.0	10.5	6.9ᴱ *	4.5	10.4	F	…	…

… not applicable
ᴱ use with caution
F too unreliable to be published
* significantly different from the reference category (ref.) (p < 0.05)
‡ significantly different from the corresponding estimate for men (p < 0.05)
Note: Because fewer people have moderate or severe gambling problems, it was necessary to dichotomize some variables. For example, the racialized group variable here identifies the racialized group of the respondent into White only, compared with non-White. The non-White category includes those who identified as all other groups other than White, as well as those reporting multiple groups and other groups not specified. This variable excludes all respondents who identified as Indigenous. Similarly, a pan-Indigenous approach was adopted for this part of the analysis, as the sample size was insufficient to support disaggregation of results by Indigenous identity. Information about Indigenous status was not available. Heavy drinking refers to males who reported having five or more drinks, or women who reported having four or more drinks, on one occassion, at least once per month in the past year.
Source: Statistics Canada, Canadian Community Health Survey, 2018 Gambling Rapid Response.

Other sociodemographic characteristics were associated with higher rates of gambling problems. These included living in lower-income households (bottom two quintiles), compared with those from households at the top 20% of the income distribution (2.7% and 2.1% compared with 1.1%, respectively); being single or never married (2.4%), or separated or divorced (3.4%) compared with being married or living common-law (1.1%); and living in the Prairies (2.5%) (Table 5).

Each of these findings is consistent with previous studies.[24] For example, being married or common-law is associated with higher levels of social support,[25] and people with more social support tend to gamble less often than those with lower levels of support.[26] Additionally, the reasons people gamble differ by marital status, with those who are married citing gambling as a way to support a charitable cause, and those who are divorced reporting gambling as a means to forget their problems.[27] Studies of pathological gamblers also find high rates of marital discord, divorce or separation, and lower levels of family functioning.[28]

The vulnerability link between lower income and problem gambling has also been found repeatedly.[29] A similar association also exists for people living in lower income neighbourhoods,[30] those who are unemployed,[31] and those on social assistance.[32] The most likely explanation is that people with lower income, variously defined, are less likely to be able to afford gambling losses because of their more limited financial resources. They may also see gambling as an opportunity to get out of a low-income situation.

Daily cigarette smoking and heavy alcohol consumption was also associated with problem gambling.[33] CCHS-GAM RR data indicate that among past-year gamblers, 4.3% of current cigarette smokers were at moderate-to-high risk of experiencing gambling problems. By comparison, those who were not cigarette smokers (1.2%) were much less likely to have a gambling problem.

A weaker association was observed for heavy alcohol consumption: 2.1% of past-year gamblers were at moderate-to-high risk of gambling problems if they also reported being a heavy drinker, compared with 1.3% if alcohol was not consumed in excess. Studies linking gambling problems with nicotine dependence in particular are numerous.[34] It is thought that smoking and gambling share common neurobiological, genetic and environmental influences.[35]

Those who rated their mental health as fair or poor were also more likely to be considered at moderate-to-severe risk of gambling problems than those who rated their mental health more positively. A person's mental health can suffer from the stress associated with gambling itself, though the relationship between reduced mental health and gambling problems can go both ways—gambling has been used to cope with other stressful life events, such as job loss.[36]

The percentage of Indigenous people (4.5%) who met the criteria for moderate-to-severe risk for problem gambling was three times the rate of the non-Indigenous population (1.5%). The CCHS-GAM RR problem-gambling rate for Indigenous people falls within a range of previous findings from studies of

gambling behaviours among North American aboriginal populations.[37] It is likely that many factors contribute to problem gambling among Indigenous people, including the harmful effects of colonialism that led to intergenerational trauma, discrimination and socioeconomic marginalization. Traumatic experiences, like child sexual abuse and residential schooling, may also be contributing factors.[38]

Gambling involvement, measured by the number of activities played, increased the risk of having a gambling problem. At the lowest, the increase is 0.5% for people who reported just one gambling activity, while it was 7.3% for those reporting four or more types of gambling activities.

