

Prevention Insights:

Gambling Harm Prevention in Chinese, South Asian, and Indigenous Communities

Prepared By



Table of Contents

Executive Summary	
Research Approach	
Key Findings	2
Recommendations	
Background and Introduction	. 7
Community-Focused Health Promotion	. 7
Methods	
Literature Review	
Community Consultation	
Provincial Survey of People Who Gamble	
Key Findings: Ontarians of Chinese Descent Who Gamble	1C
Gambling Behaviours and Attitudes	r
Cultural Influences	
Health and Gambling	13
Prevention Approaches	
Knowledge Needs	14
Appropriate Message Framing	
Format and Delivery Preferences	
Summary	15
Key Findings: Ontarians of South Asian Descent Who Gamble	17
Gambling Behaviours and Attitudes	
Cultural Influences	2
Health and Gambling	23
Prevention Approaches	24
Knowledge Needs	
Format and Delivery Preferences	25
Summary	
Key Findings: Indigenous Peoples in Ontario Who Gamble	
Gambling Behaviours and Attitudes	
Cultural Influences	
Health and Gambling	

Prevention Approaches	31
Knowledge Needs	31
Appropriate Message Framing	31
Format and Delivery Preferences	31
Summary	32
Key Takeaways and Recommendations	33
Achieving Culturally-Relevant Messaging Across Groups	33
Engage Family Members	33
Delivering Messaging	33
Promoting Online Resources	33
Language of Materials	33
Identifying Leaders in the Community	33
Tailored Messaging	34
References	35
Appendix A: Methodological Details	40
Literature Review	40
Community Consultation	40
Survey	40
Appendix B: Survey Demographics	41
Appendix C: Gambling Behaviour and Experience across Groups	44
Online Gambling	44
Gambling Risk and Harm	46
Responsible Gambling	49
Mental Health and Substance Use	53
Gambling Motives and Cultural Perspectives	55
Population Comparisons	58
Gambling Risk and Harm	58
Montal Hoalth and Substance Use	60

Executive Summary

For over 35 years, the Responsible Gambling Council (RGC) has worked to reduce gambling risk and prevent problem gambling through the creation and delivery of innovative awareness and information programs in the Province of Ontario. During the pandemic, between April and December 2020, evidence from RGC's longitudinal gambling research in Ontario revealed that people of Chinese and South Asian descents who gambled¹ had a much greater likelihood of experiencing severe gambling problems, intoxicated gambling, mental health problems, and endorsing risky gambling motives, compared to the general gambling population. While it is broadly known that these communities of gamblers, including Indigenous peoples, experience gambling problems disproportionately, there are many unanswered questions related to current trends in 2021 and how to effectively and appropriately increase awareness and knowledge of responsible gambling among these groups.

This research project was designed to provide recommendations on messaging content and format to support the development of RGC's Ministry of Health-funded problem gambling prevention programs. It identifies insights that are specific and relevant to key communities and aims to ensure that approaches moving forward are culturally sensitive and appropriate. Ultimately, the findings are intended to provide insights to stakeholders conducting work in similar areas, such prevention, public health, regulation, and industry. The objectives of this project are to develop evidence-informed priorities that reflect, in part, responsible gambling needs in each community (as highlighted by factors that influence risky behaviours and encourage Positive Play) and suggest options for key messaging and prevention strategies.

Research Approach

This project was guided by a few key questions:

- 1. What information do Ontario residents who are from Chinese, South Asian and Indigenous communities need to know to prevent gambling harms, address stigma, and promote timely help-seeking?
- 2. What cultural factors are important to consider in the design and framing of this content (i.e. beliefs, values, symbolism)?
- 3. Where and how can these messages most effectively be delivered to the key communities?

A mixed-methods research design was used to provide both depth and breadth to key topic areas. Specifically, this study conducted a literature review of grey documents and peer-reviewed sources on gambling among Chinese, South Asian, and Indigenous people; community consultations with 11

¹ South Asian gamblers include Ontarians of East Indian, Pakistani, Sri Lankan, Afghani, Nepali, Bhutanese, Bangladeshi, and Maldivian descent



participants recruited from five community organizations² operating in Ontario; and a survey of 900 Ontarians who've gambled in the past year (473 of Chinese descent, 344 of South Asian descent, and 83 Indigenous/Métis people). More details on each method can be found in **Appendix A**.

Key Findings

Ontarians of Chinese Descent Who Gamble

Due to the general acceptance of gambling as a recreational and social activity, for example playing mah-jong with family during the holidays, Chinese gamblers are often exposed to gambling at a younger age (i.e., under the age of 16; Zheng et al., 2011; Kam et al. 2014; Keovisai & Kim, 2019; Kim, 2012; Yu & Ma, 2019). Ontarians of Chinese descent who gamble were far less likely to gamble online before and during the pandemic as well as participate in most types of online gambling. They displayed over two-times the likelihood of minimal or no anxiety and of minimal or no depression. Ontarians of Chinese descent who gamble were also significantly less likely to agree they would *be supported unconditionally* when asked how their family would react to their gambling habits, even though a majority did endorse this perception (59.6%).

Problem gambling prevention messaging should inform Chinese people about the risks of gambling, odds of winning, methods of time and money management, and culturally relevant services for those experiencing harm (Kim, 2012; Tang & Wu, 2012). Messaging should not encourage abstinence due to gambling's cultural significance and should avoid labeling Chinese people as an "at-risk" group, as it may foster feelings of shame or guilt. Instead, messaging should provide positive tips on safer play and how to recognize signs of problematic gambling behaviours. Harm reduction materials that take a neutral stance on recreational gambling and community messaging would be useful tools for prevention for this group.

Ontarians of South Asian Descent Who Gamble

Festivals and holidays are popular times for gambling in South Asian cultures and may involve card games, raffles, lottery tickets, and scratch cards. Additionally, sporting events, especially cricket and soccer, are popular occasions for gambling within this community. Ontarians of South Asian descent who gamble reported the highest gambling engagement as well as the most substantial gambling risk and prevalence of harms, according to the Problem Gambling Severity Index (PGSI) and the Short Gambling Harms Screen (SGHS). They also reported higher likelihood of being negatively impacted by a family member's problem gambling (e.g., spouse, sister, etc.). Ontarians of South Asian descent who gamble reported significantly higher levels of intoxicated online gambling (alcohol and cannabis) and lower levels of Positive Play beliefs and behaviours.

Interview respondents commented that a fear of stigma can lead those with problematic gambling behaviours to be silent about their problems and deal with them internally rather than seek out help from

2[list]	•	•	



their family or community. Ontarian gamblers of South Asian descent were also more likely to report barriers to seeking help, including not wanting to go against beliefs or traditions, perceived lack of resources, perceived lack of confidentiality, resources not being relevant to their community, the perceived cost of services, the location of services, and services not being available in their preferred languages.

