Gambling During COVID-19 in Ontario

Prepared By:

Centre for the Advancement of Best Practices
Responsible Gambling Council

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EXECUTIVE SUMMARY

The COVID-19 pandemic has had a profound impact on the everyday life of all Canadians. In Ontario, the impact has been reflected in the series of emergency measures declared by the provincial government starting March 17, 2020. Emergency measures included the closure of all recreation centres, public parks and playgrounds, schools, public libraries, bars, restaurants, movie theatres, concert venues, places of worship, and extended further restrictions on non-essential work and public gatherings of five or more people. All land-based gambling venues, including Responsible Gambling Council (RGC)-operated PlaySmart Centres and in-person community outreach programs, were also affected.

With the limited availability of land-based gambling venues and in-person gambling-related help services throughout the duration of the pandemic, RGC's Centre for the Advancement of Best Practices (CABP), in collaboration with the Ontario Gambling Research Society (OGRS), rapidly conceived and implemented a three-wave provincial survey study to examine the impacts of COVID-19 on Ontarians' gambling behaviours, financial stability, and mental health and wellbeing. The results of this work now provide an empirical record of the impact of COVID-19 on players, families, and communities.

This study has also allowed RGC to make evidence-informed changes and improvements to its community outreach and prevention programming, as well as demonstrate leadership through supporting consumer protection and harm reduction in Ontario during COVID-19 and the expansion of online gambling. The emerging impact of this work is evident in the transfer of knowledge to government departments, regulators, operators, treatment providers, the research community, and the public, which have informed these areas of practice to varying degrees.

SURVEY OF ONTARIAN GAMBLERS

Three surveys in total were administered to Ontarian gamblers (18 years and older) between the spring and winter of 2020. The Wave 1 survey was carried out between April 21—28, 2020 (*n* = 2,005)[1]. The Wave 2 survey was conducted from August 1—19, 2020 (*n* = 2,015) and Wave 3 captured data between November 30—December 17, 2020 (*n* = 2,000). A subset of Ontarian gamblers (*n* = 608) completed all three waves of the survey and formed the longitudinal sample, which enabled assessments of changes in beliefs and behaviours over the 8-month period. Respondents for each survey wave were recruited and selected in order to produce samples that matched provincial census data for age and gender, producing provincially representative samples for analyses.

All three waves examined demographics, financial impacts of COVID-19, mental health concerns, substance use, intoxicated gambling, gambling behaviours and motives, responsible gambling awareness and knowledge, and gambling risk. Unique to the Wave 1 survey was Ontarian gamblers' interest in and utilization of responsible gambling services. In Wave 2, variables assessing ethnicity, changes in online gambling, online grey market involvement, and attitudes toward returning to land-based gambling venues were added to the survey. In Wave 3, items assessing substance use and conditions for returning to land-based gambling venues were removed, and variables measuring participants' income and the importance of responsible gambling online site features were added.

FINANCIAL IMPACT OF COVID-19

The COVID-19 pandemic continued to have a significant impact on Ontarian gamblers' finances during the period of study, though the effects appeared to lessen over time. Similar to Wave 1, over a quarter (29%) of respondents in Wave 2 reported that their employment situation was negatively affected by COVID-19, which decreased to 16% in Wave 3. Almost half (45%) of gamblers in Wave 1 reported that their household income had also been negatively affected, which decreased to roughly 38% in both Waves 2 and 3. Younger adults (aged 18-24 years) as well as Ontario gamblers of East Asian and South Asian descent were among those most affected by changes to their employment and household income.

MENTAL HEALTH AND WELLBEING

While life satisfaction remained moderate and stable between Waves 1 and 2, **mental health concerns appeared to fluctuate throughout the pandemic**. Approximately 25% of gamblers reported high levels of anxiety in Wave 1, which decreased to 20% in Wave 2 and 21% in Wave 3. Women, young adults (aged 18-24 years), and Ontarian gamblers of South Asian descent reported the highest levels of anxiety in each wave. A significant number of gamblers also reported high levels of depression, with rates around 11% in each wave. Young adults (aged 18-24 years) and Ontarian gamblers of South Asian descent were again those most impacted by severe depression symptoms.

[1] For Wave 1 report on the Emerging Impact of COVID-19 on Gambling in Ontario (RGC, 2020), see: https://www.responsiblegambling.org/wp-content/uploads/RGC-COVID-and-Online-Gambling-Report_Jul.AP_-1.pdf

ONLINE GAMBLING BEHAVIOURS

Throughout the course of the pandemic, **more Ontarian gamblers migrated to online gambling, including those who primarily gambled in-person before COVID-19**. In Wave 1, 54% of gamblers reported playing online since the initial lockdown in March 2020. This rose significantly to 87% of online gamblers in Wave 3 who reported playing online in the past three months alone. Although men and Ontarian gamblers of South Asian descent were more likely to report gambling online in Wave 2, rates of gambling online were equally high across all demographics in Wave 3. The most popular online gambling game in each wave was lotto or raffle ticket draws, with other popular games including instant lottery, electronic gambling machines, casino table games, and sports betting.

GAMBLING RISK LEVEL

Overall, the majority of Ontarian gamblers reported experiencing no gambling problems throughout the pandemic. However, **just under one in ten gamblers screened as high risk for gambling problems according to the Problem Gambling Severity Index (PGSI) in each wave of the cross-sectional data**. Rates of high risk gambling were generally lower in the longitudinal sample. Of note, those at high risk of gambling problems were more likely to gamble online and the prevalence of high risk gambling among online gamblers doubled from Wave 2 (12%) to Wave 3 (24%). At greatest risk of experiencing gambling harms (both among online and land-based gamblers) were men, younger adults (aged 18-44 years), Ontarians of East Asian descent, and Ontarians of South Asian descent.

ONLINE GAMBLING RISK FACTORS

For many gamblers, COVID-19 and the associated emergency measures were influential factors in deciding to gamble online. **One-third of online gamblers in Wave 1 and 2 and almost half (45%) of online gamblers in Wave 3 reported gambling online due to COVID-19 restrictions**. In addition to being influenced by COVID-19, a number of predictive factors were also associated with engaging in high risk online gambling behaviours (according to the PGSI), among which included:

- Signing up for new online gambling accounts
- Gambling online on grey market sites
- Increasing time and money spent gambling online
- High levels of anxiety and depression
- Gambling online under the influence of alcohol or cannabis

GAMBLING MOTIVES

The most common motives for gambling online in each wave were to win money, because it is fun, because it is exciting, and because players enjoy thinking about winning the jackpot. However, some motives emerged as being particularly risky. **High risk gamblers (47%) were 17 times more likely to gamble online *because it helps when feeling nervous or depressed*** compared to lower risk gamblers in Wave 2 and those who endorsed this motive also reported high levels of anxiety (26%) and depression

(22%). High risk gamblers (46%) were also five times more likely to gamble *to earn income* compared to lower risk gamblers in Wave 2 and over half of those who endorsed this motive also reported that their employment or income had been affected by COVID-19. Across gamblers, rates of gambling *to earn income* also increased over time.

RESPONSIBLE GAMBLING

The majority of Ontarian gamblers reported using strategies to keep their gambling responsible, which marked an increase in follow-up waves compared to Wave 1. The most popular responsible gambling practice was setting a money limit *before* gambling, where almost 90% of gamblers in Waves 2 and 3 reported setting a spending limit at least sometimes and another 90% stopping once they reached their limit. While there were no consistent differences in setting monetary limits, high risk players (84%) were more likely to set a time limit *before* gambling compared to lower risk players (68%), and were also more likely to adhere to this limit. High risk players were also more likely to stop gambling if feeling intoxicated compared to those at lower risk.

The most important responsible gambling site features rated across gamblers were the credibility of the website (78%), followed by information on how the games work or the odds of winning (72%). Features for managing time and money (68%) as well as the ability to self-exclude or take cooling off periods (57%) were rated higher among those at high risk for gambling problems compared to those at lower risk. On the other hand, lower risk players rated consumer protection commitments (82%) higher compared to high risk players.

CONCLUSIONS AND RECOMMENDATIONS

Key priority populations identified segments of the population who may be at increased risk of gambling harm. These groups include young adults aged 18-24 years, men (young men in particular), and key ethno-cultural groups, including Ontarian gamblers of East Asian and South Asian descent.

Expanded player supports are important considerations as Ontario expands online legal gambling. Recommended areas for expanded player supports include increased player safeguards during COVID-19 and the online gaming market expansion, tailored prevention messaging for priority populations and across the spectrum of play, and increases in the availability and visibility of responsible gambling resources and information, particularly in the online context.

Knowledge mobilization and collaboration are required to continue monitoring changes in behaviours and risks among Ontarian gamblers, as well as the mutual exchange of insights with key stakeholders to inform responsible gambling programming and policy. RGC continues to engage in community outreach, prevention programming, and social marketing to mobilize timely knowledge on gambling risks and harm prevention.

BACKGROUND

The rapid spread of COVID-19 has fundamentally changed the lives of Canadians, as well as those all around the world. The growing impact on the public's health, social functioning, and financial status continues to be seen. In an attempt to partially offset the financial impacts of the pandemic, the Canadian government instated the Canada Emergency Response Benefit (CERB) to provide financial support to Canadians whose employment was directly affected by COVID-19. By October 2020, the federal government received 25.6 million applications to CERB, resulting in the distribution of $74.1 billion to affected Canadians. The Canadian government has since transitioned CERB into the Canada Recovery Benefit (CRB), which continued to assist individuals who have been out of work due to COVID-19-related factors until September of 2021.

In Ontario, the impact on social functioning and commerce has been reflected in the series of emergency measures declared by the provincial government starting March 17, 2020. Emergency measures included the closure of all recreation centres, public parks and playgrounds, schools, public libraries, bars, restaurants, movie theatres, concert venues, places of worship, and extended further restrictions on non-essential work and public gatherings of five or more people. All land-based gambling venues, including Responsible Gambling Council (RGC)-operated PlaySmart Centres and in-person community outreach programs, were also affected.

Amid the fluctuating COVID-19 case counts, Ontario implemented a three-phase re-opening model to return to normalcy and began the process of lifting restrictions and re-opening businesses in June 2020. By July 24, 2020, Ontario's state of emergency was lifted. However, with surging COVID-19 case numbers in the fall of 2020, Ontario experienced its second wave of COVID-19 cases and was forced back into lockdown with tightened restrictions. From late November to mid-December 2020, the province began placing various regions in lockdowns, which culminated in a province-wide shut-down on December 26, 2020, where public health estimates averaged approximately 2,000 new COVID-19 cases each day.

For almost twenty years, the Responsible Gambling Council (RGC) has been conducting community outreach, prevention programming, and social marketing to educate the public on gambling risks and prevent gambling harm in Ontario and beyond. In continuation of this mission, RGC's Centre for the Advancement of Best Practices (CABP), in collaboration with the Ontario Gambling Research Society (OGRS), rapidly conceived and implemented a three-wave provincial study to examine the impacts of COVID-19 on Ontarians' gambling behaviours, financial stability, and mental health and wellbeing. RGC has been able to make evidence-informed changes and improvements to community outreach and prevention programming to meet the newly emerging needs of Ontarians in light of the limited access to land-based gambling venues and in-person gambling-related help services during these unprecedented times.

This work has also provided an empirical record of the impact of COVID-19 on players, families, and communities, which has been mobilized to provide timely evidence on gambling issues to government departments, regulators, operators, treatment providers, the research community, and the public. Through these activities, RGC has demonstrated leadership through supporting consumer protection and harm reduction in Ontario during the COVID-19 pandemic and the expansion of the online gambling market.

THE STUDY

Three cross-sectional online study waves were conducted to assess the impact of COVID-19 on Ontarian gamblers. This report expands upon the previously reported findings from the Wave 1 survey (see RGC, 2020 for the Wave 1 report). The Wave 2 survey was funded by a Carleton University COVID-19 Rapid Research Response Grant awarded to the Ontario Gambling Research Society (OGRS) executive members, including members of the CABP, and Wave 3 (similar to Wave 1) was supported by funds from the RGC Prevention Program. Waves 2 and 3 were conducted in collaboration between RGC and the OGRS.

Adult gamblers (i.e., 18+ years) living in Ontario were recruited to participate in each survey wave. Wave 1 was carried out between April 21—28, 2020 (*n* = 2,005), Wave 2 was conducted from August 1—19, 2020 (*n* = 2,015), and Wave 3 captured data between November 30—December 17, 2020 (*n* = 2,000). Furthermore, a subset of Ontarian gamblers (*n* = 608) completed all three waves of the survey and formed a longitudinal sample to assess changes in responses over the 8-month period. Respondents for each wave were recruited by *Delvinia*, a third-party online survey vendor located in Toronto, Ontario. Samples for each wave were recruited according to provincial census data for age and gender, producing provincially representative samples for analyses. However, young adults and women were under-represented in the longitudinal sample in comparison to the most recent Ontario census data.

All three waves examined demographics (e.g., age, gender, education), financial and employment impacts of COVID-19, mental health concerns (e.g., anxiety, depression), substance use (e.g., alcohol, cannabis), intoxicated gambling, gambling behaviours and motives (e.g., online gambling participation, types of online games played), responsible gambling awareness and knowledge (e.g., use of strategies), and gambling risk (e.g., problem gambling severity). Unique to the Wave 1 survey was Ontarian gamblers' interest in and utilization of responsible gambling services. In Wave 2, variables assessing ethnicity, changes in online gambling, online grey market involvement, and attitudes toward returning to land-based gambling venues were added to the survey. In Wave 3, items assessing substance use and conditions for returning to land-based gambling venues were removed, and variables measuring participants' income and the importance of responsible gambling online site features were added.

Analyses presented in this report describing correlations, cross-tabulations, analyses of variance, and post hoc comparisons are all statistically significant ($p<0.05$). For ease of interpretation, references to each wave of data collection when presenting cross-sectional data will be referred to in waves (i.e., Wave 1, Wave 2, Wave 3), whereas longitudinal data will be presented as the months of data collection (i.e., April, August, December). Moreover, due to the small sample sizes for many ethno-cultural groups, only sample-based comparisons for Caucasian/White, East Asian, and South Asian ethno-cultural groups (i.e., with the largest sample sizes) are presented in this report. Of note, Caucasian/White respondents comprise nearly three-quarters of the cross-sectional and longitudinal samples.

DESCRIPTION OF SURVEYED GAMBLERS

WAVE 1 SAMPLE

Age and gender demographics for Wave 1 were congruent with provincial census data (see Table 1). There were nearly equal portions of men (49.8%) and women (49.7%) in the sample, with an additional 0.3% who self-categorized as “other.” Respondents ranged in age from 18 to 89 years old, with an average age of 48 years. The sample was relatively well-educated, with over one-third (36.7%) who reported receiving a bachelor’s degree as their highest level of education. Participants’ ethno-cultural background was not assessed in the Wave 1 survey.

WAVE 2 SAMPLE

Age and gender demographics for Wave 2 were congruent with provincial census data (see Table 1). Specifically, 51.2% of the sample were men, 48.2% were women, and 0.4% categorized their gender as “other.” Respondents ranged in age from 18 to 92 years old, with an average age of 48 years. The sample was relatively well-educated, with over one-third (39.1%) who reported receiving a bachelor’s degree as their highest level of education. The majority of respondents were Caucasian/White (73.1%), followed by East Asian (10.2%), and South Asian (5.3%).

WAVE 3 SAMPLE

In Wave 3, age and gender distributions were nearly identical to provincial census data (see Table 1). Men accounted for 50.1% of the sample, 49.8% were women, and 0.2% categorized their gender as “other.” Similar to Wave 2, respondents ranged in age from 18 to 92 years old, with an average age of 48 years. Respondents were also relatively well-educated, with self-reported education levels similar to those reported in the Wave 2 sample (see Figure 2). As in Wave 2, the majority of respondents were also Caucasian/White (72.2%), East Asian (11.2%), or South Asian (5.2%). Over 10% of respondents were classified as low income (i.e., under $35,000; 11.6%), and one-third (32.6%) reported a household income between $50,000 and $99,999.

LONGITUDINAL SAMPLE

In the 3-wave longitudinal sample, young adults and women were under-represented in comparison to Ontario census data (see Table 1). Specifically, 56.1% of the sample were men, 43.9% were women, and participants ranged in age from 18 to 84 years, with an average age of 50 years old. Participants who completed all three waves of the survey had similar educational backgrounds compared to participants from Waves 2 and 3. Like the cross-sectional data, the majority of respondents were Caucasian/White (74.8%), East Asian (10.4%), or South Asian (4.7%). Self-reported annual household income was also similar to Wave 3, where approximately 10% of respondents classified as low income (i.e., under $35,000), with the largest portion of gamblers (31.1%) earning between $50,000 and $99,999.