On the other hand, there were no bivariate differences in the rates of moderate-to-severe gambling problems by sexual orientation, immigration status, age, or cultural or racial background.

Table 6
Adjusted odds ratios relating selected characteristics to problem gambling (Canadian Problem Gambling Index >= 3), household population aged 15 or older, Canadian provinces, 2018

	Total			Men			Women		
		95% confidence interval			95% confidence interval			95% confidence interval	
Characteristics	Adjusted odds ratios	from	to	Adjusted odds ratios	from	to	Adjusted odds ratios	from	to
Sex									
Male	1.7*	1.1	2.7	…	…	…	…	…	…
Female (ref.)	1.0	1.0	1.0	…	…	…	…	…	…
Age group									
15 to 24	0.5	0.2	1.6	0.4	0.1	1.2	0.8	0.1	7.9
25 to 44	0.6	0.4	1.1	1.0	0.5	2.0	0.3*	0.1	0.8
45 to 64 (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
65 or older	1.5	0.8	2.7	2.0	0.9	4.7	0.9	0.4	1.9
Province or region									
Atlantic	1.7	0.7	3.8	2.8	1.0	8.0	0.7	0.2	3.0
Quebec	2.2*	1.2	4.3	3.1*	1.4	7.2	1.2	0.5	3.2
Ontario (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Prairies	2.2*	1.1	4.1	2.4*	1.0	5.4	2.4	0.9	6.1
British Columbia	1.1	0.5	2.3	1.0	0.4	2.3	1.8	0.5	5.8
Household income quintile									
Not lowest 40% (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lowest 40%	1.6*	1.1	2.4	1.3	0.8	2.2	2.7*	1.4	5.0
Marital status									
Married or common-law (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Single (never married)	1.8*	1.1	3.1	2.0*	1.0	4.1	1.5	0.7	3.4
Separated or divorced	2.5*	1.2	5.2	3.8*	1.3	10.8	1.2	0.6	2.7
Widowed	0.9	0.4	2.2	1.6	0.3	8.3	0.6	0.2	1.8
Immigration status									
Non-immigrant (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Immigrant	1.6	0.7	3.5	0.9	0.4	2.0	5.2	0.8	32.6
Sexual orientation									
Heterosexual (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Sexual minority	2.1	0.9	4.7	3.0*	1.1	8.4	0.8	0.1	4.4
Indigenous identity									
Non-indigenous (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indigenous	2.3*	1.1	4.8	3.0*	1.1	7.7	1.6	0.5	4.9
Racialized group									
White only (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Non-White	2.7*	1.2	6.0	2.2*	1.1	4.4	2.9	0.5	18.7
Self-perceived mental health									
Good, very good or excellent (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Fair or poor	3.1*	1.7	5.4	2.4*	1.3	4.5	3.5*	1.4	8.6
Daily smoker									
No (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Yes	2.3*	1.4	3.7	1.8	0.9	3.5	3.2*	1.6	6.6

Table 6
Adjusted odds ratios relating selected characteristics to problem gambling (Canadian Problem Gambling Index >= 3), household population aged 15 or older, Canadian provinces, 2018

Characteristics	Total			Men			Women		
	Adjusted odds ratios	95% confidence interval		Adjusted odds ratios	95% confidence interval		Adjusted odds ratios	95% confidence interval	
		from	to		from	to		from	to
Heavy drinking									
No (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Yes	0.9	0.6	1.6	1.0	0.6	2.0	0.9	0.4	2.2
Number of gambling activities									
1 (ref.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2	2.2	0.9	5.3	2.1	0.6	7.1	2.9*	1.0	8.3
3	5.7*	2.4	13.6	5.0*	1.4	17.7	8.1*	3.0	21.5
4 or more	17.6*	7.2	42.8	13.9*	4.3	45.2	32.1*	9.7	106.4

… not applicable
* significantly different from the reference category (ref.) or rest of Canada for the regional and provincial comparisons (p < 0.05).
Note: Because fewer people have moderate or severe gambling problems, it was necessary to collapse some response categories to help minimize small cell counts and data suppression. For example, the racialized group variable used here identifies the group of the respondent into White only compared with non-White. The non-White category includes those who identified as all other groups other than White, as well as persons reporting multiple groups, other groups not specified. Similarly, a pan-Indigenous approach was used for this part of the analysis because the available sample size was insufficient to support disaggregation of results by Indigenous identity. Information about Indigenous status was not available. Heavy drinking refers to males who reported having five or more drinks, or women who reported having four or more drinks, on one occassion, at least once per month in the past year.
Source: Statistics Canada, Canadian Community Health Survey, 2018 Gambling Rapid Response.