Messaging for this community should be culturally-relevant and delivered through social media campaigns, flyers, and advertisements on public transit. The messaging in these campaigns should highlight the negative outcomes of problematic gambling behaviours and provide information on treatment programs that allow for anonymity.

Indigenous Peoples in Ontario who Gamble

Among Indigenous Peoples in Canada, playing Electronic Gambling Machines (EGMs) is the most important predictor of problematic gambling behaviours (Williams et al. 2021a). Indigenous Peoples also reside disproportionately in provinces that have the highest density of EGMs (ibid.). In our survey, Indigenous Peoples in Ontario who gamble had lower odds of gambling online in the past 16-months but also made up the largest proportion of those reporting their money spent gambling online had *increased a lot*. Indigenous Peoples in Ontario who gamble were approximately two-times more likely to report high Positive Play beliefs and behaviours and reported 2.25-times the odds of moderate depression.

When asked about perceived barriers to help seeking, Indigenous Peoples in Ontario who gamble were over twice as likely to report *not wanting to be perceived as weak or judged and location of services*. They also strongly felt that if their family found out about their gambling habits, they would *be supported unconditionally*.

Messaging should incorporate alternative, prosocial activities to gambling such as sports or outdoor games that can provide entertainment without the monetary risk. They should have a positive tone, highlight the benefits of protecting oneself against gambling harms, and include real life stories through Indigenous practices such as healing circles and other culturally relevant practices. As problematic gambling behaviours are found to be associated with stress, mental health concerns, and substance use,



Recommendations

Ontarians of Chinese Descent Who Gamble

Take-Away: Ontarians of Chinese descent who gamble were significantly less likely to agree they would be supported unconditionally by their family if their family knew about their gambling habits.

Key Options:





Expanding prevention and education programs to specifically target family members of gamblers potentially experiencing risk and harm to decrease stigma associated with gambling related harms



Promoting the availability of resources, especially resources available online with minimal time commitment



Delivering messages through social media campaigns, television ads, and booths at gambling venues



Tailoring messaging to encourage tips for safer play



Tailoring messaging to acknowledge Chinese values and views about gambling



Translating materials into Chinese languages (i.e., Simplified and Traditional)



Identifying leaders in the community and working with these leaders to co-develop and disseminate materials

Ontarians of South Asian Descent Who Gamble

Take-Away: Ontarians of South Asian descent who gamble represented the community with the greatest need for risk and harm prevention efforts.

Key Options:





Promoting the Lower-Risk Gambling Guidelines in preferred languages



Promoting and normalizing the elements of Positive Play, particularly limit setting and dispelling common gambling myths



Specifically addressing and de-normalizing intoxicated online gambling through key messaging and other public awareness strategies (e.g., social media campaigns, flyers, advertisements on public transit)



Expanding prevention and education programs to specifically target family members of gamblers potentially experiencing risk and harm



Consulting with community organizations and stakeholders on how to appropriately address cultural beliefs and mistrust or misperceptions of service providers that act as barriers to help-seeking



Translating materials into South Asian languages (e.g., Bengali, Hindi)



Identifying leaders in the community and working with these leaders to co-develop and disseminate materials



Tailoring messaging to acknowledge South Asian values and views about gambling

Indigenous Peoples in Ontario who Gamble

Take-Away: Indigenous Peoples in Ontario who gamble demonstrated the largest proportion of those reporting their money spent gambling online had increased a lot.

Key Options:





Background and Introduction

For over 35 years, the Responsible Gambling Council (RGC) has worked to reduce gambling risk and prevent problem gambling by creating and delivering innovative awareness and information programs in the Province of Ontario. RGC promotes the adoption of improved play safeguards through best practices research, standards development, and the RG Check accreditation program.

This research project was designed to provide recommendations on messaging content and format to support the development of RGC's Ministry of Health-funded problem gambling prevention programs. It identifies insights that are specific and relevant to key communities and aims to ensure that approaches moving forward are culturally sensitive and appropriate. Ultimately, the findings are intended to provide insights to stakeholders conducting work in similar areas, such as prevention, public health, regulation, and industry. The objectives of this project are to develop evidence-informed priorities that reflect, in part, responsible gambling needs in each community (as highlighted by factors that influence risky behaviours and encourage Positive Play) and suggest options for key messaging and prevention strategies.

This approach considers how to provide tailored safer gambling information and strategies that build on strengths and resilience, acknowledge structural inequalities and systemic issues, and are in line with community values.

Community-Focused Health Promotion

Over the past decade or more, knowledge of effective approaches, strategies, and techniques for health promotion and harm prevention messaging to the public have been substantially advanced. With regard to prevention programming, we've seen that it is important to involve community ambassadors in the planning and implementing of initiatives (Ortiz et al., 2021; Young et al., 2010). These ambassadors can include community leaders, religious leaders, and community-based workers (Young et al., 2010). It is important to include ambassadors that reflect the cultural, linguistic, and gender composition of the community and that are able to speak the dominant languages and dialects in the community (Ortiz et al., 2021). Moreover, it is important for community voices (i.e., members with lived experiences) to be at the center of the programs' development and implementation in order to increase effectiveness and equity (ibid.).

Catering to format and delivery preferences is also a key component of effective messaging to diverse populations. For instance, messaging should be multilingual and easily accessible, focus on normalizing help-seeking behaviours and decreasing stigma associated with seeking help, provide the community with relevant resources, as well as educate communities about treatment options (Young et al., 2010). Recommendations for delivery include incorporating the program into English as a Second Language (ESL) curriculum and/or incorporating key messaging into financial literacy classes that are available to new immigrants to Ontario (Ibid.). It is also recommended that multiple methods of delivery are used (e.g., on-on-one discussions, written information, group interactions) in order to be considerate of different community members' preferences (Ortiz et al., 2021).



Presently, there are key gaps in knowledge concerning the specific information needs and appropriate strategies for addressing gambling risk in priority communities in Ontario. As such, the purpose of this project is to gain an understanding of how Chinese, South Asian³, and Indigenous'⁴ communities view and engage in gambling and to support the development of evidence-informed best practices for prevention messaging that may reduce gambling harm in these communities. More specifically, we want to know what information key communities need to know to prevent gambling harms, address stigma, and promote timely help-seeking; what cultural factors are important to consider when designing and framing this content; and where and how these messages can be most effectively delivered to the key communities.

Methods

Three methods were used in this study:

- 1. A literature review of grey documents and peer-reviewed sources on gambling among Chinese, South Asian, and Indigenous people;
- 2. Community consultations with participants recruited from five community organizations operating in Ontario; and
- 3. A survey of 900 Ontarian gamblers (473 Chinese people, 344 South Asian people, and 83 Indigenous/Métis people).