Table 1

Sample Demographics for Wave 1, Wave 2, Wave 3, and Longitudinal Samples

Sample Demographics								
	Wave 1		**Wave 2**		**Wave 3**		**Longitudinal**	
	N	**%**	***N***	**%**	***N***	**%**	***N***	**%**
Gender:								
Men	997	49.8	1,031	51.2	1,001	50.1	341	56.1
Women	998	49.7	971	48.2	995	49.8	267	43.9
Other	6	0.3	10	0.4	3	0.2	-	-
Age								
18 – 24 years	229	11.4	242	12.0	247	12.4	34	5.6
25 – 44 years	671	33.5	652	32.4	665	33.3	213	35.1
45 – 64 years	685	34.2	688	34.1	664	33.2	211	34.7
65+ years	420	20.9	433	21.5	424	21.2	150	24.7
Education								
No High School	30	1.5	13	1.3	28	1.4	9	1.5
High School or GED	414	20.6	215	21.8	394	19.7	114	18.8
Technical/Trade Certification	388	19.4	192	19.4	421	21.1	127	20.9
Bachelor’s Degree	736	36.7	386	39.1	780	39.0	235	38.7
Master’s Degree	253	12.6	99	10.0	198	9.9	67	11.0
Professional Degree	150	7.5	62	6.3	131	6.6	44	7.2
Doctoral Degree	34	1.7	21	2.1	31	1.6	9	1.5
Ethno-Cultural Background								
Caucasian/White	-	-	1,470	73.1	1,419	72.2	446	74.8
East Asian	-	-	206	10.2	221	11.2	62	10.4
South Asian	-	-	107	5.3	102	5.2	28	4.7
Black	-	-	67	3.3	52	2.6	14	2.3
Latin American	-	-	30	1.5	33	1.7	11	1.8
Southeast Asian	-	-	27	1.3	33	1.7	6	1.0
West Asian	-	-	23	1.1	21	1.1	3	0.5
Indigenous	-	-	18	0.9	16	0.8	5	0.8
Pacific Islander/ Polynesian	-	-	3	0.1	1	0.1	-	-
Total	**2,005**	**100.0**	**2,015**	**100.0**	**2,000**	**100.0**	**608**	**100.0**

Note: Wave 2 education percentages reflect proportions among those who completed the measure assessing education (49.0% completion).

FINANCIAL IMPACT OF COVID-19

HIGHLIGHTS

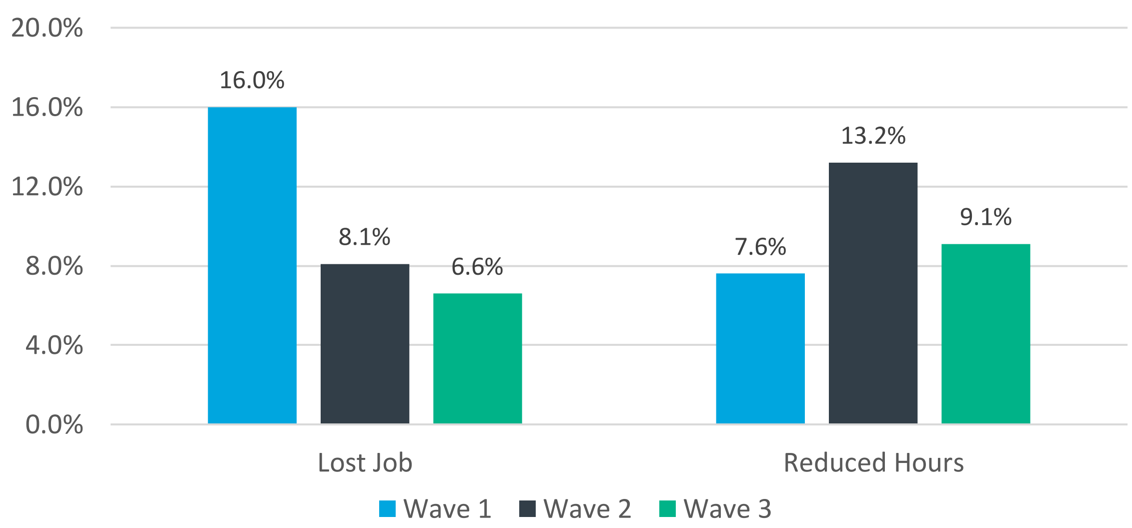
- The COVID-19 pandemic continued to have a significant impact on Ontarian gamblers' finances during the period of study, though the effects appeared to lessen over time.
- Roughly a quarter of respondents in Wave 1 (25%) and Wave 2 (29%) reported that their employment was negatively affected by COVID-19, which decreased in Wave 3 (16%).
- Almost half (45%) of respondents in Wave 1 reported that their household income had been negatively affected, which decreased in Waves 2 and 3 (38%).
- Longitudinal results confirmed the patterns seen in cross-sectional results—for example, significantly more people reported losing their employment near the beginning of the pandemic in April (16%) compared to August (8%) and December (6%).
- Young adults, Ontarians of East Asian descent, and Ontarians of South Asian descent were among those most affected by changes to their employment and household income.

CHANGE IN EMPLOYMENT

The COVID-19 pandemic has resulted in significant changes to many Ontarians' employment and financial situation (Figure 1). Similar to Wave 1 (25%), more than a quarter (28.8%) of respondents in Wave 2 reported that their employment had been affected in some way due to COVID-19, typically in the form of working reduced hours (13.2%) or a loss of employment altogether (8.1%). However, more than half of Wave 2 respondents indicated no change to their employment, either reporting that they were employed and did not have their hours reduced (37.8%) or that they were unemployed prior to COVID-19 and have remained unemployed (14.6%).

By Wave 3, cross-sectional data revealed that fewer respondents reported a change in employment due to COVID-19. Specifically, 9.1% reported that their hours were reduced, and 6.6% reported a loss of employment. More than half of respondents in Wave 3 also indicated no change to their employment status, though almost twice as many people reported that they were unemployed prior to COVID-19 and have remained unemployed (30.7%) compared to Wave 2.

Figure 1: Negative Employment Impacts Due to COVID-19 in Each Wave



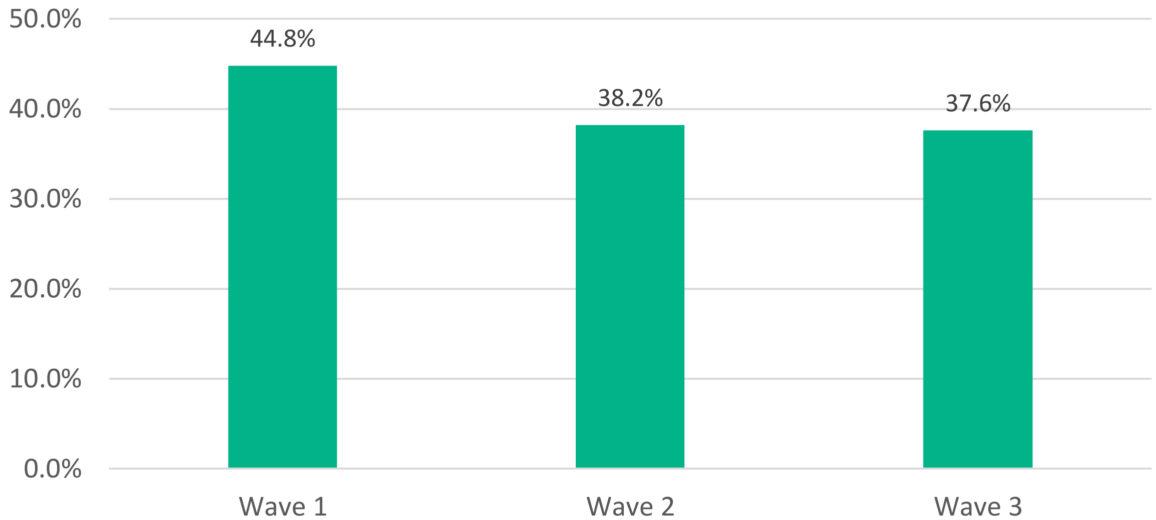
Note: Cross-sectional data; Wave 1 *n* = 2,005; Wave 2 *n* = 2,001; Wave 3 *n* = 1,999

In both Waves 2 and 3, younger people were most affected by changes in employment compared to older people. In Wave 2, almost half (45.0%) of 18-24 year old respondents reported that their employment had been negative affected, which rose slightly to 49.8% in Wave 3. In Wave 3, 25-44 year old respondents (45.9%) were also included among those whose employment was most affected by COVID-19. There were no gender differences reported in employment change in either wave. However, significantly more Ontarians of South Asian descent (29.9%) reported that their employment was negatively impacted by COVID-19 compared to those from other ethno-cultural backgrounds (20.9%) in Wave 2. In Wave 3, both Ontarians of East Asian descent (51.1%) and South Asian descent (49.0%) were among those whose employment was most affected.

CHANGE IN HOUSEHOLD INCOME

While almost half (44.8%) of all respondents in Wave 1 indicated that their household income had been negatively affected by COVID-19, cross-sectional data demonstrated a slight reduction in the impact on household income in follow-up waves (Figure 2). In Wave 2, over a third of respondents (38.2%) indicated that their household income had been negatively affected by COVID-19, which remained relatively stable in Wave 3 (37.6%).

Figure 2: Negative Impacts to Household Income Due to COVID-19 in Each Wave



Note: Cross-sectional data; Wave 1 *n* = 2,005; Wave 2 *n* = 2,001; Wave 3 *n* = 1,999

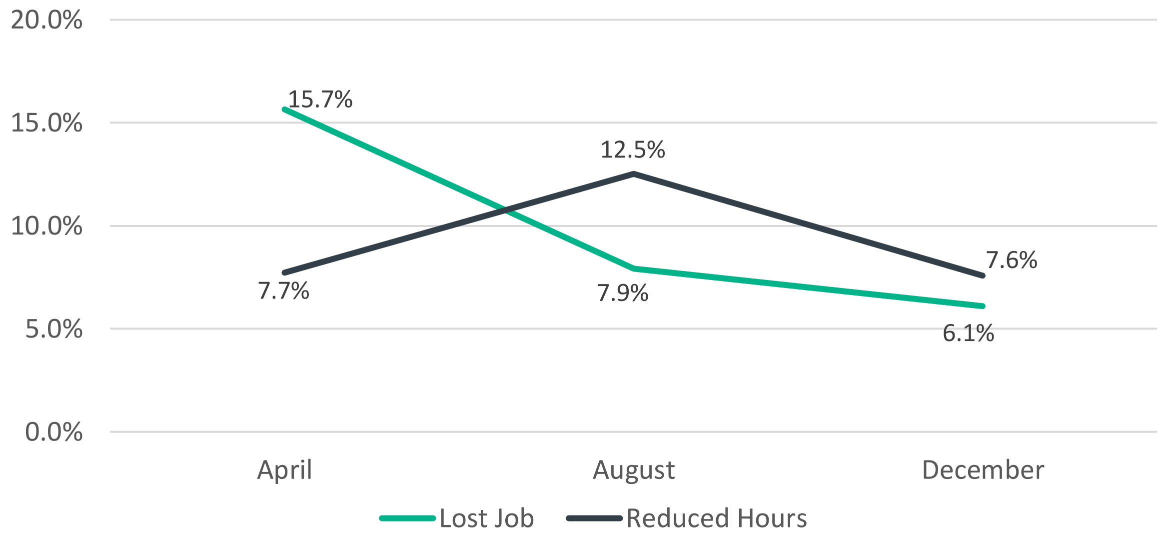
Young people were again most affected by changes in household income compared to other age groups. For example, 54% of 18-24 year old respondents reported that COVID-19 had negatively impacted their income in Wave 2, which slightly rose to 59.7% in Wave 3. Men and women reported similar levels of impact to their household income. However, slightly more Ontarians of East Asian descent (44.2%) reported their household income as being negatively impacted by COVID-19 compared to those from other ethno-cultural backgrounds (37.5%) in Wave 2. In Wave 3, negative impacts to household income did not differ between ethno-cultural groups.

FINANCIAL IMPACTS OF COVID-19 OVER TIME

The longitudinal data provided an interesting overview of employment changes among respondents who completed all three waves. Overall, the longitudinal impact of COVID-19 on employment was consistent with results from the cross-sectional data. The level of job loss due to COVID-19 declined significantly over time (see Figure 3). Significantly fewer people reported losing their jobs in August and December compared to April, though there was no difference in the proportion of people experiencing job loss between August and December. This could be due to factors such as businesses reopening, federal grants allowing businesses to rehire furloughed employees, or that the individual remained unemployed in August and December, meaning that their employment status did not change.

Both the cross-sectional data and longitudinal data also revealed a notable pattern in the proportion of people whose employment was affected by working reduced hours. A similar proportion of people reported working reduced hours in April and December, however there was a significant spike in people reporting reduced hours in August (Figure 3). This spike may be due to some businesses trying to retain staff at the onset of the pandemic and then resorting to money management practices such as reducing business hours or shifting full-time employees into part-time roles.

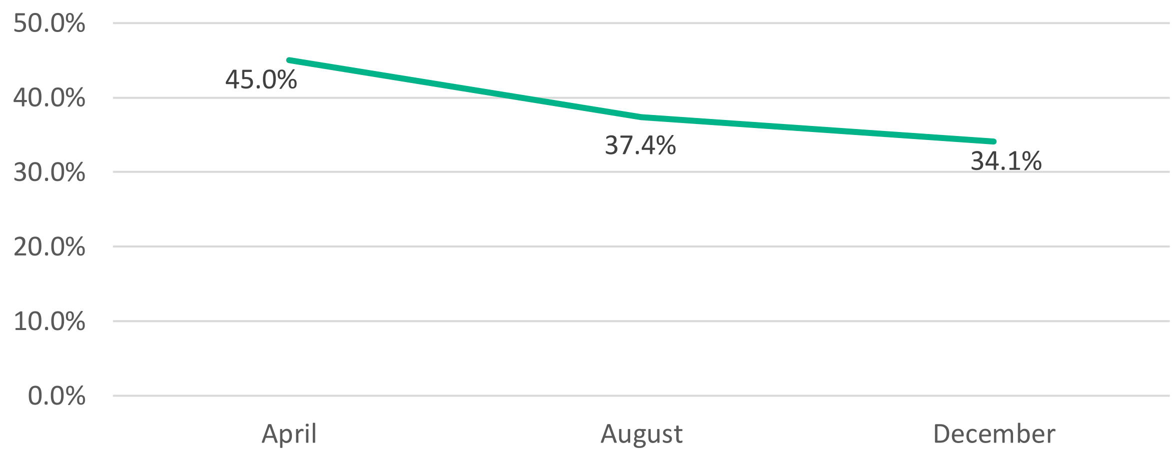
Figure 3: Negative Employment Impacts Due to COVID-19 Over Time



Note: Longitudinal 3-wave repeated measures analysis of variance (ANOVA); *n* = 607

The impact on Ontarians' household income among those who completed all three waves followed a similar pattern to that seen in the cross-sectional results. That is, almost half (45.0%) of Ontarian gamblers reported that their household income was negatively affected by the COVID-19 pandemic in April, which significantly reduced to 37.4% in August and remained relatively stable at 34.1% in December (Figure 4).

Figure 4: Negative Impact on Household Income Due to COVID-19 Over Time



Note: 3-wave repeated measures analysis of variance (ANOVA); n = 604

MENTAL HEALTH AND WELLBEING

HIGHLIGHTS

- While life satisfaction remained moderate and stable in each wave, moderate-to-severe mental health concerns were prevalent among Ontarian gamblers.
- Life satisfaction remained moderate and stable between Wave 1 and Wave 2.
- High levels of anxiety were more prevalent near the beginning of the pandemic in Wave 1 (26%), which reduced slightly in Wave 2 (21%) and Wave 3 (21%).
- High levels of depression remained relatively stable between Wave 1 (12%), Wave 2 (11%), and Wave 3 (12%).
- Longitudinal results demonstrated fluctuating mental health concerns throughout the pandemic, where rates of severe anxiety decreased while severe depression increased over time.
- Young adults, women, and Ontarians of South Asian descent were among those who reported the highest levels of anxiety, whereas young adults and Ontarians of South Asian descent were among those most impacted by severe depression symptoms.

LIFE SATISFACTION

Life satisfaction was assessed in Waves 1 and 2 with the item, "How do you feel about your life right now?" Possible responses ranged from 0 (*very dissatisfied*) to 10 (*very satisfied*). Overall, self-reported life satisfaction was moderate among Ontario gamblers, and remained stable between Wave 1 (average = 6.2) and Wave 2 (average = 6.5).

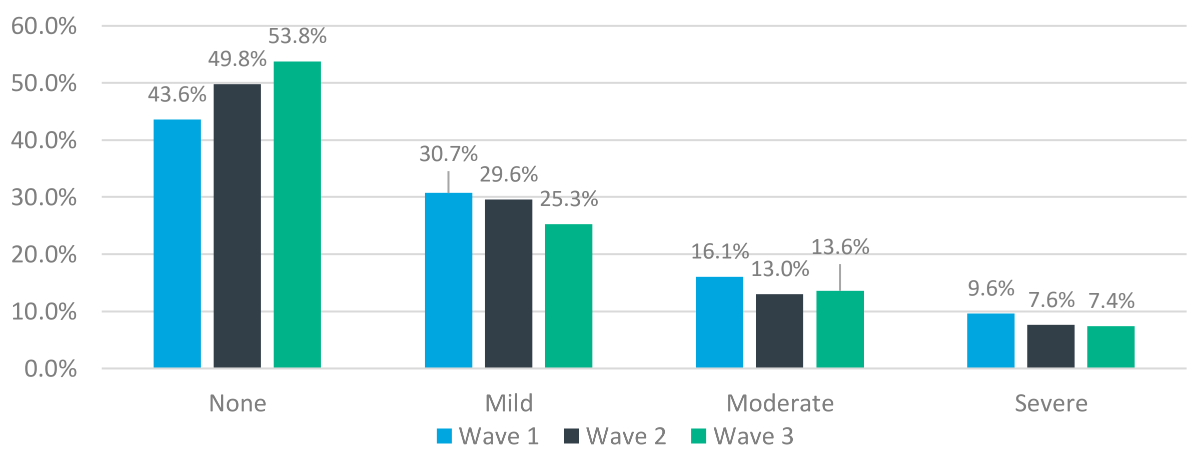
In both waves, life satisfaction generally increased with age. For example, 18-24 year olds reported the lowest average life satisfaction (Wave 2 = 5.9) while those over 65 years reported the highest life satisfaction (Wave 2 = 7.1). Men also consistently reported higher life satisfaction in both waves (Wave 2 = 6.7) compared to women (Wave 2 = 6.3). As well, Ontarians of East Asian descent (average = 6.1) and South Asian descent (average = 5.8) also reported significantly lower life satisfaction than respondents from other ethno-cultural backgrounds (average = 6.6) in Wave 2.