Of course, sociodemographic characteristics, mental health, health behaviour and other factors may not be independently associated with problem gambling. When the effects of gender; age; geography; income; marital status; immigration status; population groups and Indigenous identity; sexual orientation; mental health; smoking; heavy drinking; and number of gambling activities were taken into account in multivariable logistic analyses, most previously identified risk factors remained statistically significant (Table 6). These included being male, a resident of the Prairies, in a lower income household, unmarried (single, or divorced or separated), a daily smoker, as well as people identifying as Indigenous, having fair or poor mental health, and participating in multiple types of gambling activities.

Likely owing to the higher rate of moderate-to-severe gambling problems among males, the male-only results were more similar to the overall results than those for females.

In addition, the multivariable analysis of males suggests that sexual-minority males, such as gay men, have higher odds of having gambling problems than heterosexual males. Directly comparable studies are not available, although there is some related literature which suggests that problem gaming, problematic Internet use,[39] and alcohol and drug use[40] can be more common in non-heterosexual or sexual minorities.

Conclusion

Overall, the results of this study showed that problem gambling, while affecting a minority of the population, continues to be an issue in Canada. Among past-year gamblers, two percent of men and about one percent of women were either at severe or moderate risk for gambling-related problems, representing about 304,000 Canadians.

Surveys that collect data about gambling are important for informing and supporting health promotion and surveillance programs. Substantial numbers of Canada's population gamble, and a minority develop gambling-related problems. With the advent of online gambling, it is now easier than ever to gamble.

This study provides an updated profile of past-year gamblers, including data on gambling activities, frequency of play, household expenditures on games of chance, and the characteristics of those who were at moderate-to-severe risk for developing gambling-related problems. The data presented here were collected prior to the pandemic, and prior to the *Safe and Regulated Sports Betting Act*[41] which legalized single-event sports betting in Canada in 2021. The results serve as an important baseline of gambling

behaviour in Canada permitting future monitoring of changes in gambling behaviour over time and as a result of the new legislation. This information can also be used to update educational and awareness materials.

Some populations were more vulnerable to gambling problems, including males, those from lower-income households, Indigenous people, individuals who considered their mental health as fair or poor,

daily smokers, and individuals who participated in multiple forms of gambling activities.

Michelle Rotermann and Heather Gilmour are senior analysts in the Health Analysis Division of Statistics Canada.

Data sources, methods and definitions

The CCHS collects information related to health: status, care use and determinants for the Canadian population aged 12 years and older, living in the provinces and territories (Statistics Canada). Rapid Response modules are offered on a cost-recovery basis with this gambling module funded by the Canadian Consortium for Gambling Research.

Excluded from the study are people living on reserves and other Aboriginal settlements, people in two health regions in northern Quebec, full-time members of the Canadian Forces, the institutionalized population, and youth aged 12 to 17 living in foster homes. These groups represent about 3% of the target population.[42] Details about the CCHS, including survey frames, sampling strategy, weighting and questionnaires, are available elsewhere.[43]

Data were collected from July 3, 2018, to December 24, 2018, by computer-assisted telephone and in-person interviews. Most interviews were conducted exclusively by telephone (82%). The overall CCHS-GAM RR 2018 response rate was 58.8%, corresponding to a final file size of 26,648 respondents, representing 31.4 million Canadians aged 12 or older.[44] The gambling module was applicable to those aged 15 or older and was asked to 24,983 non-proxy respondents in the 10 provinces only.