More details on each method can be found in Appendix A.

Literature Review

A literature review was conducted of 50 peer-reviewed and eight grey sources which aimed to explore key domains of inquiry, including how cultural influences and values shape gambling behaviours and impact gambling-related harm among these three key groups. Gambling related harm may include financial impacts, relationship disruption, mental health problems, decrements in physical health, cultural harms, work disruption, and criminal activity (Downling, Suomi, Jackson & Lavis, 2016; Langham et al., 2015; Leung, Wong, Lau, & Yeung, 2010). Furthermore, this review examined how family dynamics and peer influence can impact gambling-related outcomes. Finally, this review included information on mental health comorbidity and the impact of gambling attitudes on one's propensity to seek out gambling support resources and services. Overall, the review of these topics provides us a better understanding for developing health promotional messaging, effective communication techniques (e.g., formats and languages), and selecting optimal delivery channels for impactful prevention messaging.

⁴Indigenous Peoples include those living in Canada, Australia, New Zealand, and Greenland



³South-Asians include those who self-identify as East Indian, Pakistani, Sri Lankan, Afghani, Nepali, Bhutanese, Bangladeshi, or Madivian

Community Consultation

In August of 2021, two focus groups and three one-on-one interviews were conducted with Chinese, South Asian, and Indigenous people, recruited from community organizations operating in Ontario. The goal of these discussions was to provide concrete recommendations for developing relevant messages. Participants were asked to answer a series of questions related to their gambling experiences, the links between gambling with family and health, and approaches to the prevention of problem gambling within their community.

Provincial Survey of People Who Gamble

An online survey was conducted to better understand the experiences and perspectives of Ontarians who gamble and are from Chinese (n=473), South Asian (n=344), or Indigenous/Métis (n=83) communities. Questions were presented to respondents on topics including gambling behaviours and attitudes, cultural influences and values, family and social dynamics, knowledge needs, format and delivery preferences for prevention messaging, mental health comorbidity, as well as the impact of COVID-19 on their lives. Demographics of survey participants can be found in **Appendix B**. Detailed survey results, include analyses comparing across groups, can be found in **Appendix C**.



Key Findings: Ontarians of Chinese Descent Who Gamble

HIGHLIGHTS

- Gambling among members of Chinese communities is fairly common and generally accepted as a form of recreation and social activity
- 41% of survey respondents of Chinese descent reported online gambling prior to the pandemic and 76.1% reported gambling online during the pandemic. The most commonly engaged in forms of gambling were lottery or raffle draws, instant lottery, and Electronic Gaming Machines
- The cultural impacts on gambling risk often stem from the endorsement of lucky numbers and illusions of control related to personal rituals
- Privacy and confidentiality were high priorities for preferred approaches to harm prevention and minimization, such as self-assessment tools and anonymous support services
- Prevention messaging should highlight risk signs, tips on Positive Play, and clarify odds of winning and risks of certain games
- The most preferred methods of delivering responsible gambling messages were through social media campaigns, TV advertisements, and booths at gambling venues
- Messages should be delivered in relevant languages (English, Cantonese, Mandarin)



Gambling Behaviours and Attitudes

Chinese gamblers tend to be exposed to gambling at a younger age (i.e., under the age of 16), due in part to the general acceptance of gambling as a recreational and social activity; gambling is also prevalent during many Chinese traditional holidays and family gatherings (e.g., Mah-jong during Chinese New Year; Zheng et al., 2011; Kam et al. 2014; Keovisai & Kim, 2019; Kim, 2012; Yu & Ma, 2019). Among Chinese people in Australia, gambling on Mah-jong is significantly more popular among males and people over the age of 35 (Zheng et al. 2011). When asked how Mah-jong players learned how to play, nearly half (45.5%) reported learning from family members (ibid.). Similarly, both Chinese participants interviewed as part of this study stated that they were introduced to gambling, namely Mah-jong and dice games, through their relatives at an early age (9-12 years). Gambling, notably Mah-jong and dice games, is a staple of certain Chinese celebrations, particularly Chinese New Year. When living in Hong Kong, both participants stated that they would go on weekend vacations to Macau to gamble at the casinos. One of the participants noted that they would consider stock investing and the emerging crypto market as new forms of gambling that are popular with many Chinese Canadians, particularly youth due to the pervasiveness of investments apps on smartphones (i.e., Robinhood, WealthSimple). On the topic of investments, some research finds an increased likelihood of problem gambling among Chinese people who report elevated concerns related to maintaining and accumulating material wealth, and gambling for income has been noted in previous studies (Tao et al., 2010; Wu, Tao, Tong & Cheung, 2012).

A study of Chinese college and university students in Macao found that young men were significantly more likely to be high risk gamblers according to the PGSI compared to women and over three quarters (76%) of those identified as being high risk gambled for the first time before the age of 14 (Kam et al. 2017). The most common reasons for gambling were for entertainment (37.5%) and to pass time (25.1%; ibid.). Among these students the most preferred forms of gambling were mah-jong (38.1%), betting on soccer games (25.4%), and playing the Mark Six lottery (22.9%; ibid.). Additionally, those who were classified as moderate or high risk gamblers were significantly more likely score high in sensation seeking (measured using the Brief Sensation Seeking Scale) compared to those who were classified as non-problem and low risk (ibid.).

A study of Chinese high school students in the United States found higher estimates of problem gambling (scoring a 4 or higher on the South Oaks Gambling Screen-Revised for Adolescents) among students of Chinese descent than the general population (Chiu & Woo, 2012). Kim (2012) noted that Asian Americans who are exposed to cultural traditions emphasizing gambling as a recreation activity can be exacerbated by the addition of American consumer culture, which provides a large variety of physical and digital means to gamble—the results include catalyzed gambling behaviours through increased availability, which are influenced by cultural factors.

In Australia, within the Chinese community married men with families have been found to experience more harms than women (Scull & Woolcock, 2005). Furthermore, those who work in restaurants and international students are seen as being more vulnerable than other groups due to these groups having regular periods of spare time to fill (ibid.).

Each participant in the interviews had many positive memories associated with gambling. However, these positive experiences were often associated with lower stakes betting, rarely exceeding \$100 in a single session. They both had stories of people they knew who had lost significant amounts of money when



gambling, noting that these losses contributed to job loss, family issues, and in one case suicide. Despite these potential negative outcomes, gambling is largely seen as an acceptable social activity for the Chinese community.