ANXIETY

Anxiety was measured using the General Anxiety Disorder Questionnaire (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006) in all three waves. Cross-sectional data showed that high levels of anxiety appeared to be more prevalent near the beginning of the pandemic, with approximately one-quarter (25.7%) of Wave 1 respondents presenting moderate-to-severe symptoms of anxiety. In Wave 2, approximately one in five gamblers (20.6%) reported moderate-to-severe anxiety symptoms which remained stable in Wave 3 (21.0%; Figure 5).

In each wave, almost twice as many women reported experiencing severe anxiety than men. Severe anxiety was also most prevalent among 18-24 year olds in each wave (Wave 3 = 14.2%) compared to other age groups, and generally declined with age. Severe anxiety was more prevalent among Ontarians of South Asian descent (15.1%) compared to those from other ethno-cultural backgrounds (7.2%) in Wave 2, which remained relatively stable (12.7%) in Wave 3.

Figure 5: Anxiety Symptoms among Ontario Gamblers in Each Wave



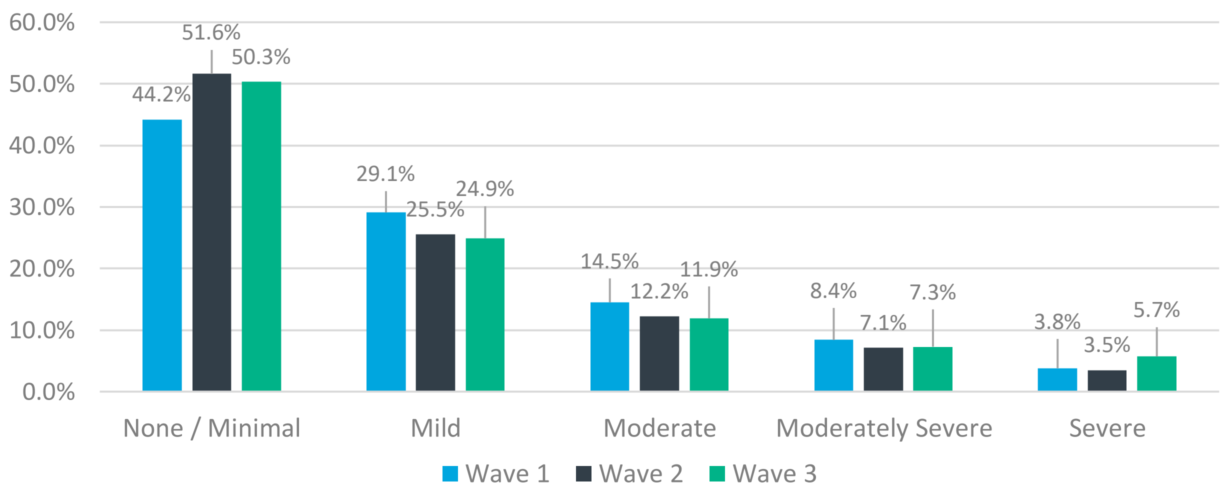
Note: Cross-sectional data; Wave 1 *n* = 2,005; Wave 2 *n* = 2,001; Wave 3 *n* = 1,999.

DEPRESSION

Depression was measured using the Patient Heath Questionnaire (PHQ-9; Kroenke, Spitzer, & Williams, 2001) in all three waves. Overall, more than one in ten Ontario gamblers were affected by depression. In Wave 1, 12.2% of respondents reported moderately severe-to-severe depression, which remained relatively stable in Wave 2 (10.6%) and Wave 3 (12.0%; Figure 6).

In each wave, men and women reported similar levels of severe depression. Severe depression was significantly more prevalent among 18-24 year olds in each wave (Wave 3 = 10.1%) than other age groups, and generally declined with age. Ontarians of South Asian descent were also among those most affected by severe depression in both Wave 2 (9.4%) and Wave 3 (11.8%).

Figure 6: Depression Symptoms among Ontario Gamblers in Each Wave

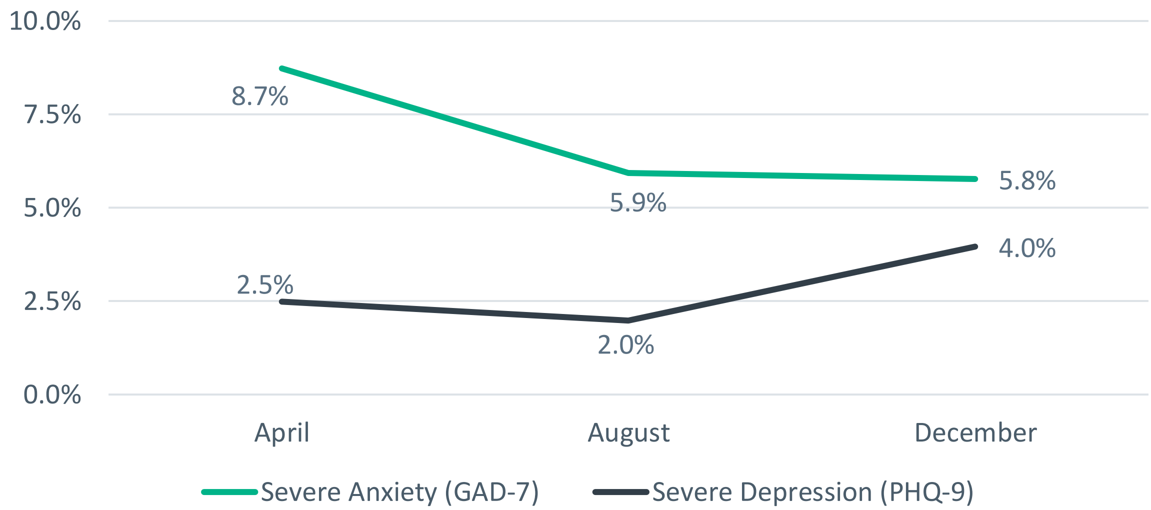


Note: Wave 1 *n* = 2,005, Wave 2 *n* = 2,001, Wave 3 *n* = 1,999

MENTAL HEALTH AND WELLBEING OVER TIME

Mental health appeared to fluctuate throughout the COVID-19 pandemic, where rates of severe anxiety decreased while severe depression increased over time (Figure 7). Severe anxiety scores started relatively high in April during the first six weeks of emergency measures, and then significantly decreased in August and remained stable in December. On the other hand, severe depression scores remained stable between April and August and then significantly increased in December. While these trends follow a similar pattern to the rates of severe anxiety and depression in the cross-sectional data, the longitudinal prevalence rates are slightly lower overall.

Figure 7: Severe Mental Health Symptoms Over Time



Note: Longitudinal 3-wave repeated measures analysis of variance (ANOVA); Severe anxiety *n* = 607; Severe depression *n* = 606.

ONLINE GAMBLING BEHAVIOURS

HIGHLIGHTS

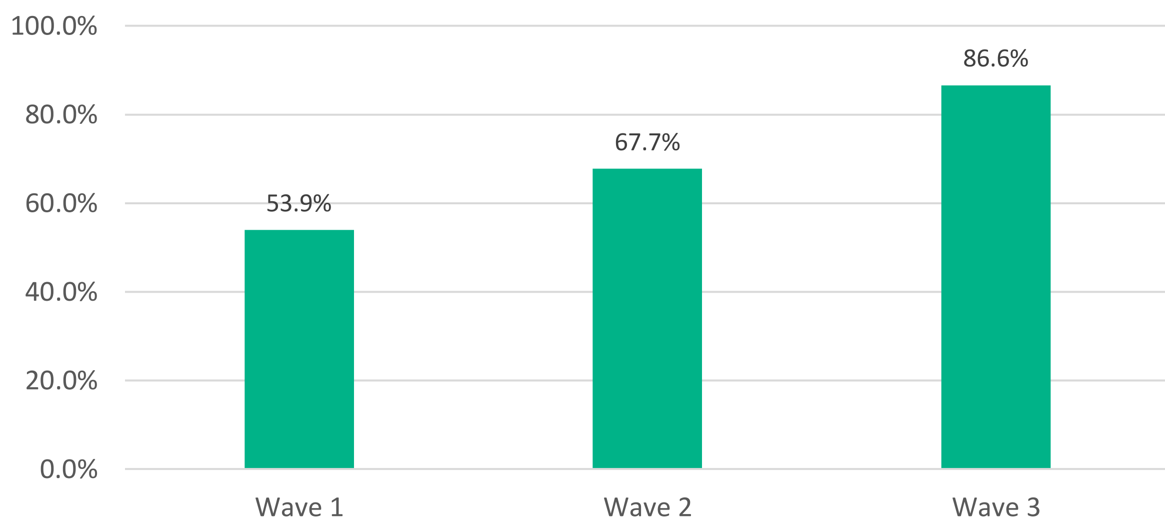
- Throughout the course of the pandemic, more Ontarian gamblers migrated to online gambling, including those who primarily gambled in-person before COVID-19.
- Over half of gamblers in Wave 1 (54%) reported playing online since the initial lockdown in March 2020, which rose significantly in Wave 2 (68%) and again in Wave 3 (87%) among online players who reported playing online in the past three months.
- Participation in most online gambling games increased in each wave. The most popular online gambling game across waves was lotto or raffle ticket draws, with other popular games including instant lottery, electronic gambling machines, casino table games, and sports betting.
- Longitudinal results confirmed the increasing rates of online gambling over time as seen in the cross-sectional results.
- Men and Ontarians of South Asian descent were most likely to report gambling online in Wave 2, though rates of online gambling were equally high across all demographics in Wave 3.

ONLINE GAMBLING BEHAVIOURS

Before COVID-19, Wave 1 showed the vast majority of Ontarians (76.7%) reported engaging in in-person or land-based gambling only, with 13.6% reporting a mix of both in-person and online gambling, and just 9.7% reporting online gambling only. Wave 1 findings also showed that in the six weeks after the initial declaration of provincial emergency measures for COVID-19 in March 2020, the rates of online gambling sharply rose to 53.9%. By Wave 2, cross-sectional results revealed online gambling participation since March 2020 increased to 67.7%. By Wave 3, results revealed that among those who reported having ever gambled online, 86.6% had gambled in the three months since Wave 2 (Figure 8).

In Wave 2, men (73.5%) were more likely to have gambled online in the past six months than women (61.6%). As well, Ontarians of South Asian descent (77.9%) were more likely to have gambled online compared to other ethno-cultural groups (67.1%) in Wave 2. In Wave 3, rates of online gambling in the past three months were equally high across all demographics.

Figure 8: Online Gambling Participation Rates among Ontario Gamblers in Each Wave

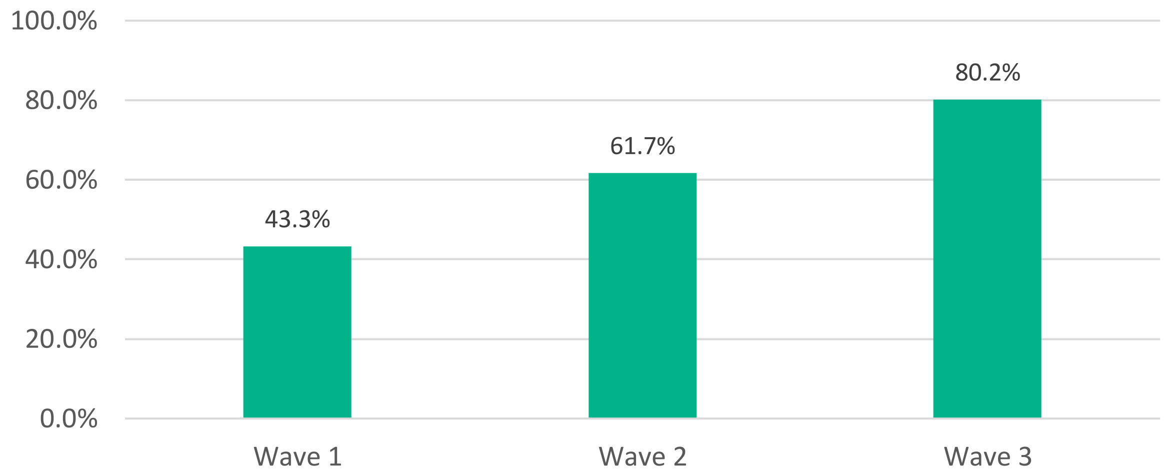


Note: Cross-sectional data; Wave 1 *n* = 2,005; Wave 2 *n* = 2,001; Wave 3 *n* = 1,999.

ONLINE GAMBLING AMONG PRE-COVID-19 LAND-BASED PLAYERS

Online gambling participation also increased steadily over time among those who primarily gambled in-person before COVID-19 (Figure 9). Online gambling among land-based players significantly increased from 43.3% in Wave 1 to 61.7% in Wave 2, and again to 80.2% in Wave 3.

Figure 9: Online Gambling Participation among Land-Based Players Pre-COVID-19 in Each Wave



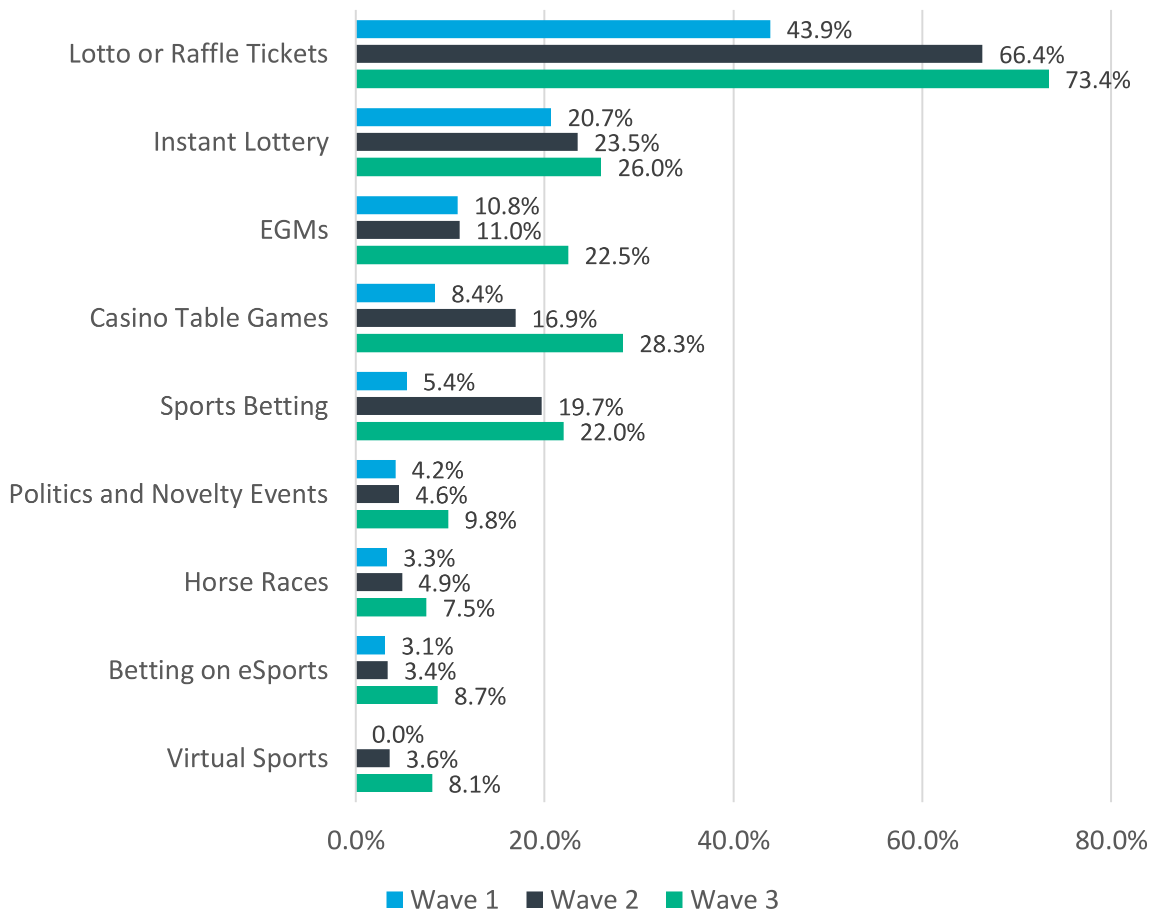
Note: Cross-sectional data; Wave 1 *n* = 1,538; Wave 2 *n* = 1,453; Wave 3 *n* = 257.

TYPES OF ONLINE GAMES PLAYED

Among Ontarian gamblers, the most popular online gambling game played was lotto or raffle ticket draws in each wave (Figure 10). In Waves 1 and 2, the second most popular game was instant lottery, followed by electronic gaming machines in Wave 1 and sports betting in Wave 2. In Wave 3, casino table games were the second most popular game played, followed by instant lottery.

Participation in most online gambling games increased in each wave (Figure 10). Cross-sectional data revealed sizeable increases in sports betting, lotto or raffle draws, and casino table games from Wave 1 to Wave 2, of which sports betting remained relatively stable at Wave 3. On the other hand, there was increased participation from Wave 2 to 3 in all other game types except for instant lottery.