Analytical technique

Weighted frequencies and cross-tabulations were calculated to examine, by selected characteristics, estimates of past-year gambling prevalence and problem gambling, as well as participation in and frequency of play of different gambling activities.

To account for survey design effects, coefficients of variation and 95% confidence intervals were estimated with the bootstrap technique[45] using SAS 9.4 and SAS-callable SUDAAN 11.0.3. Differences between weighted frequencies and cross-tabulations were calculated with t-tests, and results at the $p < 0.05$ level were considered statistically significant.

Definitions

Past-year gambling was based on responses to the following questions: In the past 12 months, how often have you spent money on or at, bet on, purchased: 1) instant lottery tickets, such as scratch, break-open or pull-tabs, or instant online

games; 2) lottery or raffle tickets; 3) electronic gambling machines, such as slot machines, Video Lottery Terminals, electronic blackjack, electronic roulette or video poker; 4) casino table games (e.g., poker, blackjack, baccarat, or roulette at any location, whether at a casino, a private residence, online or anywhere else, excluding electronic machine versions); 5) money bets on sports, such as hockey, football, horseracing, billiards or golf, including pools, sports lottery, or bets made with friends; 6) Bingo, excluding instant games; 7) speculative financial market activities, such as day trading, penny stocks, shorting, options, or currency futures; 8) any other form of gambling not mentioned. Respondents who reported at least one form of gambling in the past 12 months were considered gamblers.

Past-year gamblers were also classified according to how frequently they participated in each activity in the 12 months before they were interviewed: never, less than monthly, 1 to 3 times per month (combined once per month and two three times per month), 1 or more times per week (combined once per week and several times per week).

The Canadian Problem Gambling Index (CPGI)[46] was used to assess 12-month prevalence of problem gambling. The CPGI is a nine-item instrument that assesses two problem-gambling domains: problem gambling behaviour and consequences of that behaviour for the individual or others. These nine questions are scored to determine the severity of problem gambling.

The Canadian Problem Gambling Index assessment items

1) Did you bet more than you could afford to lose?

2) Did you gamble with more money to get the same excitement?

3) Did you go back another day to try to win back the money you lost?

4) Have you borrowed money or sold anything to get money to gamble?

5) How often has your gambling caused any financial problems for you or your household?

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6) Have you felt that you might have a problem with gambling?

7) Has your gambling caused you any health problems, including stress or anxiety?

8) Have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?

9) Have you felt guilty about the way you gamble or what happens when you gamble?

Respondents who gambled at least once a month, on at least one type of gambling, were asked the nine assessment questions. Each question has four response options: never = 0, sometimes = 1, most of the time = 2, and almost always = 3. The total score, ranging from 0 to 27, was obtained by summing the scores from the 9 4-point recoded (0–3) items; higher scores denote greater problems. Respondents who gambled less than monthly in the past year were considered to never have endorsed any of the nine assessment items, and were given a score of 0.

The CPGI scores were divided into 4 categories (0; 1 to 2; 3 to 7; and 8 or over) to indicate increasing levels of gambling problems.[47] The 3-to-7 level is believed to denote a significant risk and may be associated with heavy gambling, correlates of gambling problems, and is sometimes accompanied by adverse gambling consequences. The 8-or-over level is believed to represent the most extreme group, comprised of those who have experienced adverse consequences from gambling and might have lost control of their behaviour.[48] Consistent with other research,[49] the two highest levels, corresponding to scores of 3 or higher, indicated moderate and severe problem gambling and were combined for parts of this analysis to boost sample size and statistical power.

Non-gamblers: respondents in this group have not gambled in the past 12 months

Non-problem gambling: Scored 0 on the CPGI

Low-risk gambling: Scored between 1 and 2

Moderate-risk gambling: Scored between 3 and 7

Problem gambling: Scored between 8 and 27

Moderate to high: Scored 3 or more

Selection of covariates was guided by the gambling literature and availability in the CCHS-GAM.

Limitations

This study has several limitations common to survey research.

The findings may reflect some underreporting for gambling behaviour common in survey research. Although survey weights ensured that the sample is representative of the target population, bias may exist if the gambling habits of respondents and non-respondents differed systematically.