Nearly one fifth (18.6%) of Ontarians of Chinese descent who gamble⁵ in the survey screened as high risk gamblers according to the Problem Gambling Severity Index (PGSI), with a higher percentage among men than women (20.3% vs. 14.5%). Chinese gamblers were also far less likely to gamble online before and during the pandemic as well as participate in most types of online gambling forms, compared to the other groups (especially South Asians; 41% reported gambling online prior to the pandemic and 76.1% reported gambling online during the pandemic). Since May 21, 2021, the majority of Chinese gamblers reported that the time and money spent gambling online has remained the same (55.3% and 54.2%, respectively). The most popular games for Chinese respondents were lottery or raffle draws (67.7%), instant lottery (34.5%), and Electronic Gaming Machines (EGMs; 20.9%).

Cultural Influences

The normalization of gambling as a leisure activity has been associated with the development of cognitive biases in the Chinese community. Cognitive biases surrounding people's control of gambling outcomes has been linked to pathological gambling habits amongst Asian populations (Tang & Wu, 2012; Fu & Yu, 2015). Chinese gamblers in Macau routinely demonstrate illusory-control behaviour, such as shouting 'cheui' in Cantonese when playing baccarat to 'blow' away unwanted numbers (Lam, 2007). The fallacy bias that is most commonly endorsed among Chinese gamblers is *positive recency* which suggests that the next outcome will be the same as the previous outcome when there is a sequence of

homogenous outcomes (i.e., a streak or a hot hand) (Fong et al. 2014). Chinese youth have been particularly vulnerable to these cognitive biases; with researchers linking these biases to problematic gambling habits such as rarely setting limits on money or time spent gambling and often increasing their betting when receiving a payout (Fu & Yu, 2015).

The selection of 'lucky numbers' is also a common practice used by Asian gamblers when purchasing lottery tickets or playing casino games (e.g., roulette). While the concept of a lucky number appears in multiple cultures, there is high degree of value surrounding numbers among Chinese communities (Fong, So, & Law, 2015; Tang & Wu, 2012). For example, in Chinese culture the number "4" has a similar pronunciation to the word "death" in Cantonese, making it unlucky; the number "8" is considered the luckiest as it sounds similar to the word for "wealth" and "fortune" (Yang, 2011). Chinese and Taiwanese communities have used lucky numbers for other financial

"There is a saying that states 'if you don't gamble, you don't know how lucky you are', so there is a shared belief that encourages taking chances for the purposes of assessing one's own luck/fortune."

Interview respondent

12

⁵ Throughout the rest of the report, we will use the shorthand 'Chinese gamblers' to refer to the people of Chinese descent who gamble.

ventures, such as real estate and banking investments (Shum, Sun & Ye, 2013; Weng, 2018). Our interviewees noted that superstition can motivate people to gamble specific amounts, only gamble on certain days of the year, or bet on 'lucky' numbers for games of chance like roulette.

It is not uncommon for Chinese gamblers to be secretive about their excessive gambling habits (Chan et al., 2016). In China, problematic gambling behaviours are considered to be taboo and are not seen to be related to one's mental health (Papineau, 2005). For Chinese residents of Montreal, it is unlikely that they will seek out services outside of their own community, due to being self-sufficient and having an established tradition which includes using their own services (e.g., hospitals, banks, social services, media) (Papineau, 2005).

When asked about barriers to help-seeking for problems related to gambling, a large proportion of Chinese gamblers in the online survey acknowledge *not wanting to be perceived as weak or judged* (51.3%), *lacking of awareness of resources* (44.7%), and having conflicting *time commitments for accessing services* (41%). Chinese women were more likely than Chinese men to report not wanting to be perceived as weak or be judged (59.6% vs. 47.6%), a lack of available resources (40.0% vs. 27.9%), a lack of awareness of resources (55.5% vs. 39.6%), the location of services (42.5% vs. 29.7%), and services only available in English (42.7% vs. 24.8%) as barriers to help seeking. Barriers were further demonstrated in the interviews as both respondents noted that while resources to treat addictions are bountiful in Toronto, there is a lack of public information on problematic gambling behaviours and 'the slippery slope' that can lead to a gambling problem. Whilst language is a barrier respondents identified, the most significant barrier was internalized denial of gambling issues. It was stressed that people with gambling concerns in the Chinese community do not want to identify themselves due to public perceptions that they lack self-control. Additionally, survey rrespondents were asked how their family would react to their own gambling habits. Chinese gamblers were significantly less likely to agree they would *be supported unconditionally*, even though a majority did endorse this perception (59.6%).

Those interviewed felt that there were distinct differences between first- and second-generation Chinese immigrants. First-generation immigrants were more likely to experience language barriers, anxiety, loneliness, and homesickness. As such, gambling provided a distraction from these challenges. In addition, first-generation immigrants hold onto traditional cultural belief systems surrounding luck and fortune, as such they may continue to gamble throughout their lifetime. Both participants noted that second-generation immigrants were more tech savvy and more likely to involve themselves in online gambling ventures compared to first-generation gamblers.

Health and Gambling

The presence of mental health and substance overuse has been linked to pathological gambling behaviours among Asian youth (Cheung, 2012; Kong et al., 2013). Chinese interview respondents felt that there was a link between gambling and mental health issues, with some people use gambling as a method of releasing stress. Mental health can impair self-control, leading people to focus on gambling whilst ignoring other important family and work duties.



In the survey, mental health was a lower concern for Chinese respondents. Chinese gamblers displayed over two-times the likelihood of *minimal* or *no anxiety* and over two-times the likelihood of *minimal* or *no depression*, compared to South Asian and Indigenous respondents.

Prevention Approaches

Knowledge Needs

Messaging should be designed to prompt relevant educational opportunities for Chinese gamblers about the risks of gambling, randomness, odds of winning, methods of time and money management, and culturally appropriate services for those experiencing harm (Kim, 2012; Tang & Wu, 2012). Ideally, these types of messages will disrupt cognitive biases through the provision of relevant information regarding gambling risks, randomness, and odds, allowing individuals to make informed decisions and cultivate safer gambling practices (Fong et al. 2014; Tang & Wu, 2012). For example, messages should be designed to dispel the belief that "lucky" numbers or good fortune allows people to have a certain level of mastery over the game—a mastery that is not supported by empirical odds (Fong, So, & Law, 2015; Tang & Wu, 2012).

The Chinese respondents interviewed felt that awareness and education were critical to gambling harm prevention. They articulated the need for information on how to identify when normal gambling behaviours transition into something problematic (i.e., ignoring previous time/monetary limits). Both noted messaging should allow people to self-assess their behaviours and then reach out for help on their own to reduce shame. One of the respondents stressed the importance of prevention messaging that avoids labeling the Chinese community as high-risk of problem gambling, instead messaging should highlight how it impacts everybody. Messaging should be supportive and show positive outcomes of safer gambling (i.e., money saved, entertainment value).