Figure 10: Types of Online Games Played among Ontario Gamblers in Each Wave



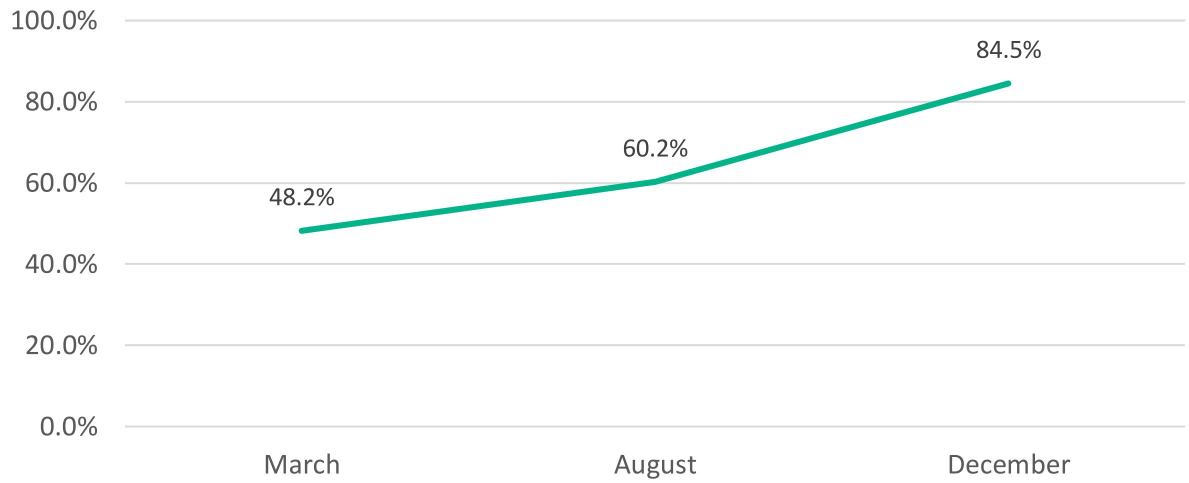
Note: Wave 1 *n* = 2,005; Wave 2 *n* = 2,001; Wave 3 *n* = 1,999.

Popularity of gambling games also differed according to gambling risk level. In Wave 2, those at high risk for gambling problems were significantly more likely to play all types of online games compared to those at lower risk. In Wave 3, high risk gamblers were also more likely to play all types of games than gamblers of lower risk levels with the exception of lottery tickets, which were equally likely to be played by both high risk gamblers (69.3%) and lower risk gamblers (62.4%).

ONLINE GAMBLING BEHAVIOURS OVER TIME

Rates of online gambling continued to increase over the course of the COVID-19 pandemic in the longitudinal sample (Figure 11). That is, online gambling increased from April (48.2%) to August (60.2%) and then again in December (84.5%; among those having ever gambled online). These trends are similar to rates of online gambling in each wave of the cross-sectional data.

Figure 11: Online Gambling Participation Over Time



Note: Longitudinal 3-wave repeated measures analysis of variance (ANOVA); n = 605

GAMBLING RISK LEVEL

HIGHLIGHTS

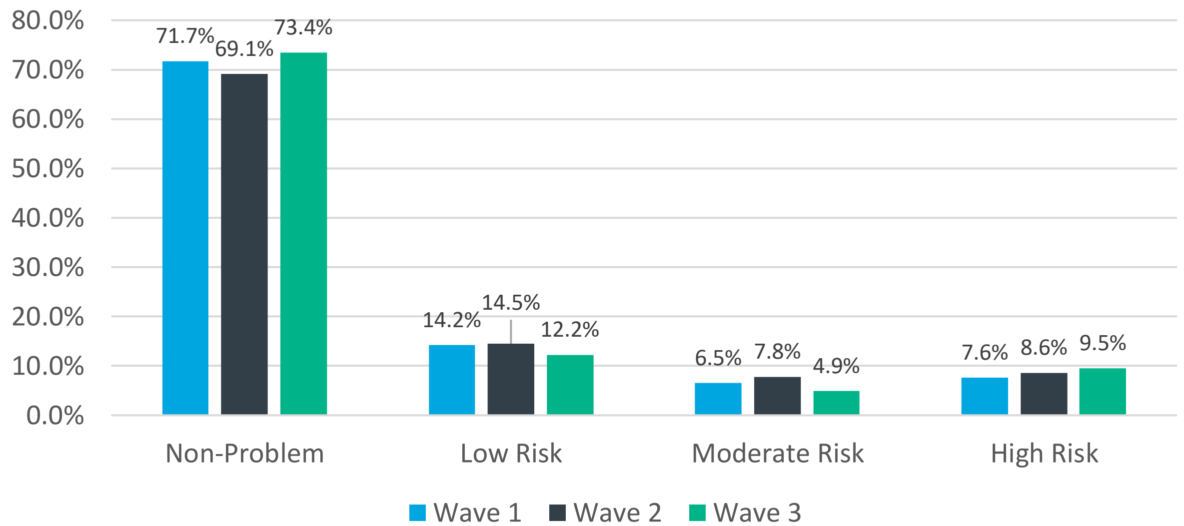
- The majority of Ontarian gamblers reported experiencing no gambling problems throughout the pandemic.
- Under one in ten respondents screened as high risk for gambling problems according to the Problem Gambling Severity Index (PGSI) in Wave 1 (7.6%), Wave 2 (8.6%), and Wave 3 (9.5%).
- Over one-third (36%) of gamblers in Wave 2 reported that they intended to return to in-person gambling after COVID-19, which reduced by over half in Wave 3 (13%).
- Gamblers at high risk of experiencing gambling problems were more likely to gamble online and the rate of high risk gambling among online players doubled between Wave 2 (12%) and Wave 3 (24%).
- Longitudinal results revealed that rates of high risk gambling, including high risk online gambling, did not change throughout the pandemic, despite the sharp increase seen in high risk online gambling in the cross-sectional data.
- Men, younger adults, Ontarians of South Asian descent, and Ontarians of East Asian descent were among those at greatest risk of experiencing gambling harms, including high risk online gambling.

GAMBLING RISK LEVEL

Gambling risk level was measured using the Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001) in all three waves. Overall, the majority of Ontarians reported experiencing no gambling problems in each wave (Figure 12). However, cross-sectional results revealed that a small proportion of respondents indicated being high risk for gambling problems in Wave 1 (7.6%), which slightly increased in Wave 2 (8.6%) and Wave 3 (9.5%).

In each wave, men were more likely to screen as high risk for gambling problems and women were more likely to experience no gambling problems. For example, 11.5% of men screened as high risk compared to 7.4% of women in Wave 3. Cross-sectional results also revealed a changing demographic in gambling risk according to age. High risk gambling was most prevalent among 25-44 year olds (13.9%) in Wave 1, equally high among 18-24 year olds (14.0%) and 25-44 year olds (14.2%) in Wave 2, and highest among 18-24 year olds (25.1%) in Wave 3. In each wave, adults over 65 years displayed the lowest prevalence of high risk gambling. Ontarians of East Asian (22.2%) and South Asian (18.6%) descent were most likely to screen for high risk gambling in Wave 2 and 3 compared to those from other ethno-cultural backgrounds (6.9%), though the prevalence of high risk gambling among Ontarians of South Asian descent was considerably higher in Wave 3 (26.5%).

Figure 12: Gambling Risk Level (PGSI) among All Gamblers in Each Wave

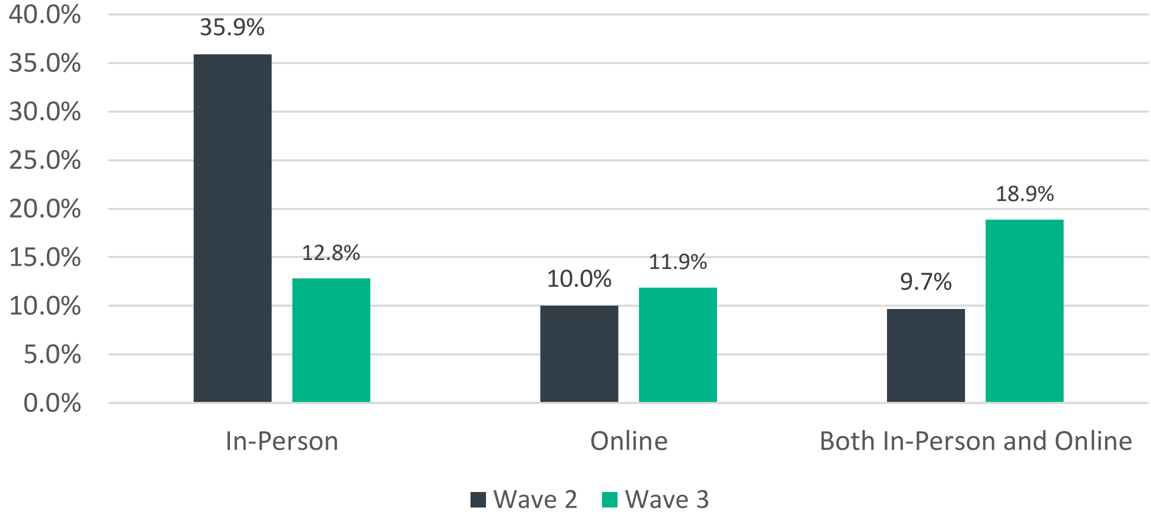


Note: Cross-sectional data; Wave 1 *n* = 2,005; Wave 2 *n* = 2,001; Wave 3 *n* = 1,999.

RISK LEVEL AND INTENTION TO RETURN TO LAND-BASED GAMBLING

Ontarians' intention to return to land-based gambling once COVID-19 land-based gambling venue restrictions are lifted were assessed in Waves 2 and 3. Over one-third (35.9%) of gamblers in Wave 2 reported that they intended to return to in-person gambling, which reduced by over half in Wave 3 (12.8%; Figure 13). This drop may be due to the additional lockdowns faced by Ontarians, where it was unclear when land-based gambling venue restrictions would be permanently lifted. Roughly similar rates of gamblers in both waves reported that they will only gamble online, and almost twice as many people in Wave 3 (18.9%) reported that they intend to gamble both in-person and online compared to Wave 2 (9.7%).

Figure 13: Intent to Gamble Once COVID-19 Gambling Venue Restrictions are Lifted



Note: Cross-sectional data; Wave 2 *n* = 1,925; Wave 3 *n* = 1,984

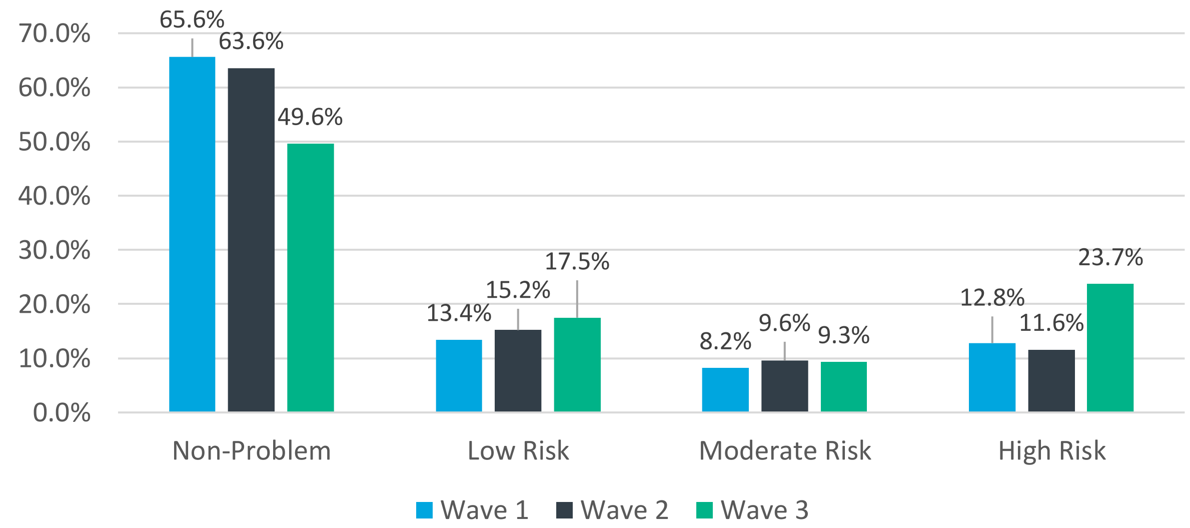
In both Waves 2 and 3, respondents who intend to return to land-based gambling once safe to do so were least likely to score as high risk for gambling harm. Rather, those who intend to gamble online, or gamble both online and in-person, were most likely to screen as high risk.

ONLINE GAMBLING RISK LEVEL

Among those who reported gambling online in the past six months (Wave 2) or the past three months (Wave 3), the majority reported no gambling problems (Figure 14). However, players at high risk of experiencing gambling problems were more likely to gamble online. Specifically, the prevalence of moderate risk and high risk gambling were greater among online gamblers than in the overall sample of gamblers in each wave, as moderate risk and high risk gamblers were significantly more likely to play online. Cross-sectional results also revealed that the rate of high risk gambling among online players doubled between Wave 2 (11.6%) and Wave 3 (23.7%).

The demographic trends seen in the overall sample of gamblers generally held for online gamblers – men, younger adults, and Ontarians of East Asian and South Asian descent were most likely to screen for high risk gambling. The only exception is that while men were more likely to screen as high risk for gambling problems compared to women in Waves 1 and 2, there were no gender differences for gambling risk level among those who played online in the last three months in Wave 3.

Figure 14: Gambling Risk Level (PGSI) among Online Gamblers in Each Wave

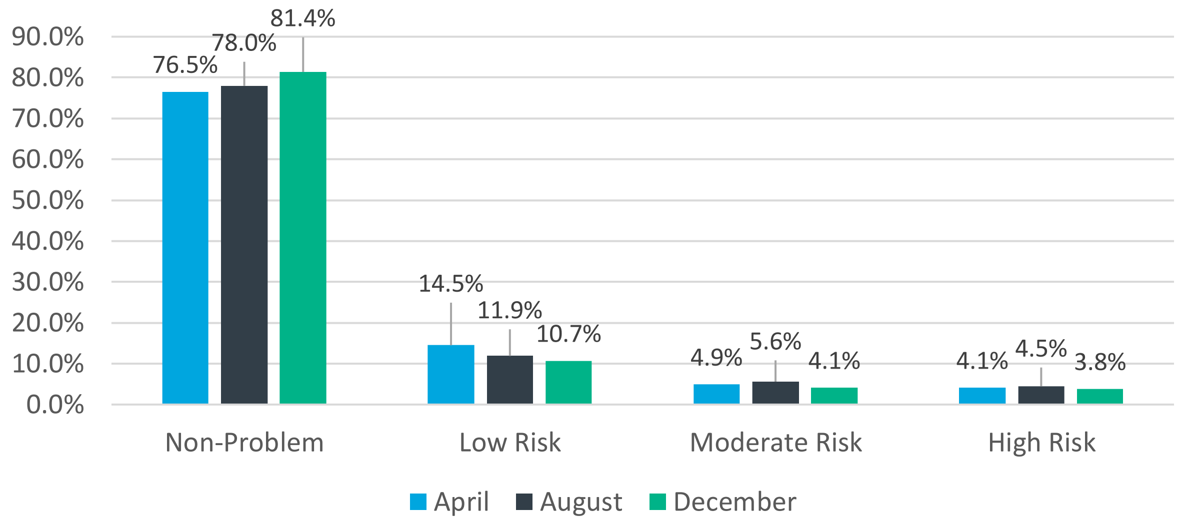


Note: Cross-sectional data; Wave 1 *n* = 1,081; Wave 2 *n* = 1,269; Wave 3 *n* = 561

GAMBLING RISK LEVEL OVER TIME

Gambling risk levels did not significantly change over the course of the COVID-19 pandemic in the longitudinal sample, except for a minor increase in the prevalence of non-problem gambling from April (76.5%) to December (81.4%; Figure 15). Compared to the cross-sectional results, those who participated in all three waves also demonstrated lower rates of moderate and high risk gambling as well as higher rates of non-problem gambling over time.

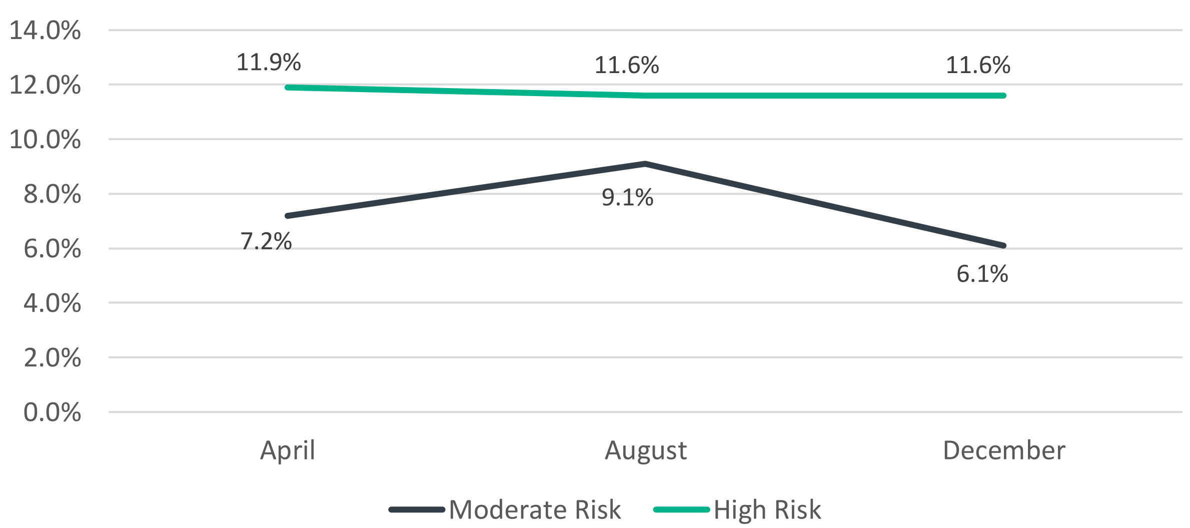
Figure 15: Gambling Risk Level (PGSI) Over Time



Note: Longitudinal 3-wave repeated measures analysis of variance (ANOVA); *n* = 463.