The data are cross-sectional and thereby permit the observation of associations between variables at only one point in time. Smaller sample sizes in some parts of the analysis may also have reduced the ability to reach statistical significance. As well, some variables relevant to gambling were not available in the CCHS-GAM, including amount of money spent, hours of play, reasons for gambling.

Notes

1. Humphreys et al. (2011); Kairouz et al. (2015); Elton-Marcshall et al. (2016); Wiebe et al. (2001); Wiebe et al. (2006).

2. Ministry of Health NZ (2009); Queensland Government Statistician's Office (2021); Binde et al. (2020); Iowa Department of Public Health (2017); Mason (2009); Stucki et al. (2007); Williams et al. (2012).

3. Wiebe et al. (2001); Wiebe et al. (2006); Stucki et al. (2007); Kairouz et al. (2015); Williams et al. (2012); McCready et al. (2008).

4. Wiebe et al. (2001).

5. Elton-Marshall, T. et al (2018).

6. Wiebe et al. (2001).

7. Humphreys et al. (2011); Ferland et al. (2008); Mason (2009); Suurvali et al. (2012); Browne et al. (2016); Shaw et al. (2007); Black et al. (2012).

8. American Psychiatric Association (2013).

9. Browne et al. (2016).

10. Bilodeau et al. (2021).

11. Government of Canada (2021).

12. Gambling includes: spending money on or at, betting on, or having purchased: 1) instant lottery tickets; 2) lottery or raffle tickets; 3) electronic gambling machines, such as slot machines or Video Lottery Terminals; 4) casino table games (e.g.poker whether at a casino, a private residence, online or anywhere else, excluding electronic machine versions); 5) money bets on sports, such as hockey or horseracing, including bets made with friends; 6) bingo, excluding instant games; 7) speculative financial market activities, such as day trading; 8) any other form of gambling not mentioned.

13. Marshall (2011); Iowa Department of Public Health (2017).

14. Wilson et al. (2015).

15. "Other groups" were combined together because sample size was not sufficient to provide reliable estimates for all remaining groups.

16. Belanger (2010); Breen et al. (2013); Mason (2009); Raylu et al. (2004).

17. Belanger (2010); Breen et al. (2013); Mason (2009); Raylu et al. (2004); Currie et al. (2013).

18. Barnes (2017).

19. Elton-Marshall et al. (2016); McCready et al. (2008); Binde et al. (2020); Currie et al. (2006); Welte et al. (2004).

20. Government of Canada, Canadian Tobacco, Alcohol and Drugs Survey.

21. Wiebe et al. (2001).

22. Hare (2015); Volberg (2003).

23. Elton-Marshall et al. (2016); Turner et al. (2018).

24. Wiebe et al. (2005); Johansson et al. (2009); Welte et al. (2004); Ministry of Health (2009); Cox et al. (2005); McCready et al. (2008); Currie et al. (2006); Abbott (2017); Castren et al. (2013).

25. Rendall et al. (2011).

26. Zaranek et al. (2005).

27. Wiebe et al. (2001).

28. Black et al. (2012); Shaw et al. (2007).

29. Wiebe et al. (2001); Abbott (2017); Browne et al. (2016); Day et al. (2020).

30. Ministry of Health (2009); Barnes et al. (2013).

31. Castren et al. (2013).

32. Ministry of Health (2009); Johansson et al. (2009); Wiebe et al. (2001).

33. Welte et al. (2004); Castrén et al. (2013).

34. Rash et al. (2016); Castrén et al. (2013) ; McGrath et al. (2009).

35. McGrath et al. (2009).

36. Breen et al. (2013).

37. Wardman et al. (2001).

38. Dion et al. (2015); Dion et al. (2009).

39. Broman and Hakansson (2018).

40. Kidd et al. (2018).

41. Government of Canada (2021).

42. Statistics Canada (2018).

43. Statistics Canada (2018).

44. Statistics Canada (2018).

45. Rust (1996).

46. Ferris (2001).

47. Ferris (2001).

48. Ferris (2001).

49. Weibe et al. (2001)

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