Information dedicated to helping parents identify at-risk gambling behaviours in their children would be extremely useful as Asian-American high school students have shown higher levels of at-risk/problem gambling compared to their Caucasian classmates (Kong et al., 2013). Additionally, this group of students were more likely to be concerned about the gambling habits of one of their family members compared to Caucasian students, so information for youth worried about a family member may also be useful (ibid.).

It is important to appreciate the cultural significance of gambling in the Chinese community. As such, gambling harm prevention messaging should illuminate signs of problem gambling; convey tips on how to gamble more safely (i.e., setting time limits, budget limits); and discuss the odds of winning and potential risks associated with each game.

Appropriate Message Framing

Messages should avoid promoting gambling abstinence, as gambling will continue to have cultural value among many Chinese people and be represented in events and traditions (Kim, 2012). Instead, harm reduction materials would best serve this community, taking a neutral stance on recreational and leisurely gambling, but increasing awareness of signs of problem gambling as well as steps to mitigate



harmful gambling habits (i.e., chasing losses, betting over your daily limit; Chiu & Woo, 2012; Shek & Lee, 2010). Messages could also incorporate gratitude and hope, as a negative correlation has been found between problematic gambling behaviours and feeling grateful (i.e., appreciating the positive in life) and hopeful (i.e., planning to meet goals; Loo et al. 2014).

Format and Delivery Preferences

Community messaging (i.e., materials posted in community centres, open forum presentations, etc.) has been positioned as an effective method for educating Asian gamblers on risks and harms, as it enables individuals to access information without drawing individual attention to their own gambling behaviours, which may be stigmatizing (Liao, 2018; Kim, 2012). These messages are designed to target the specific needs of the community and are conscious efforts to make them culturally relevant (Liao, 2018).

Interview participants noted that having a call-in radio show to share experiences and stories would be a great method of promoting awareness, as it allows the caller to retain anonymity while allowing viewers to listen to first-hand accounts of problematic gambling behaviours and the consequences of gambling. Campaigns would also benefit from going on chatrooms and web-apps that are popular among Chinese people (i.e., WeChat). The messages themselves should not come from a place of authority and instead provide softer tips on how to play smarter and safer.

When asked which methods of delivering responsible gambling messaging to communities would be most effective, Chinese gamblers in the online survey reported social media campaigns (51%), advertisements on televisions (47.8%), and booths at gambling venues (42.1%) as the top three methods. Chinese gamblers were more likely than the other two community groups to support radio broadcasts (31.5%, 1.34 times the odds of the other groups).

Messages should be available in native languages—this is especially important for new immigrants in North America, as many addictions treatment and prevention messaging is primarily delivered in English and rely on pre-established addictions counseling services (e.g., Gamblers Anonymous) that are often rooted in Western Christian beliefs (Papineau, 2005).

Programming designed to target youth can be incorporated into existing school-based seminars, such as Hong Kong's P.A.T.H.S. program, designed to educate youth about drug and alcohol addiction, with high levels of student engagement and retention of information related to gambling addiction (Shek & Sun, 2012). Incorporating gambling prevention messaging into pre-existing prevention campaigns (e.g., for alcohol and substance use) makes the messaging familiar and therefore more approachable for participants who have engaged with these types of programs in the past (Shek & Sun, 2012).

Summary

Gambling is an important form of entertainment in the Chinese community. It is often introduced early in life through games such as Chinese dice games and Mah-jong. Chinese gamblers in Ontario were far less likely to gamble online before and during the pandemic as well as participate in most types of online gambling, compared to South Asian and Indigenous gamblers. They also had over two-times the likelihood of minimal or no anxiety and of minimal or no depression.



Reports of treatment-seeking avoidance were also met with the acknowledgement of *not wanting to be* perceived as weak or judged, lacking awareness of resources, and perceived barriers related to time commitments for accessing services. Furthermore, when asked how family members would react to their own gambling habits, Chinese gamblers were significantly less likely to agree they would be supported unconditionally, even though a majority did endorse this perception (59.6%).

Problem gambling prevention messaging should inform Chinese people about the risks of gambling, odds of winning, randomness, methods of time and money management, and culturally relevant services for those experiencing harm (Kim, 2012; Tang & Wu, 2012). As survey respondents were significantly less likely to agree that they would be supported unconditionally by their family, future messages should reduce the stigma associated with gambling related harms by targeting family members. Messaging should not encourage abstinence due to gambling's cultural significance and should avoid labeling Chinese people as an "at-risk" group, as it may foster feelings of shame or guilt. Instead, messaging should provide positive tips on safer play and how to recognize signs of problematic gambling behaviours. Harm reduction materials that take a neutral stance on recreational gambling and community messaging would be useful tools for prevention for this group.



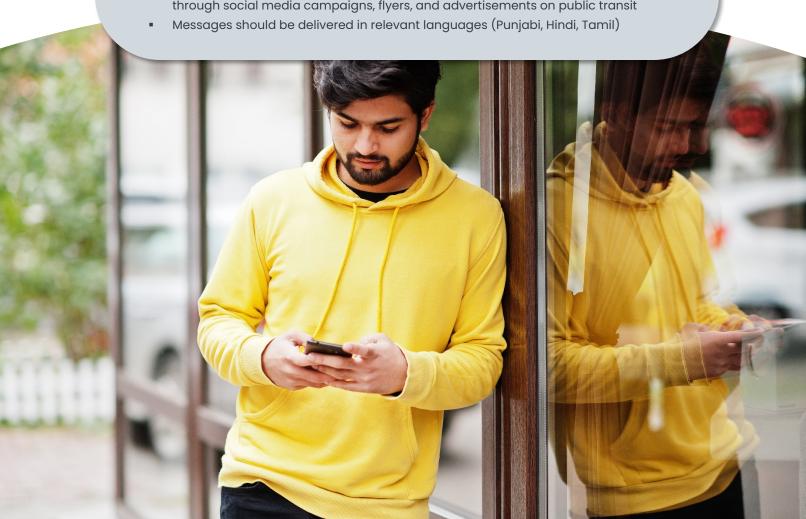


Key Findings: Ontarians of South Asian Descent Who Gamble



HIGHLIGHTS

- Gambling is a part of many South Asian cultural events
- 58.7% of Ontarians of South Asian descent who gamble reported gambling online prior to the pandemic and 88.4% reported gambling online during the pandemic, with the most commonly engaged in forms of gambling being lottery or raffle draws, instant lottery, and Electronic Gaming Machines
- Ontarians of South Asian descent who gamble featured the highest gambling engagement of the three population groups and were significantly more likely to classify at moderate risk and high levels of risk
- Due to the pervasiveness of shame and guilt around gambling harm in South Asian culture it is important that services allow people to remain anonymous
- The content of future messaging should increase the awareness of problematic gambling behaviours and include the odds of winning and negative impacts of gambling
- The most preferred methods of delivering responsible gambling messages were through social media campaigns, flyers, and advertisements on public transit