Among online gamblers, gambling risk levels also did not significantly change throughout the COVID-19 pandemic. Rather, both high risk gambling and moderate risk gambling remained stable over time (Figure 16). These rates are similar to those seen in the cross-sectional data with the exception of high risk gambling in December, which saw a sharp increase between Waves 2 and 3 in the cross-sectional data.

Figure 16: Elevated Online Gambling Risk Over Time



Note: Longitudinal 3-wave repeated measures analysis of variance (ANOVA); *n* = 599

ONLINE GAMBLING RISK FACTORS

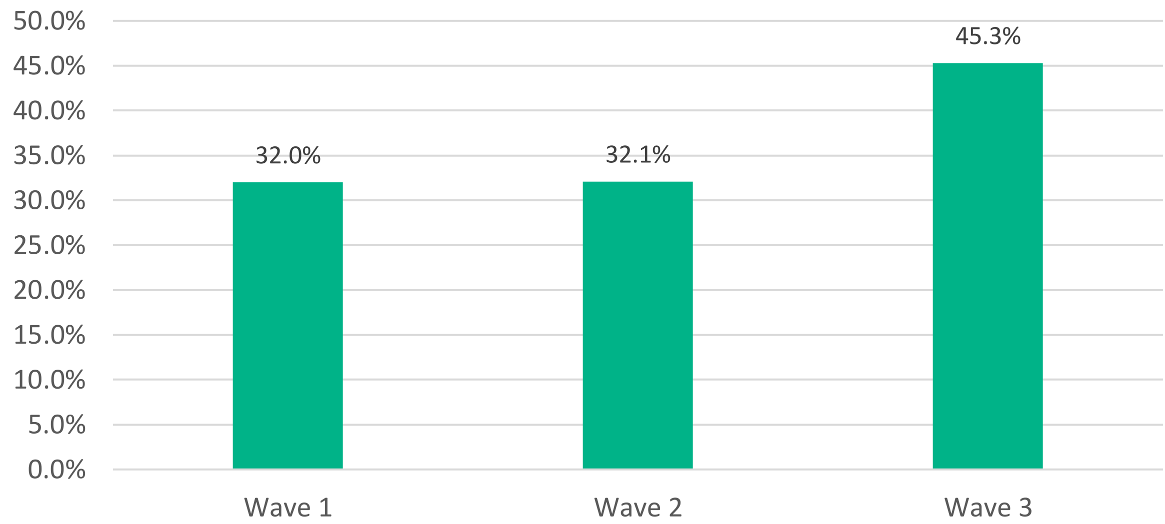
HIGHLIGHTS

- For many gamblers, COVID-19 and the associated emergency measures were influential factors in deciding to gamble online.
- One-third of online gamblers in Waves 1 and 2 (32%) and almost half of online gamblers in Wave 3 (45%) reported gambling online due to COVID-19 restrictions, though longitudinal results revealed that the rate of Ontarians gambling online due to COVID-19 did not significantly change over the course of the pandemic.
- Online gambling behaviours such as opening new online gambling accounts, gambling online on grey sites, and increasing the time and money spent gambling online were also factors associated with high risk online gambling.
- Online gamblers who were at higher risk for gambling harms also reported experiencing greater levels of severe anxiety (17% to 24%) and depression (16% to 21%).
- Intoxicated online gambling was also prevalent throughout the COVID-19 pandemic, where almost half of online gamblers reported gambling under the influence of alcohol (46%) and one-third reported gambling under the influence of cannabis (26%) in Wave 3.
- Longitudinal results confirmed the increase in intoxicated gambling over time, where a significantly higher portion of online gamblers reported either gambling under the influence of alcohol (38%) or cannabis (12%) in December 2020.
- Younger adults, men, Ontarians of South Asian descent, and those at high risk of gambling harms were among those most likely to gamble online under the influence of a substance.

INFLUENCE OF COVID-19

In Wave 1, approximately one-third (32.0%) of those who reported gambling online said that they were in part influenced by COVID-19 and the impact of emergency measures, which included greater isolation (Figure 17). While the proportion of people whose gambling was influenced by COVID-19 restrictions remained stable in Wave 2 (32.1%), cross-sectional data revealed an increase in online gambling influenced by such measures in Wave 3 (45.3%).

Figure 17: Decision to Gamble Online Due to COVID-19 Restrictions in Each Wave



Note: Cross-sectional data; Wave 1 n = 1,081; Wave 2 n = 1,271; Wave 3 n = 483

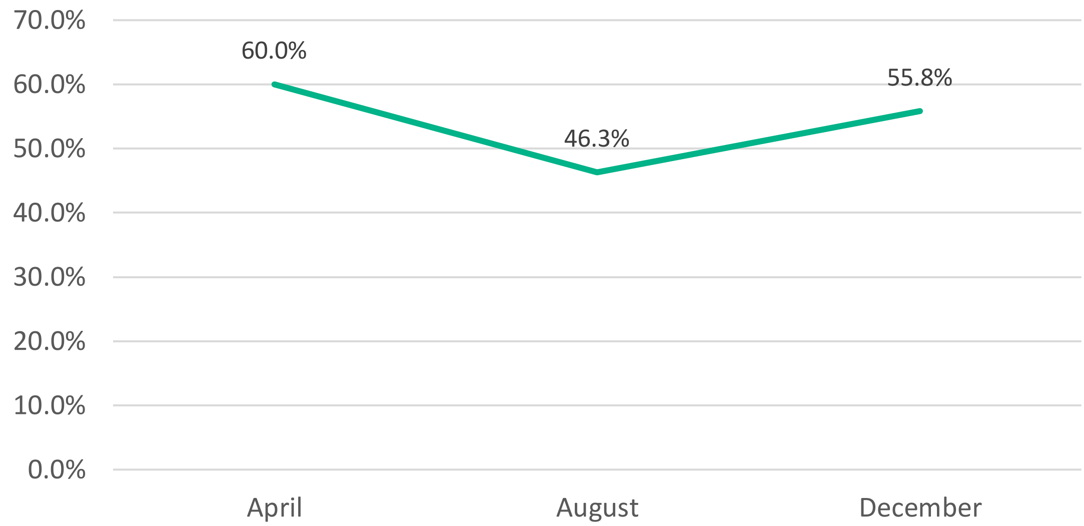
Men and women did not differ in the extent to which COVID-19 influenced their online gambling. However, 25-44 year olds were most likely to report that their decision to gamble online was in part influenced by COVID-19 restrictions in both Wave 1 (38.0%) and Wave 2 (36.0%) compared to other age groups. As well, Ontarians of South Asian descent in Wave 2 (44.3%) were most likely to report that their decision to gamble online was influenced by COVID-19 restrictions in Wave 2, but not Wave 3.

In Waves 1 and 2, moderate risk and high risk gamblers were most likely to indicate that their decision to gamble online was influenced by COVID-19 restrictions. However, players from all risk levels were equally likely to be influenced by COVID-19 in their decision to gamble online in Wave 3.

INFLUENCE OF COVID-19 OVER TIME

The extent to which COVID-19 influenced Ontarians' online gambling did not significantly change over the course of the pandemic in the longitudinal sample (Figure 18). However, a minor decrease was noted in the influence of COVID-19 on online gambling between April (60.0%) and August (46.3%). Compared to the cross-sectional results, those who participated in all three waves reported being more influenced by COVID-19 in their decision to gamble online. As well, the cross-sectional results revealed that more gamblers were influenced by COVID-19 in Wave 3, whereas the longitudinal results demonstrate the highest rate of influence in April.

Figure 18: Decision to Gamble Online Due to COVID-19 Restrictions Over Time



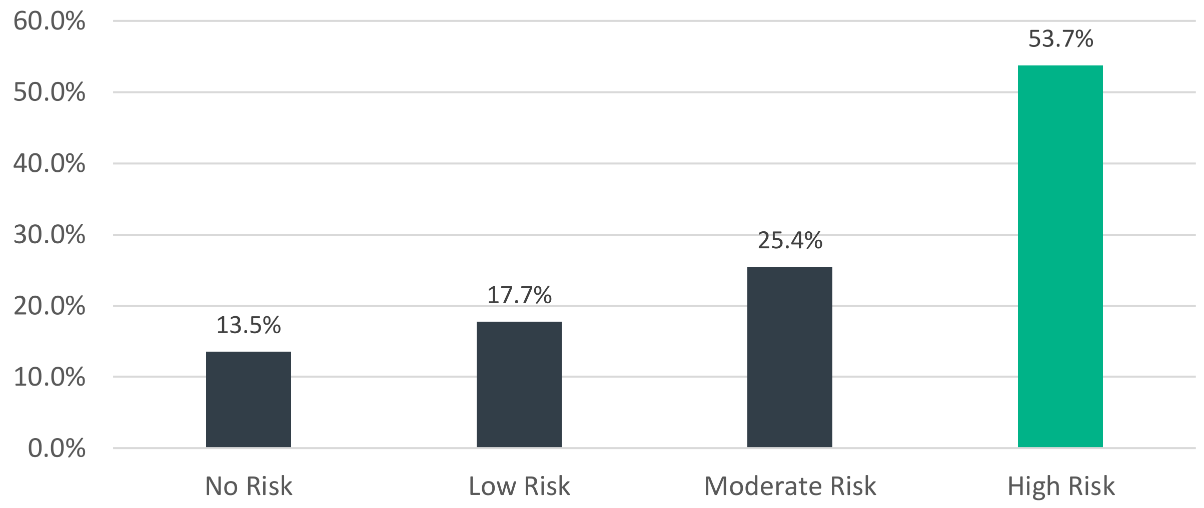
Note: Longitudinal 3-wave repeated measures analysis of variance (ANOVA); *n* = 95

ONLINE GAMBLING BEHAVIOURS

Certain online gambling behaviours were identified as being prominent risk factors for gambling-related harm. Specifically, opening new online gambling accounts, gambling online on grey sites, and increasing the time and money spent gambling online were all associated with high risk gambling.

In Wave 2, 19.9% of those who gambled online in the past six months opened new online gambling accounts. Of note, over half (53.7%) of respondents at high risk for gambling problems reported signing up for a new online gambling account compared to 15.5% of those at lower risk levels (Figure 19).

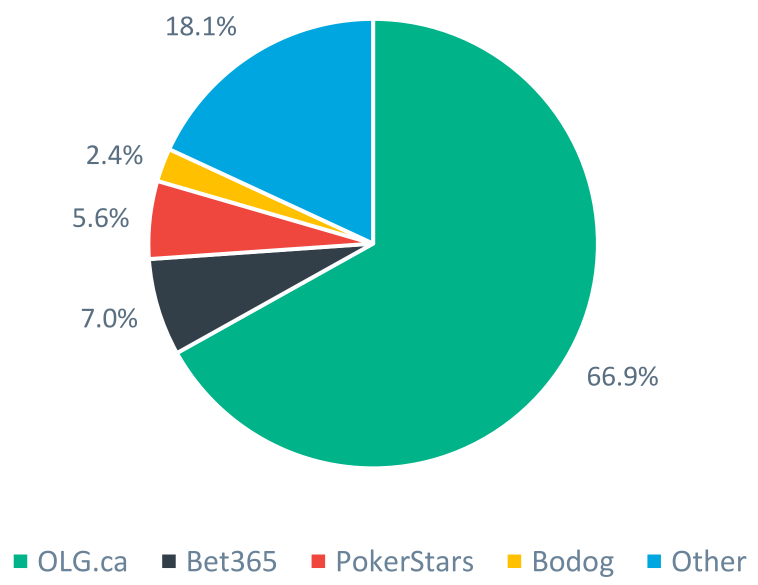
Figure 19: Online Players who Signed Up for a New Online Gambling Account During COVID-19



Note: Wave 2 cross-sectional data; *n* = 1,266

In Wave 3, OLG.ca was the most frequently used online gambling platform (66.9%) among Ontarians who gambled online in the past three months, followed by Bet365 (7.0%) and PokerStars (5.6%). Those at high risk (46.1%) for gambling problems were more likely to list grey sites as their most frequent online gambling platform compared to those at lower risk (29.4%).

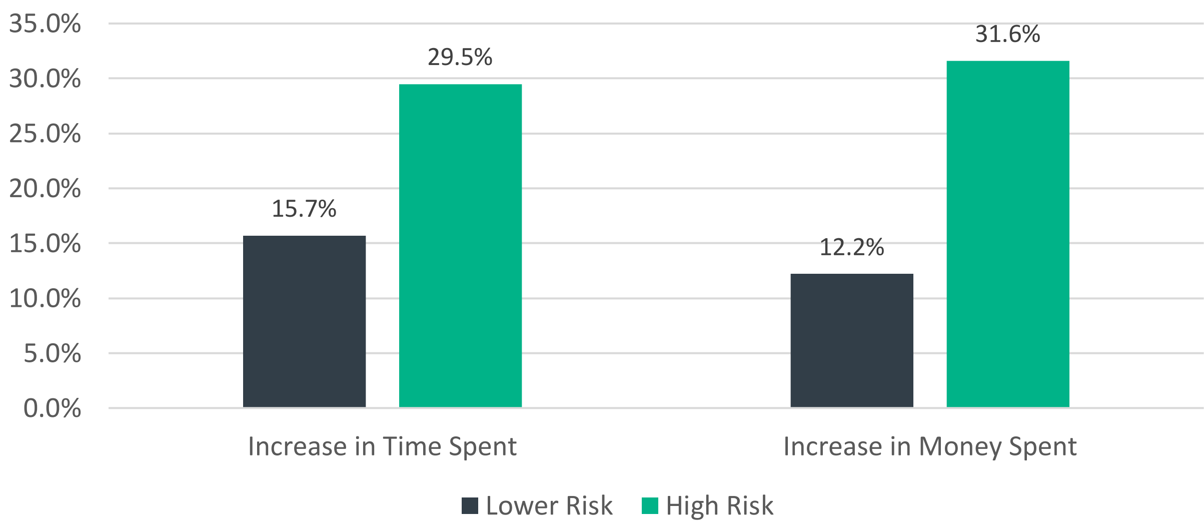
Figure 20: Most Frequently Played Online Gambling Site



Note: Wave 3 cross-sectional data; *n* = 482

Approximately half of participants reported no change in their time and money spent gambling online in the past three months (Wave 3). However, 18.9% reported increasing their time spent and 16.8% increased their money spent gambling online. These rates were even higher among those at high risk of gambling problems, with 29.5% reporting an increase in their time spent gambling online, and 31.6% reporting an increase in their money spent gambling online (Figure 21).

Figure 21: Changes in Time and Money Spent Gambling Online by Gambling Risk Level

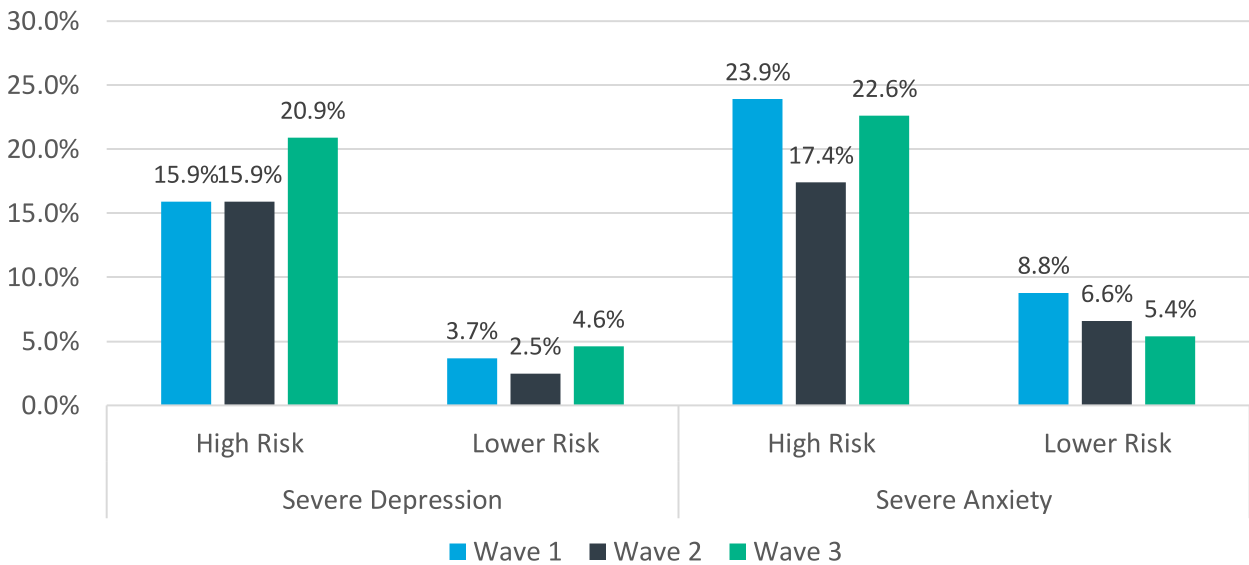


Note: Wave 3 cross-sectional data; *n* = 481

MENTAL HEALTH CONCERNS

Ontarians who had gambled online since the initial lockdown in March were significantly more likely to report moderate anxiety (17.9%) and moderately severe depression (10.2%) symptoms (but not severe symptoms) compared to those who had not gambled online in Wave 2. In Wave 3, the severity of mental health concerns did not differ between those who had gambled online in the past three months and those who had not. Mental health concerns were, however, directly related to online gambling risk level in each wave. That is, online gamblers who were at higher risk for gambling harms also reported experiencing greater levels of severe anxiety and depression concerns compared to those at lower risk (Figure 22).

Figure 22: Severe Mental Health Concerns by Online Gambling Risk in Each Wave



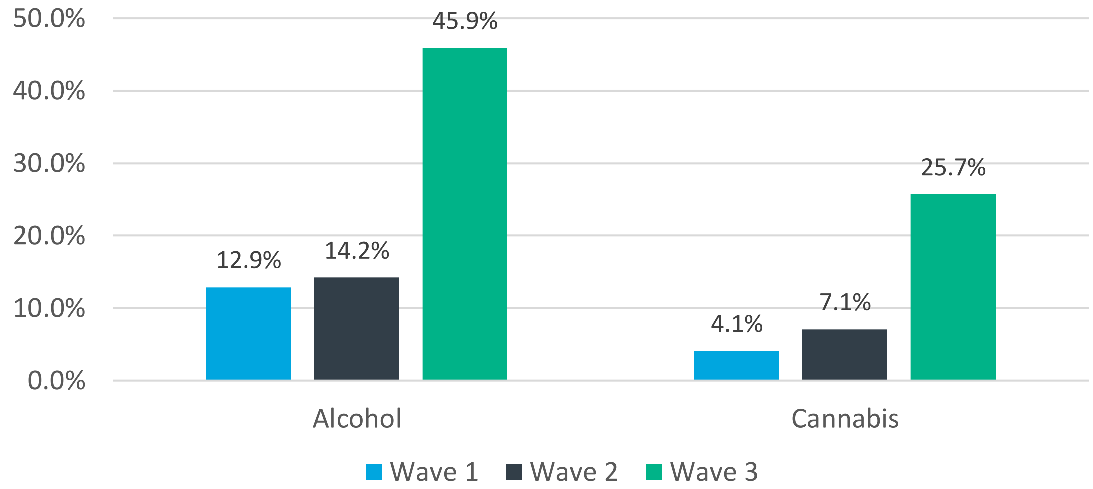
Note: Cross-sectional data; Wave 1 *n* = 1,081; Wave 2 *n* = 1,259; Wave 3 *n* = 486

INTOXICATED GAMBLING

Substance use was prevalent throughout the COVID-19 pandemic among those who gambled in Ontario. In Wave 2, the vast majority of gamblers reported consuming alcohol (87.7%) and half reported using cannabis (51.9%). This marked a stark increase from rates of alcohol consumption (68.7%) and cannabis use (16.4%) reported in Wave 1 (substance use was not assessed in Wave 3).

Of concern is that rates of substance use also translated to intoxicated gambling online, where 12.9% of respondents in Wave 1 reported consuming alcohol while gambling online and 4.1% reported using cannabis while gambling online in the six weeks since the initial lockdown in March 2020. In Wave 2, cross-sectional results revealed a slight rise in rates of gambling online while intoxicated, where 14.2% of respondents had ever consumed alcohol and 7.1% had ever used cannabis while gambling online in the past six months (since the initial lockdown). These rates increased substantially in Wave 3 with 45.9% of those who gambled online in the past three months reporting that they consumed alcohol while gambling online and 25.7% reporting they used cannabis while gambling online in the past year (Figure 23). Interestingly, cross-sectional results revealed that the majority of online gamblers in Wave 3 reported that their use of alcohol or drugs while gambling online had stayed the same (67.2%), and 12.4% indicated that their use while gambling online increased during the pandemic.

Figure 23: Intoxicated Online Gambling in Each Wave



Note: Cross-sectional data; Wave 1 *n* = 1,081; Wave 2 *n* = 1,302; Wave 3 *n* = 486

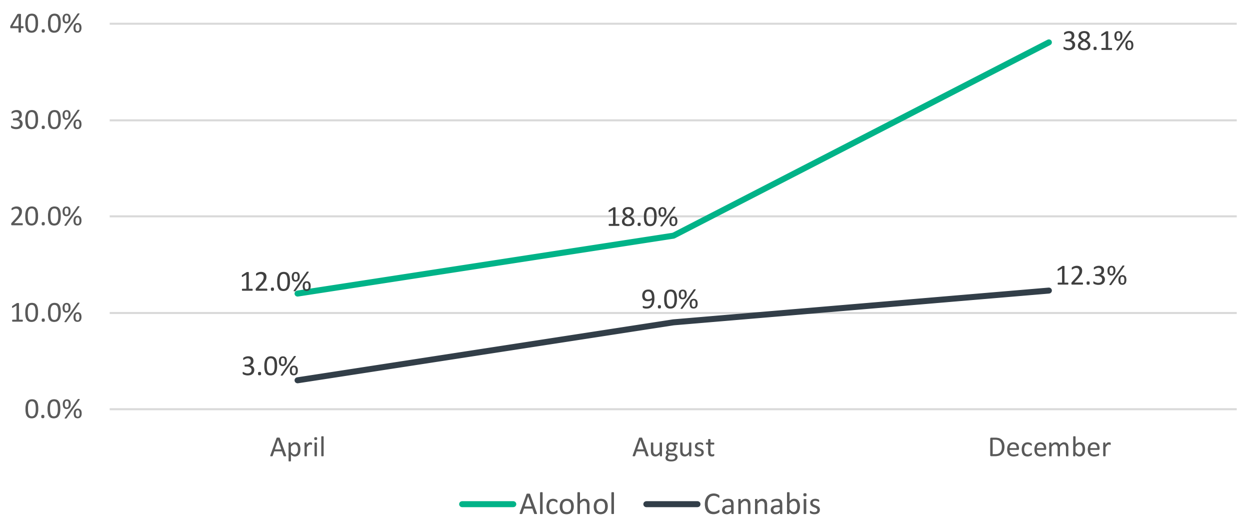
Rates of intoxicated online gambling were highest among men (17.6%) in Wave 2, who were twice as likely as women to consume alcohol while gambling online. Rates of consuming cannabis while gambling online did not differ between genders. Intoxicated gambling was also more prevalent among younger age groups than older age groups, with 18-44 year old respondents being more likely to consume both alcohol and cannabis while gambling in Wave 2 and Wave 3. In Wave 3, more than half (59.6%) of young adults gambled online under the influence of alcohol and half (50.0%) gambled online under the influence of cannabis. Ontarians of South Asian descent (21.0%) were slightly more likely than other ethno-cultural groups (13.6%) to consume alcohol while gambling online in Wave 2, though there were no ethno-cultural differences in alcohol consumption while gambling online in Wave 3. While there were no ethno-cultural differences in gambling online under the influence of cannabis Wave 2, Ontarians of South Asian descent (40.0%) were more likely than those from other ethno-cultural backgrounds (24.3%) to gamble online while using cannabis in Wave 3.

People at high risk for gambling problems were also significantly more likely to gamble online under the influence of a substance than those who were at lower risk. In Wave 2, 40.1% of high-risk gamblers reported consuming alcohol while gambling online, and one-third (32.0%) used cannabis while gambling online. In Wave 3, rates of gambling under the influence doubled among high-risk gamblers, the majority of whom reported gambling under the influence of alcohol (83.5%) or cannabis (69.6%) among those who gambled online in the past three months. In both Wave 2 and Wave 3, intoxicated online gambling was also significantly associated with moderate-to-severe depression and anxiety, where people experiencing higher severity of mental health concerns were also more likely to use substances while gambling online.

INTOXICATED ONLINE GAMBLING OVER TIME

Intoxicated online gambling increased throughout the course of the COVID-19 pandemic. Gambling under the influence of alcohol remained relatively stable between April (12.0%) and August (18.0%), but rates more than doubled in December (38.1%; Figure 24). This trend follows a similar pattern to that seen in the cross-sectional results. On the other hand, online gambling while using cannabis increased between April (3.0%) and August (9.0%) but remained stable through December (12.3%). This pattern differs from the cross-sectional data, in which rates of cannabis use while gambling online rose drastically between Waves 2 and 3.

Figure 24: Intoxicated Online Gambling Over Time



Note: Longitudinal 3-wave repeated measures analysis of variance (ANOVA); *n* = 195

GAMBLING MOTIVES

HIGHLIGHTS

- The most common motives for gambling online were to win money, because it is fun, because it is exciting, and because players enjoy thinking about winning the jackpot.
- Two particularly risky motives were identified: gambling online *because it helps when feeling nervous or depressed*, and gambling online *to earn income.*
- High risk gamblers (47%) were 17 times more likely to gamble online *because it helps when feeling nervous or depressed* in Wave 2 compared to low risk gamblers, and those who endorsed this motive also reported high levels of anxiety (26%) and depression (22%).
- High risk gamblers (46%) were also five times more likely to gamble *to earn income* compared to lower risk gamblers in Wave 2, and over half who endorsed this motive reported that their employment (56%) or income (51%) had been affected by COVID-19.
- Longitudinal results showed that while overall rates of gambling online *because it helps when feeling nervous or depressed* remained stable over time, rates of gambling *to earn income* increased between August (18%) and December (35%).

GAMBLING MOTIVES

Gambling motives were assessed using the Gambling Motives Questionnaire—Financial (GMQ-F; Dechant, 2014) to determine whether Ontarians are gambling online for various reasons. In Wave 2, the most popular motives for online gambling were to win money (30.6%), because it is fun (22.9%), and because it is exciting (15.4%; Figure 25). These rates remained relatively stable from the motives commonly reported in Wave 1. However, the rate of people endorsing each motive for gambling online in the past three months in Wave 3 almost doubled from previous waves. The most popular motives in Wave 3 were to win money (54.6%), because it is fun (44.4%), and because players enjoy thinking about winning the jackpot (41.5%; Figure 26).

Although the majority of online gambling motives were more frequently endorsed by high risk gamblers, some motives were identified as being particularly risky. Similar to Wave 1, gambling online *because it helps with feeling nervous or depressed* was highlighted as the riskiest motive in both follow-up waves. Specifically, high risk gamblers (47.6%) were 17 times more likely to report gambling online for this coping motive than those not at high risk for gambling problems in Wave 2. Though this gap narrowed in Wave 3, high risk gamblers (40.2%) were still more than five times more likely to endorse this gambling motive compared to lower risk gamblers. Of note, among those gambling to help with feelings of nervousness or depression, over a quarter of respondents (25.7%) reported severe anxiety and over one-fifth (21.6%) reported severe depression symptoms in Wave 2, which remained consistent in Wave 3. Young adults aged 18 – 24 years (Waves 2 and 3) and Ontarians of East Asian descent (Wave 2) were among those most likely to gamble online to help when feeling nervous or depressed.

Due to the financial hardships faced by many during the COVID-19 pandemic, gambling *online to earn income* was also flagged as a risky motive and confirmed via a significant association with high risk gambling in each survey wave. High risk gamblers (46.2%) were five times more likely than lower risk gamblers to gamble online to earn income in Wave 2. Although rates of gambling to earn income remained stable among high risk gamblers in Wave 3 (48.4%), endorsement of this motive increased among lower risk gamblers (27.2%). Of note is that over half (56.3%) of those who reported gambling to earn income also reported that their income had been negatively affected by COVID-19, and half (50.6%) whose employment status had also been affected by COVID-19 in Wave 3. Younger adults aged 18 – 44 years (Wave 2), Ontarian gamblers of South Asian descent (Wave 2), and East Asian descent (Wave 3) were among those most likely to gamble online to earn income.

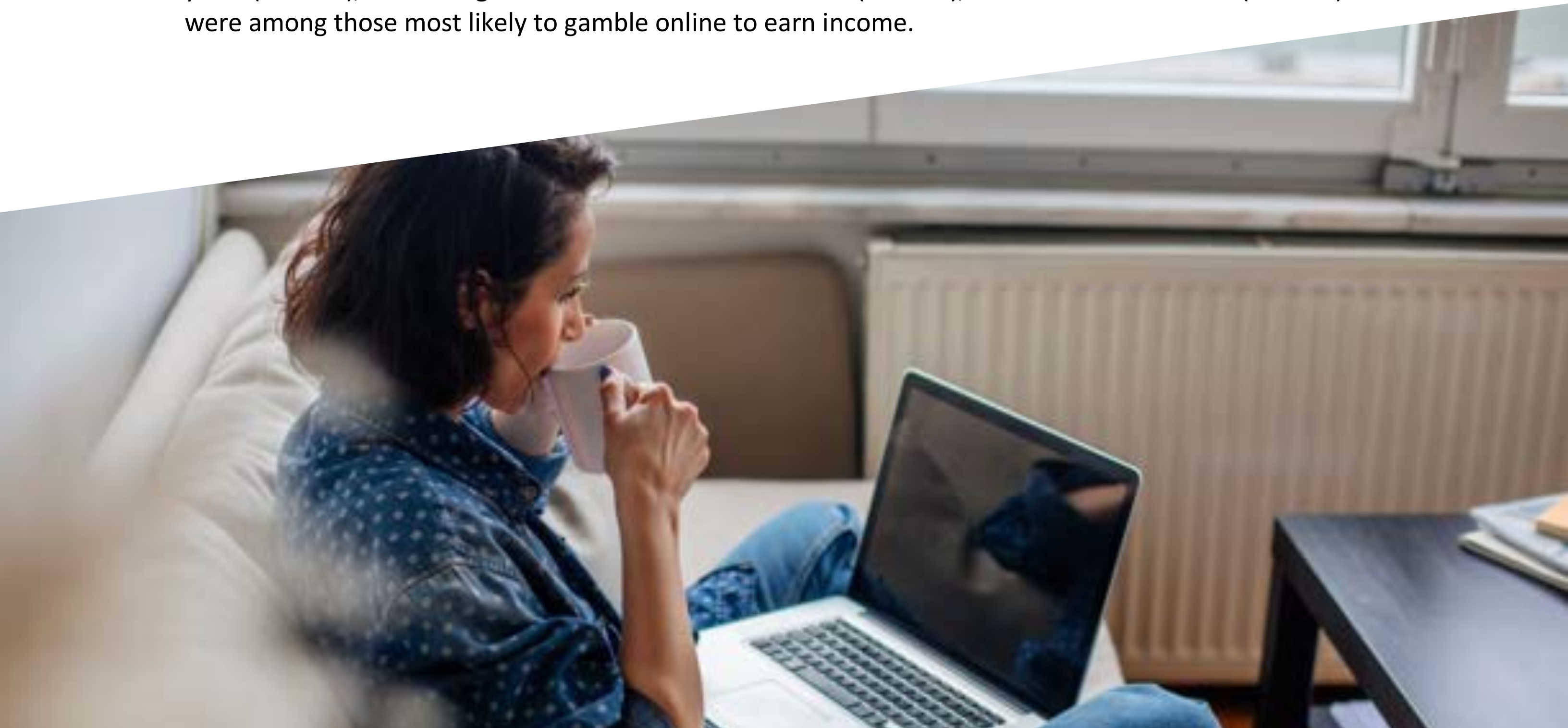
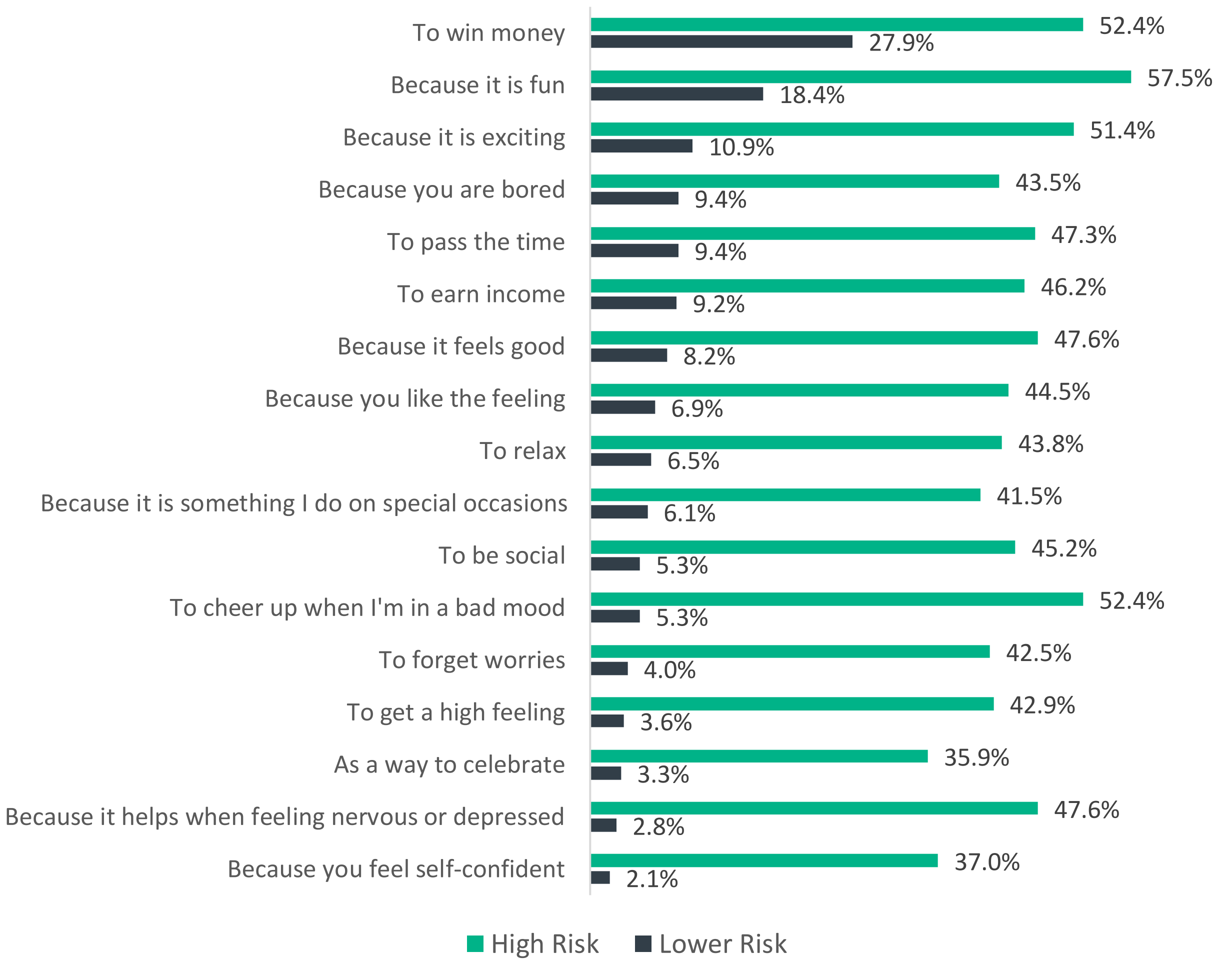
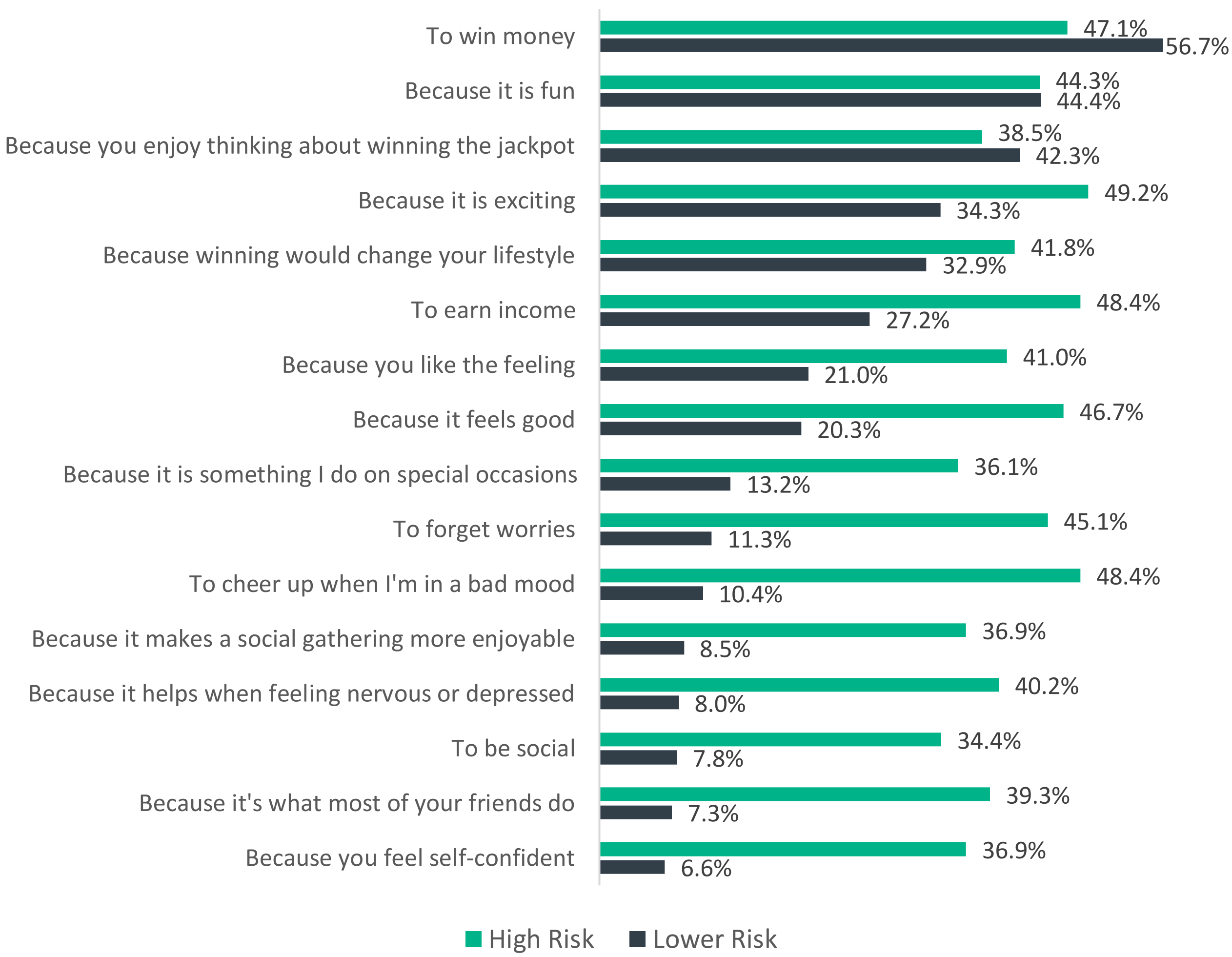