Gambling Behaviours and Attitudes

In India, legalized forms of gambling include state-run lotteries, horse racing, the card game Rummy, and casinos in the states of Goa and Sikkim (Benegal 2013; George et al. 2016). Along with these land-based forms of gambling, online gambling opportunities exist for Indians to bet on sporting events such as cricket (George et al. 2016). For Indian and other Ontarians of South Asian descent interviewed, lottery was the most popular form of gambling they could identify, followed by sports betting, particularly online sports betting for cricket and soccer. Tombola and bingo were also popular forms of gambling, which were generally played at community centres. All three interview respondents felt that overall gambling was perceived negatively. However, one participant stated that certain activities like tombola, playing cards with friends, and low stakes lottery play are not considered "gambling" by the South Asian community. Instead, the term "gambling" tends to be reserved for higher stakes games and is done outside of the household, such as betting thousands of dollars at a poker table in a casino.

Studies of South Asian people have presented significant levels of problem gambling (George et al., 2016; Jaisoorya et al., 2016). High school and college aged students in India have reported some of the highest rates of problem gambling in South Asia (George et al., 2016; Jaisoorya et al., 2016). Roughly one third of college aged students in India who gambled could be classified as having a gambling problem (George et al., 2016). Jaisoorya and colleagues (2016) showed a similar finding with one quarter of high school students having ever gambled classified as having gambling problems. These findings were significantly higher than national standards for other jurisdictions in Asia (i.e., China, Japan) and the West (i.e., Canada, United Kingdom, United States; George et al., 2016). People of South Asian descent who gamble tend to diversify their gambling, often playing state sanctioned lotteries or participating in the ever increasing online sports betting market (i.e., cricket, football; Benegal, 2013; George et al., 2017; Jaisoorya et al., 2016).

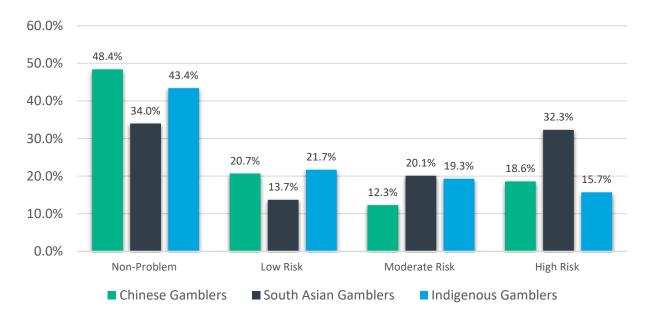
In the survey, South Asian gamblers featured the highest gambling engagement of the three population groups. In addition, *low levels of Positive Play beliefs* and *behaviours* were significantly higher among South Asian gamblers compared to Chinese and Indigenous gamblers. Looking at PGSI scores, nearly one third (32.3%) of South Asian gamblers screened as being high risk. Further, when comparing PGSI scores across populations, South Asian gamblers were significantly more likely to be classified as *moderate risk* and *high risk* (1.6- and two-times the odds of Chinese and Indigenous gamblers; Figure 1).

⁶ Throughout the rest of the report, we will use the shorthand 'South Asian gamblers' to refer to the people of South Asian descent who gamble.



18

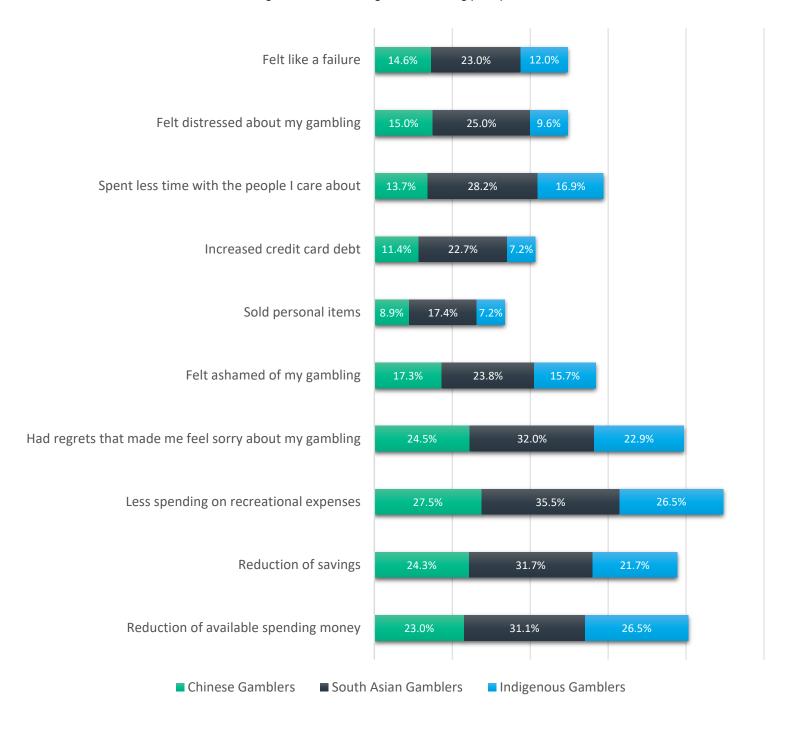
Figure 1: Problem Gambling Risk (PGSI) by Population Groups



South Asian gamblers were also significantly more likely to experience each of the gambling harms listed in the Short Gambling Harms Screen (SGHS) (Figure 2). On average this group experienced 2.7 harms compared to 1.8 harms on average experienced by Chinese respondents and 1.6 by Indigenous respondents. Specifically, increased credit card debt and spending less time with people cared about were harms most strongly associated with South Asian gamblers (over 2.3-times that reported by Chinese and Indigenous gamblers; Figure 2). South Asian gamblers were also far more likely to report negative personal impacts from other's gambling problems (28.4%, 1.87 times the odds of other groups), and often indicating these people were spouses (26%), sisters (10.4%), or a classmate (9.4%).



Figure 2: Short Gambling Harms Screening (SGHS) Items





South Asian gamblers surveyed were also over twice as likely to gamble online prior to and during the pandemic (58.7% reported gambling online prior to the pandemic and 88.4% reported gambling online during the pandemic). Similar to Chinese survey respondents, the most popular forms of gambling for South Asian respondents were lottery or raffle draw (72.1%), instant lottery (64.2% South Asian), and EGMs (36.9%). South Asian gamblers also reported significantly higher levels of intoxicated online gambling (alcohol and cannabis). This population reported 2.6-times and three-times the odds of intoxicated online gambling under the influence of alcohol (27%) and cannabis (16.4%), respectively. South Asian men were more likely than South Asian women to have gambled online while intoxicated on cannabis in the past year (18.7% vs. 11.8%).

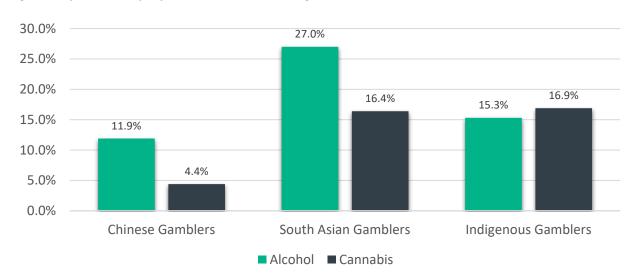


Figure 3: Population Groups by Intoxicated Online Gambling

South Asian survey respondents were also two-to-four times as likely to participate in every form of online gambling (except lottery and raffle draws) than Chinese and Indigenous gamblers. However, since May 21, 2021, South Asian gamblers also saw the largest cumulative decrease in time and money spent gambling online (39% and 37.5%, respectively).

Cultural Influences

Gambling is often present during Indian celebrations and may be referred to as 'festival gambling' (Benegal 2013; George et al. 2016). Interview respondents reported that during festivals and holidays gambling is relatively popular, especially during Diwali which is dedicated to Lakshmi the goddess of good fortune and luck. There are many card games, raffles, and other forms of gambling encouraged at these events. Sporting events are another popular time for betting, particularly cricket and soccer. Respondents also reported that during holiday events it is common within some South Asian families to pool money together to buy lottery and scratch tickets.

Research has shown that people of Indian descent are less likely to gamble in adulthood compared to Chinese gamblers (Subramaniam et al., 2015). This may be due to cultural pressures that frame gambling



negatively. All South Asian interviewees reported being exposed to gambling as children (around 9-12 years old), however they did not participate until they were older, generally in their mid to late teens. Their first forms of gambling were typically card games or lottery tickets that were played during family social events (i.e., birthdays, reunions).

Gambling had more negative associations for the South Asians interviewed compared to Chinese respondents. Each participant shared stories of relatives or people close to them that had gambled excessively and experienced family and employment issues as a result. Survey results also demonstrated higher likelihood among South Asians to be negatively impacted by a family member's problem gambling (e.g., spouse, sibling, etc.), compared to the other groups.

Interview respondents universally agreed with the statement that "South Asian gamblers are less likely to be open about their gambling habits with family members, as they are concerned about their potential reactions." They noted that experiencing harms from gambling is viewed by some members of the South Asian community as a personal failure and an example of poor self-control. This stigma against gamblers can lead to rejection from the family as well as the assignment of negative labels to the individual from the community. If the community has knowledge of ones gambling habits it can affect their perception of their extended family, including the belief that the family was ineffective at raising their children and that other members of the family may have a similar lack of self-control.

When South Asian survey respondents were asked how their family would react to their own gambling habits, they were significantly more likely to believe they would be judged harshly and given little/no support (39.5%). This group of respondents also had three-times the odds of agreeing that people who gamble are reliable and trustworthy (33.7%). Although, 39.2% agreed that people who experience gambling harms should keep it to themselves (1.83-times the odds of Chinese and Indigenous gamblers). South Asian survey respondents were also significantly more likely to avoid someone they thought to be suffering from a gambling related harm (43%, 1.55-times the odds of other groups).

Interview informants also commented that the fear of stigma could lead those with problematic gambling behaviours to be silent about their problems and deal with them internally rather than seek out help from their family or community. When asked about barriers to help seeking in our survey, South Asian gamblers had significantly higher odds of perceiving specific barriers to help seeking. These barriers included not wanting to go against beliefs or traditional lifestyle (43.6%), a lack available resources (39.7%), perceived lack of confidentiality (49.2%), a lack of relevant community resources (37.9%), cost of services (47.5%), and location of services (45.8%).

Similar to the Chinese group, two of the South Asian respondents interviewed noted that first generation immigrants may be more likely to gamble as they use gambling as a coping mechanism for the hardships they endure in their new country (i.e., isolation, struggles with acculturation, anxiety, homesickness). However, one participant challenged this view, noting that first generation South Asian immigrants put greater value on securing a home and moving their families and that gambling would be seen as a frivolous activity. Two respondents also noted that when they first came to Canada it was their first exposure to credit cards, which are far less prevalent in South Asian countries.

Health and Gambling

Studies have found that among South Asian people experiencing gambling problems has been associated with lower educational attainment, more prevalent comorbidities (i.e., smoking cigarettes and cannabis, alcohol consumption), Attention–Deficit Hyperactivity Disorder (ADHD), suicidality, and mental health concerns (Fatima et al., 2018; George et al., 2016). South Asian interview informants also identified a correlational link between gambling and mental health issues. Two of the three respondents had personally counselled people who had experience with depression and anxiety, and noted these issues impacted on the individuals' gambling decisions. They also noted an interconnectivity between high rates of gambling and alcohol consumption. One participant stressed the impact of gambling on mental health and how it had led to the suicide of someone they knew.

One participant discussed how gambling was associated with obsessive behaviours and impulsivity. Informants expressed their familiarity with the idea of lucky clothing or items that some believed influenced gambling wins. Respondents reported that in some instances disrupting personal rituals and lucky items could lead to distress when these items are missing or taken away.

One of the participants was cautious, claiming that generalizing mental health and gambling could be problematic, claiming that people who do not experience poor mental health could still experience gambling harms and stress as a result of the internalized shame they have over their gambling behaviours. They claimed that the relationship was more likely the inverse where gambling can lead to mental health problems, namely stress from losing money.

In the survey, South Asian respondents were the leading at-risk population for anxiety. South Asians reported over two-times the odds of moderate anxiety than Chinese and Indigenous respondents (Figure 4).