Figure 25: Online Gambling Motives by Gambling Risk in Wave 2



Note: Wave 2 cross-sectional data; *n* = 1,302

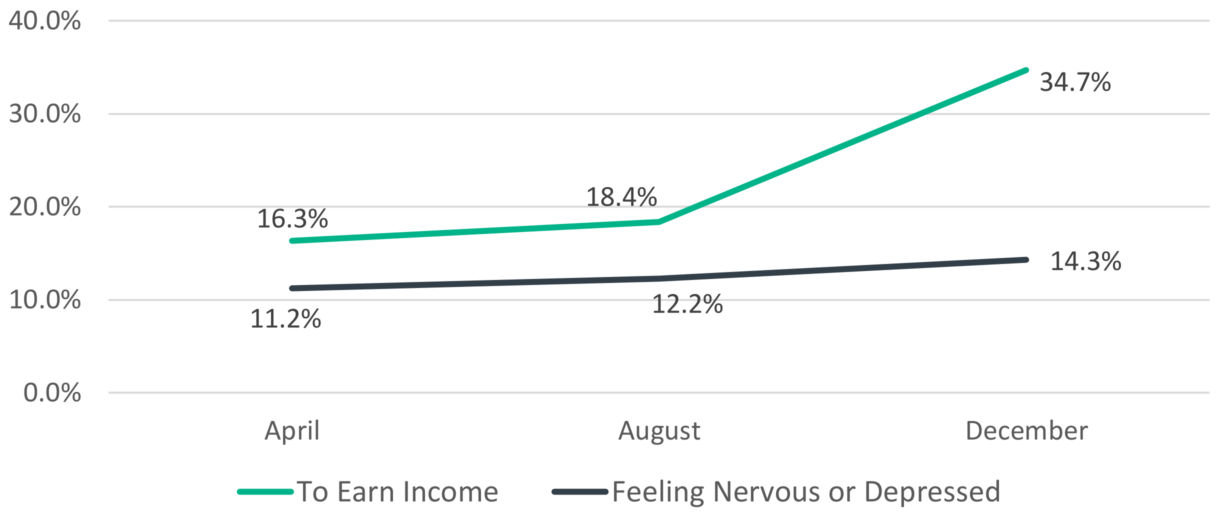
Figure 26: Online Gambling Motives by Gambling Risk in Wave 3



Note: Wave 3 cross-sectional data; *n* = 486

During COVID-19, some risky motives increased over time whereas others remained relatively stable. That is, gambling online because it helps *when feeling nervous or depressed* remained stable over time across all Ontario gamblers (Figure 27). This stability differs slightly from the cross-sectional data, which showed relatively low rates of gambling to help with feelings of nervousness or depression in Wave 1 and 2 before doubling in Wave 3. On the other hand, gambling online *to earn income* did not differ between April (16.3%) and August (18.4%), but significantly increased among all gamblers in December (34.7%). This trend follows a similar trend to the cross-sectional data.

Figure 27: High Risk Online Gambling Motives Over Time



Note: Longitudinal 3-wave repeated measures analysis of variance (ANOVA); *n* = 98

RESPONSIBLE GAMBLING

HIGHLIGHTS

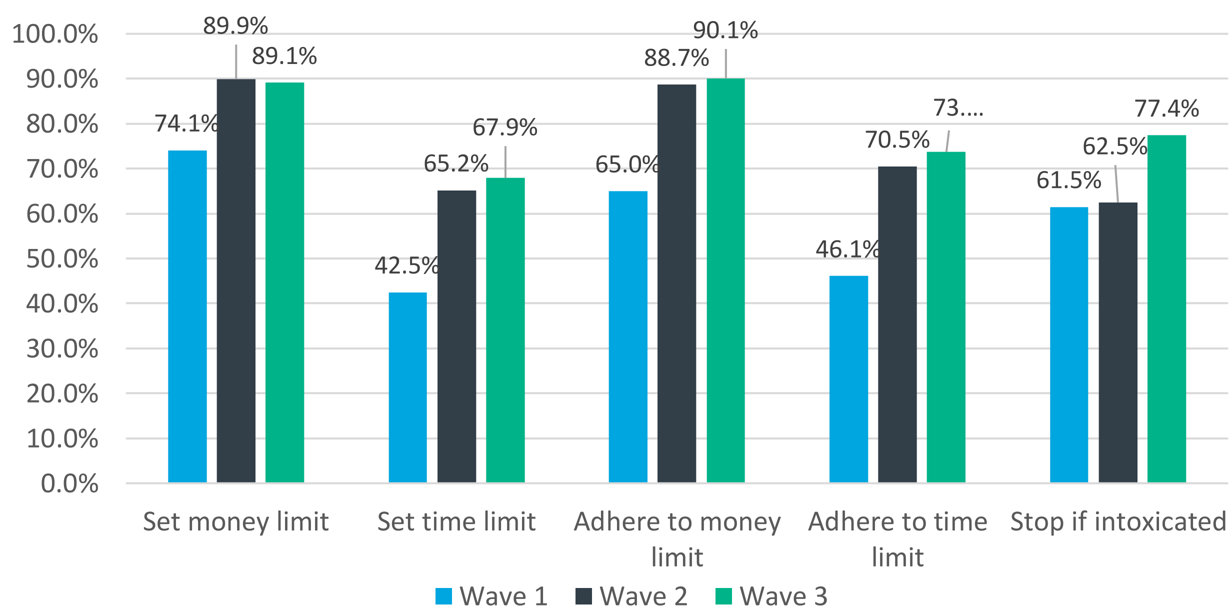
- The majority of Ontarian gamblers reported using strategies to keep their gambling responsible.
- The most popular responsible gambling practice was setting a money limit *before* gambling, where almost 90% of gamblers in Wave 2 and 3 reported setting a limit and another 90% stopping once they reached their money limit at least sometimes.
- High risk players were more likely to set (84%) and adhere to a time limit *before* gambling compared to lower risk players (68%) and were also more likely to report that they stopped gambling if feeling intoxicated.
- Longitudinal results demonstrated that limit-setting behaviours and adhering to pre-set limits remained stable throughout the COVID-19 pandemic, while practices of stopping gambling when intoxicated increased between August (46%) and December (60%).
- The most important responsible gambling online site features rated across gamblers were the credibility of the website (78%), followed by information on how the games work or the odds of winning (72%).
- Features for managing time and money (68%) as well as the ability to self-exclude or take cooling off periods (57%) were rated higher among those at high risk for gambling problems compared to those at lower risk.

REPSONSIBLE GAMBLING STRATEGIES

Throughout the COVID-19 pandemic, responsible gambling strategies were endorsed by the majority of Ontarian gamblers. Across all waves, the most common responsible gambling strategy was setting a monetary limit. In both Waves 2 and 3, almost 90% of gamblers reported setting a money spending limit *before* starting to gamble at least sometimes, which marked an increase from Wave 1 (74.1%). Fortunately, adherence to pre-set monetary limits was also high, with almost 90% of participants in both Waves 2 and 3 also reporting that they stopped playing once they reached their spending limit at least some of the time. Approximately 66% of gamblers in both Waves 2 and 3 set time limits *before* a gambling session, and over 70% of gamblers in both waves adhered to their set time limit. While rates of setting time limits in follow-up waves were similar to those reported in Wave 1, adhering to pre-set time limits was higher than in Wave 1 (46.1%). Nearly two-thirds (62.5%) of gamblers in Wave 2 also stopped gambling if they felt intoxicated, which rose to 77.4% in Wave 3 (Figure 28).

Among those who gambled online in the past six months (Wave 2) or in the past three months (Wave 3), rates of endorsing each responsible gambling strategy were similar to those endorsed by the entire sample of gamblers in each wave. However, use of responsible gambling strategies somewhat differed by gambling risk. In Wave 3 (but not Wave 2), gamblers at high risk (79.1%) were *less* likely to have ever set a monetary limit before gambling compared those at low risk (90.3%), though both high and low risk gamblers were equally likely to have adhered to their spending limit at least sometimes. On the other hand, high risk gamblers in both waves (Wave 2 = 83.9%) were *more* likely than low risk gamblers (Wave 2 = 68.3%) to have ever set a time limit before gambling, and were also more likely to adhere to this limit. Lastly, those at high risk of gambling problems were also more likely to stop gambling if feeling intoxicated in both Waves 2 and 3.

Figure 28: Responsible Gambling Strategies Endorsed by Gamblers in Each Wave



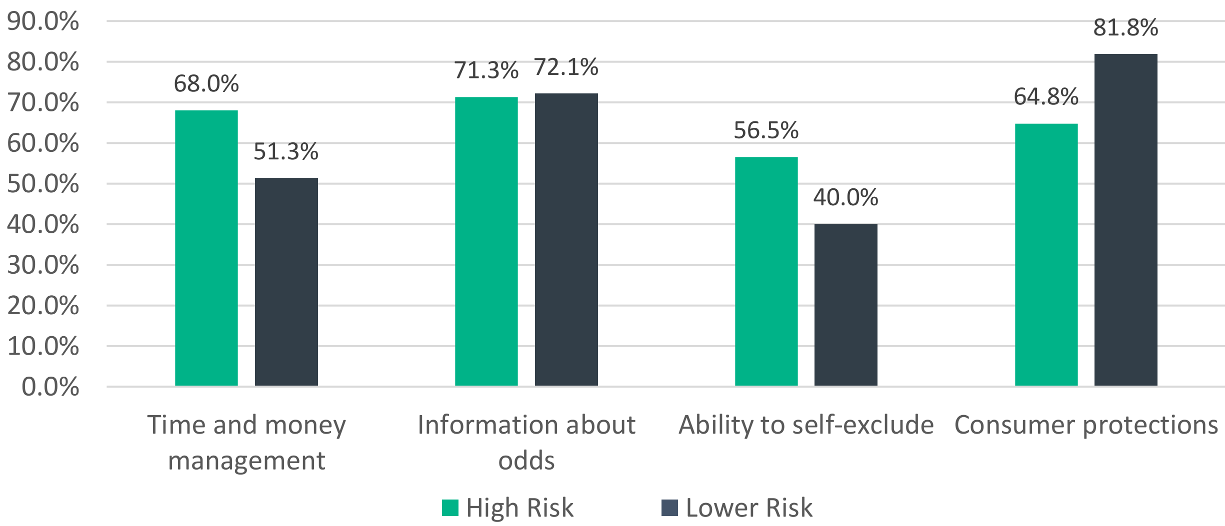
Note: Cross-sectional data; Wave 1 *n* = 2,005; Wave 2 *n* = 2,015; Wave 3 *n* = 2,000; Data reflects endorsement of each strategy *at least sometimes.*

RESPONSIBLE GAMBLING SITE FEATURES

Overall, respondents rated various responsible gambling site features as being important in their decision to play on a particular online website (assessed in Wave 3). The most important site feature was the credibility of the website (i.e., consumer protection commitment; 78.0%), followed by information on how the games work or the odds of winning (71.9%). Other noteworthy responsible gambling features endorsed by approximately half of Ontario gamblers were features for managing time and/or money spent (55.0%) and the ability to self-ban, self-exclude, or take cooling off periods from websites (43.8%).

Features for managing time and money (68.0% vs. 51.3%) as well as the ability to self-ban or self-exclude (56.5% vs. 40.0%) were rated higher among those with gambling problems compared to those at lower risk of gambling problems. On the other hand, high risk players were less likely to rate the importance of consumer protection commitments (64.8%) as high compared to lower risk players (81.8%). However, both those at high risk and lower risk of gambling harm were equally likely to endorse the importance of the information about the odds of winning (Figure 29).

Figure 29: Importance of Responsible Gambling Site Features by Gambling Risk

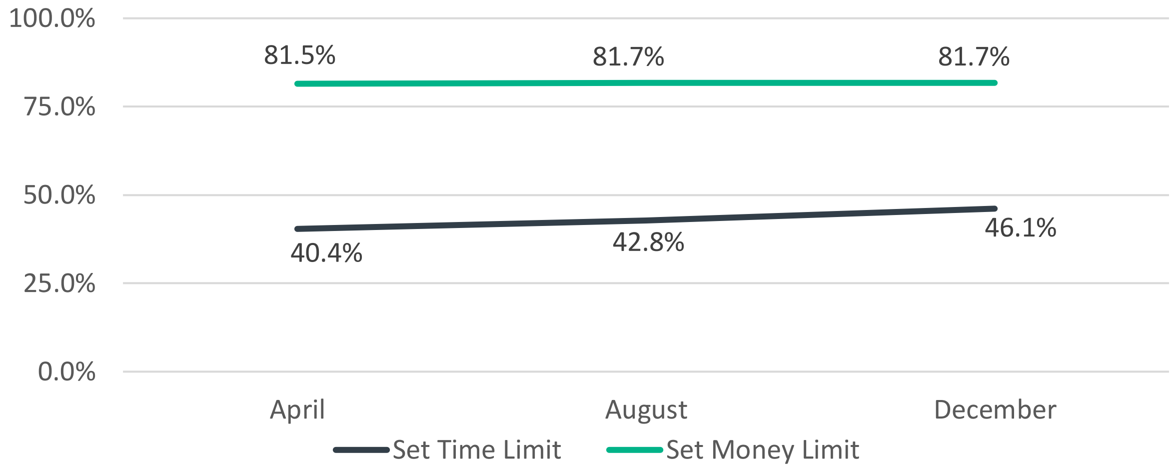


Note: Wave 3 cross-sectional data; *n* = 2,000

RESPONSIBLE GAMBLING STRATEGIES OVER TIME

Among those who completed all three waves, limit-setting behaviours remained stable throughout the COVID-19 pandemic (Figure 30). This pattern differs from the cross-sectional findings which saw an increase in setting both money and time limits before starting gambling in Waves 2 and 3. Overall, rates for limit setting behaviours in the longitudinal data also appeared to be lower than those reported in the cross-sectional data—particularly those for setting time limits before gambling.

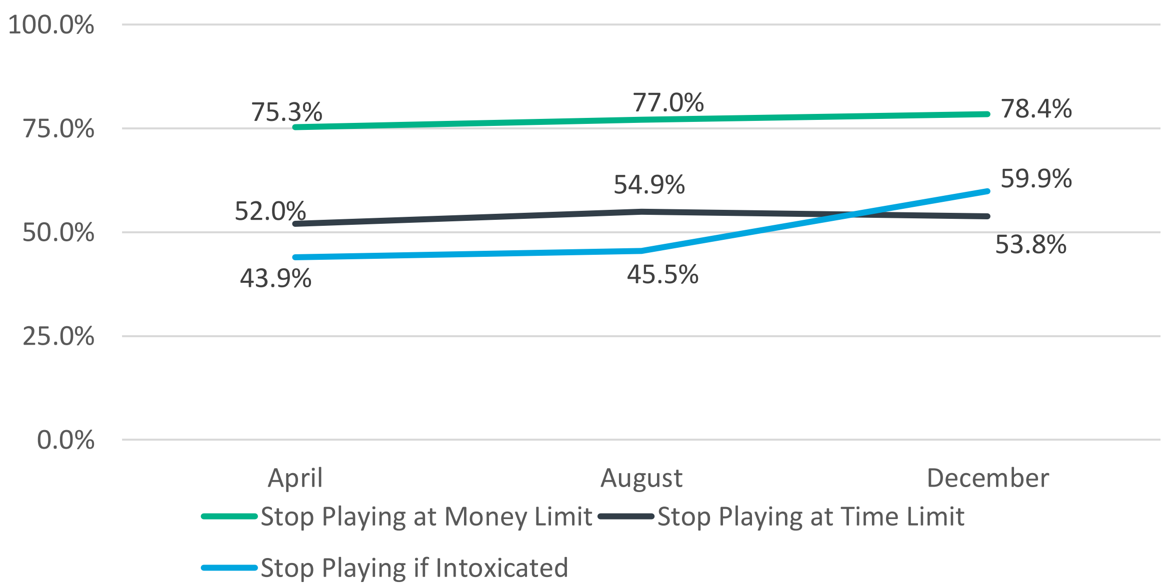
Figure 30: Self-Reported Limit Setting Behaviours Used by Gamblers Over Time



Note: Longitudinal 3-wave repeated measures analysis of variance (ANOVA); Set money limit *n* = 470; Set time limit *n* = 410

Longitudinal data demonstrated that gamblers' adherence to pre-set limits also remained stable during COVID-19 (Figure 31). However, these rates also differ from cross-sectional findings which revealed an increase in adherence to pre-set money and time limits in both Waves 2 and 3 compared to Wave 1. Stopping playing if intoxicated remained stable between April and August and increased in December, which is consistent with rates seen in the cross-sectional data.

Figure 31: Self-Reported Responsible Gambling Strategies Used by Gamblers Over Time



Note: Longitudinal 3-wave repeated measures analysis of variance (ANOVA); Stop at money limit *n* = 446; Stop at time limit *n* = 392; Stop if intoxicated *n* = 239

CONCLUSION AND RECOMMENDATIONS

This three-wave provincial study is the first of its kind to provide an empirical record of the impact of COVID-19 on gambling in Ontario. The findings highlighted in this report capture important trends and changes in Ontarian gamblers' attitudes, behaviours, and mental health-related outcomes during COVID-19. As the expansion of the online gambling market rolls out in Ontario, the current study provides robust and generalizable evidence regarding various predictors that may increase the risks associated with online gambling. Understanding the challenges that Ontarians' are facing during the COVID-19 pandemic and how these may translate to the online gambling context is integral for developing policies that help to drive a safe and sustainable player base and prevent gambling-related harms.

Key takeaways from the current report are that the majority of gamblers have migrated to online gambling, including those who primarily gambled in-person before the pandemic. Moreover, there have been sizeable increases to Ontarians' online gambling involvement in terms of participation, time and money spent, games played, and online accounts created. A number of high risk motives for gambling online were identified, among which include coping (e.g., to help with negative feelings) and financial motives (e.g., to earn income).

Findings from the current report also show that the pandemic has significantly disrupted many areas of life for Ontarian gamblers, including financial stability and mental health. Importantly, the COVID-19 also provided opportunity for engaging in risky online gambling behaviours, like gambling online under the influence of alcohol or cannabis, signing up for new online gambling accounts, and increasing the time and money people spend gambling online. The risky behaviours identified in the current report were associated with a higher level of gambling risk during COVID-19, though the implications of engagement in these behaviours extends into the upcoming expansion of the online gambling market in Ontario and beyond.

Fortunately, players appeared to place a high value on responsible gambling resources and strategies, evidenced by the majority of Ontarians who reported setting and adhering to limits at least some of the time during play. Responsible gambling online site features were also widely viewed as important by the majority of Ontarian gamblers. Importantly, responsible gambling strategies and online resources were relevant to gamblers across the spectrum of play.

The combined findings from the current report expand our understanding of COVID-19's impact on gambling in Ontario and will continue to inform policy and programming in the province. A strength of this work lies in its generalizability due to the provincially representative nature of each sample wave. Moreover, the longitudinal sample allowed us to draw conclusions about important trends throughout key time points in the pandemic (i.e., April, August, and December). These strengths afford confidence in the results and the ability to form concrete recommendations in promoting harm minimization and prevention efforts.

The findings from this report have important implications for RGC's evolving practice. Three specific areas for recommendations are informed by the evidence: *Priority Populations, Expanded Player Supports,* and *Knowledge Mobilization and Collaboration.*

PRIORITY POPULATIONS

Young Adults (18-24 Years and Older)

The findings from the surveys revealed a number of priority population who may be at increased risk of gambling harm. Young adults aged 18-24 years were consistently found to be at increased risk of gambling-related harms during COVID-19. Specifically, young adults were most likely to have suffered the negative financial impacts of COVID-19 in the form of losing their job, working reduced hours, and as a result, over 50% experienced a reduction in their household income. In line with the financial harms experienced, young adults were also significantly more prone to mental health concerns, reporting greater levels of severe anxiety and depression, as well as lower life satisfaction compared to older adults surveyed. Of note, 18-24 year olds also emerged as being most likely to exhibit high risk gambling in follow-up waves compared to other age groups, with one quarter of young adults screening for problem gambling in Wave 3. The emergence of high risk gambling among young adults also translated to those who reported gambling online throughout the pandemic. Lastly, young adults were most likely to report gambling online under the influence of both alcohol and cannabis, with over half reporting that they had done so in Wave 3.

Young Adult Males

While women were more likely to experience severe mental health concerns (i.e., anxiety, depression) and lower life satisfaction throughout the COVID-19 pandemic, men were more likely to exhibit gambling-related risk factors. That is, men were significantly more likely to report gambling online in the first six months since the announcement of emergency measures in March 2020. Men were also most likely to screen as high risk for gambling harms, which was replicated among men who had also migrated to online gambling. Young men between the ages of 18 – 44 years may be at particularly high risk, as this demographic was two- to six-times more likely to screen for problem gambling. Men were also significantly more likely than women to report intoxicated gambling, particularly when gambling online under the influence of alcohol.

Ontarians of South Asian and East Asian Descent

Due to greater level of representation across samples, two key ethno-cultural groups emerged as being particularly high risk for COVID-19 and gambling-related harms: Ontarians of South Asian (e.g., Afghan, East Indian, Pakistani, Sri Lankan, etc.) and East Asian (e.g., Chinese, Japanese, Korean, Taiwanese, etc.) descent. For example, over 18% of Ontarians of South Asian descent who gamble and 20% of Ontarians of East Asian descent who gamble demonstrated a strong association with high risk gambling in follow-up waves. While Ontarian gamblers of South Asian descent were more than twice as likely to report experiencing severe anxiety and depression compared to gamblers from other ethno-cultural backgrounds, over 15% of Ontarian gamblers of East Asian descent indicated gambling to help when feeling nervous or depressed in Wave 2. Both Ontarians of South Asian and East Asian descent also experienced significant financial hardships due to COVID-19, with more than 16% of Ontarian gamblers of South Asian descent reporting that their working hours had been reduced, and over 40% of Ontarian gamblers of East Asian descent reporting that their household income had been negatively affected. Perhaps due to financial strain, both Ontarians of East Asian and South Asian descent were also more likely to report gambling to earn income. Lastly, Ontarian gamblers of South Asian descent were more likely to indicate gambling online under the influence of alcohol or cannabis.

Recommendations and Ongoing Support

The identification of key high priority groups dictates a need for targeted responsible gambling efforts to prevent and mitigate risks among these communities. To ensure that our problem gambling prevention programs consider the unique responsible gambling needs of these high priority groups, the Centre for the Advancement of Best Practices (CABP) conducted a follow-up study which included consultations with members from various community organizations in Ontario as well as an online survey of those of Chinese, South Asian, and Indigenous backgrounds who gambled. In doing so, RGC identified insights that are specific to South Asian, East Asian, and Indigenous communities and outlined recommendations to ensure that approaches moving forward are culturally sensitive and appropriate (RGC, 2021). Recently, culturally relevant responsible gambling campaigns have been delivered by RGC during Diwali and Lunar New Year to promote safer gambling practices among high priority communities. As further evidence of our ongoing support, RGC recently hosted a webinar to disseminate these findings and recommendations to international stakeholders working with high risk communities. With support from the Centre for Addiction and Mental Health, RGC will also be working with COSTI Immigrant Services and Dyversity Inc. to develop a resource guide focused on gambling harm prevention for newcomers to Canada in English, Simplified and Traditional Chinese, Punjabi, and Vietnamese.

In addition to these ethno-cultural initiatives, RGC continues to work with and engage young adults through social media marketing and young-adult specific responsible gambling programming. For example, Check Your (Re)Flex is an interactive problem gambling awareness program that engages young adults across Ontario to demonstrate how common motives such as excitement can lead to prolonged gambling sessions. Moreover, RGC recently launched a problem gambling awareness campaign dedicated to reducing stigma and mitigating harms among young adults, particularly young men. As the findings in the current report demonstrate a rapidly growing risk of heightened online gambling risk among young men aged 18-24 years, RGC has adapted and transitioned these programs to the online context to offer increased digital supports to young adults.

Due to the increased vulnerabilities associated with these high priority groups, responsible gambling initiatives would benefit from tailoring messaging and tools to better meet the unique needs of these populations to minimize gambling-related harms. Additional community engagement is needed with young (male) adults and Ontarians of South and East Asian descent who gamble to determine how the responsible gambling needs of these communities change over time so that outreach efforts remain timely and relevant. Co-developing responsible gambling messages and resources with these high priority communities can ensure that RGC promotes culturally relevant and appropriate initiatives that will effectively prevent and mitigate gambling harms among these groups. Follow-up research is also recommended to recruit larger samples from other ethno-cultural communities, in addition to determining how the intersectionality of vulnerable group identities can influence needs and uptake of current responsible gambling messaging and tools.

EXPANDED PLAYER SUPPORTS

Survey findings suggest a need for expanded player supports, particularly in light of the upcoming expansion of online gaming. Specifically, in April 2022, the Government of Ontario will open the first licensed and regulated iGaming market in Canada. The newly established online market will provide Ontarians with access to safe and legal gambling options. Importantly, the new online landscape in Ontario offers a unique opportunity to prevent harms and normalize positive play experiences at the outset, as well as introduce operator and regulator responsible gambling initiatives for maximum upstream impact. Due to the potential for increased high risk gambling alongside the online market expansion, player supports are recommended in three key areas: player safeguards, prevention messaging, and responsible gambling resources.

Player safeguards such as increasing the availability of visibility of responsible gambling tools can help players to make informed decisions about their gambling while affording a seamless gambling experience. More stringent safeguards during COVID-19 restrictions may be particularly helpful in combatting the negative effects of emergency measures, which includes increased isolation and financial hardships. There is also an opportunity for frontline gaming staff to be educated on the impacts of COVID-19 on everyday life and among those who gamble to bolster interactions and increase confidence in providing support to players experiencing harm. Additional player safeguards like RG Check Accreditation, prevention education, treatment, and ongoing research are also important tools in driving a safe and sustainable player base in Ontario.

Prevention messaging is encouraged upon re-opening of land-based gambling venues as well as the expansion of the iGaming market. Tailored messaging during COVID-19 restrictions would be especially beneficial for gamblers due to the unique risks faced and potential for increased harms during these times. Importantly though, prevention messaging should be tailored to the unique needs of the priority populations outlined in the current report: young adults, young men, and key ethno-cultural groups. As opportunities to gamble online become more widespread, it is imperative to prevent gambling harms from emerging among groups at particularly increased risk. Tailoring such messaging to the needs of each group can also increase the effectiveness and likelihood that it will have a positive impact in preventing and mitigating gambling-related harm.

Increasing the availability and visibility of responsible gambling resources and information can also help players to establish positive play attitudes and behaviours, such as setting and adhering to monetary limits within a gambling session. Expanded online resources for players across the spectrum are recommended, along with consistent and dedicated resources specific to iGaming. While all responsible gambling site features listed in the current study were rated as important, their importance differed according to gambling risk. As such, responsible gambling resources should consider a tailored approach that factors in the spectrum of risk for maximum impact. Importantly, given that the majority of Ontarian gamblers in the first survey wave indicated a preference for accessing responsible gambling resources and information online, opportunities for providing responsible gambling tools and messaging to players are arguably greater in this context.

KNOWLEDGE MOBILIZATION AND COLLABORATION

As Ontario continues to face an ever-changing COVID-19 and gambling landscape, there remains a need to mobilize knowledge on the impact of COVID-19 on everyday life among those who gamble. To meet the newly emerging needs of Ontarians during these unprecedented times, RGC has been successful in making evidence-informed changes and improvements to community outreach and prevention programming to deliver education messaging and tools digitally in accordance with physical distancing measures. RGC continues to work with our partners at Ontario's Lottery and Gaming Corporation as well as public health and treatment stakeholders to provide information and tools to support moderate and high risk gamblers. In addition, RGC continues to offer training to gaming operators, health care systems, and social service providers related to health promotion and interventions that minimize gambling harms.

To continue our mission of conducting community outreach, prevention programming, and social marketing to educate the public on gambling risks and prevent gambling harm in Ontario and beyond, RGC underscores the need for continued knowledge mobilization and collaboration. The findings outlined in this report provide an important overview of the impact of the COVID-19 pandemic on Ontarian gamblers. In particular, the evidence presented on gambling risks and related risk factors may further inform, or work in collaboration with, Canada's Lower Risk Gambling Guidelines (Young et al., 2021), particularly as Ontarians navigate this challenging new environment. However, regular monitoring is recommended to detect changes in behaviours and risk as Ontario continues to face further pandemic waves and resulting restrictions. The expansion of iGaming alongside the legalization of sports betting is also expected to result in changes to the nature of Ontarians' gambling involvement as well as gambling-related risks. As such, follow-up research and the collection of timely data is required to inform regulatory, prevention, and harm minimization approaches.

To promote the transfer of knowledge to a wide audience, RGC hosted an interactive webinar on the impact of COVID-19 on gambling in Ontario which successfully engaged gambling operators, regulators, policy makers, researchers, treatment providers, gamblers, and community members from over 20 countries around the world. A publication stemming from these survey data has also been circulated widely in research communities. RGC is committed to the continued collaboration with key stakeholders in credit counselling, financial institutions, community groups, and mental health organizations to refine and promote responsible gambling messaging and programming. In addition, RGC continues to collaborate with gambling operators for the mutual exchange of insights to inform and ensure the success of responsible gambling programming and policy. Through these activities, RGC has demonstrated thought leadership through supporting consumer protection and harm reduction in Ontario during the COVID-19 pandemic and the expansion of the online gambling market.

This survey was paid for through the Ontario Ministry of Health and Long-Term Care Problem Gambling Prevention Fund and a Carleton University COVID-19 Rapid Research Response Grant. The results from this survey will be used to inform RGC Community Outreach, Young Adult and High School programming.

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411 Richmond Street East, Suite 205,
Toronto, ON, Canada M5A 3S5
ResponsibleGambling.org