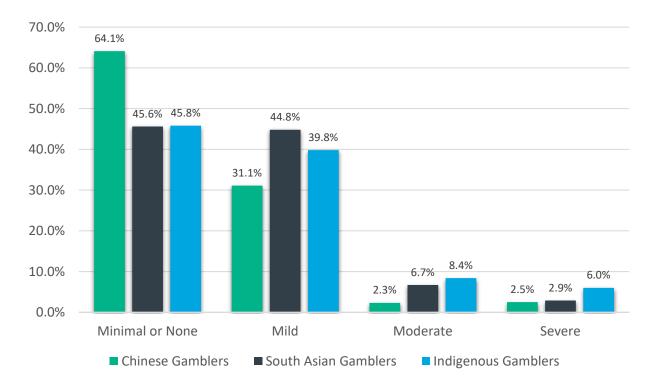


Figure 4: Population Groups by Anxiety Symptomatology

Prevention Approaches

Knowledge Needs

Awareness was critical for South Asian interview respondents - they felt that messaging should serve to tackle fallacies surrounding gambling prevalence within the South Asian community. This would consist of educational messages describing the true odds of games and how gambling with credit can negatively affect your credit score. Another participant highlighted that counter messaging is imperative in helping South Asian people avoid problematic gambling behaviours; they felt that responsible gambling messages need to be as prevalent as ads for gambling.

George and associates (2017) articulated the importance of a three-stage model for avoiding problem gambling among South Asian communities. The first stage would focus on building awareness of problem gambling behaviours for youth and non-gamblers, as to avoid these behaviours in the future and identify those close to them who may be at-risk of or currently experiencing gambling harms. These messages could be incorporated into existing school based and social media campaigns related to other forms of addiction awareness (i.e. drugs, alcohol). The second stage provides those who are classified as high-risk gamblers with treatment options. Much like the Chinese community, there is a significant stigma regarding gambling in the South Asian community, as such these treatments should be anonymous and confidential.

Format and Delivery Preferences

All of the respondents in the interviews felt that the sharing of personal stories related to gambling harms could be a helpful method of delivering prevention messaging to the South Asian community. In terms of scope, each participant stressed that prevention and treatment messaging should be pervasive and take advantage of digital technologies as well as in-person lectures, stories, and presentations. When asked which methods of delivering responsible gambling messaging to communities would be most effective, social media campaigns (52%), flyers (45.6%), and advertisements on public transit (40.7%) were the top three choices for South Asian survey respondents.

Additionally, the third stage of the three-stage model by George and associates (2017) articulates the need to incorporate gambling addiction modules into current addiction treatment and mental health programs (i.e. drugs, alcohol). For example, messaging can be incorporated into high school programming, which would be more cost effective then developing a completely new prevention campaign, and youth would already be familiar with this form of information dissemination (ibid).

Campaigns should be aware of how pervasive shame and guilt are in South Asian culture related to gambling, so that people with gambling problems are not exposed and singled out to their family/community. Each participant interviewed stressed the need for services that help them remain anonymous and rejected the idea of religious institutions being a viable treatment service as they can exacerbate personal feelings of shame.

The most significant barrier to reaching South Asian audiences identified in the interviews was that messages have not been presented in a preferred language. Approximately one-third (35.1%) of surveyed South Asian gamblers also reported resources not being available in languages other than English as a barrier to seeking help.

Summary

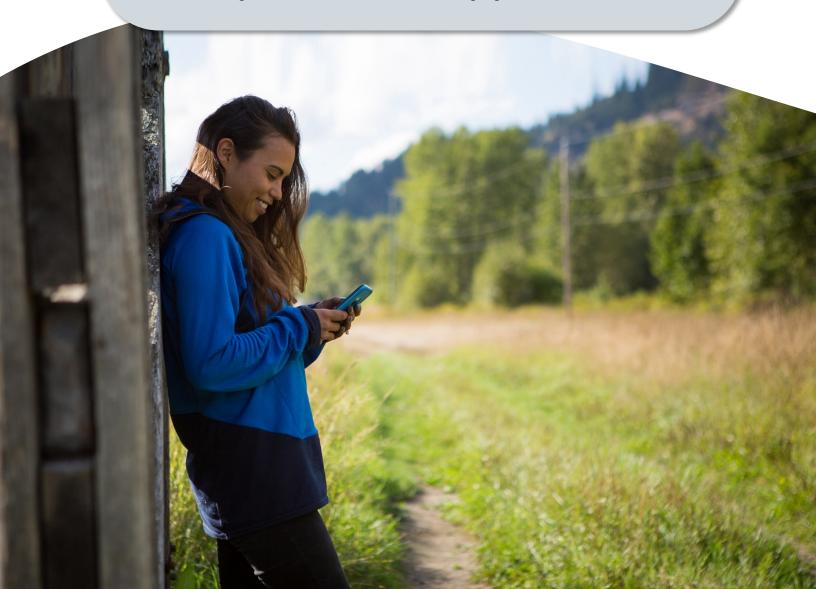
For South Asian people, gambling is a part of cultural events through various customs and games. Although gambling outside of these events may be viewed negatively, Ontarians of South Asian descent who gamble featured the highest gambling engagement among the three community groups in addition to the most substantial gambling risk and prevalence of harms. South Asian gamblers were significantly more likely to believe they would be judged harshly and given little/no support and nearly 40% (39.2%) agreed that people who experience gambling harms should keep it to themselves. Additionally, South Asian respondents were significantly more likely to avoid someone they thought to be suffering from a gambling related harm.

In addition to this stigma, South Asian gamblers in the survey had significantly higher odds of perceiving specific barriers to help seeking. As a result, campaigns should be aware of the shame and guilt South Asian gamblers may experience and adjust their messaging according. Messaging should be culturally-relevant and delivered through social media campaigns, flyers, and advertisements on public transit. It should highlight the negative outcomes of problematic gambling behaviours and provide viewers with information on treatment programs that allow for anonymity.

Key Findings: Indigenous Peoples in Ontario Who Gamble

HIGHLIGHTS

- Indigenous Peoples took part in forms of gambling prior to colonization, however the focus was not on optimizing monetary extraction for operational profit
- 42.2% of Indigenous People in Ontario who gamble gambled online prior to the pandemic and 71.1% gambled online during the pandemic, with the preferred forms of gambling being lottery or raffle draw, instant lottery, and Electronic Gaming Machines
- Key barriers for this community include the location of services, language, legacy of residential schools, and a lack of culturally relevant programs
- Resources that relate to stress, mental health concerns, and substance use will be beneficial to the community as these are related to problematic gambling behaviours
- Prevention messaging should be unique to each community (e.g., those living in urban areas vs. rural areas) and incorporate alternative, prosocial activities to gambling
- The most preferred methods of delivering responsible gambling messages were through social media campaigns, booths at gambling venues, and TV advertisements
- Messages should be delivered in relevant languages (Cree, Inuktitut)



Gambling Behaviours and Attitudes

Understanding and acknowledging the socio-economic factors attributed to gambling problems experienced by Indigenous Peoples is critically important. In Canada, having low socio-economic status is found to be associated with greater harms from gambling (Van Der Maas, 2016). Settler colonialism and the Canadian government's assimilation policies (e.g., the Indian Act and enfranchisement) have negatively impacted Indigenous People's socio-economic status and as a result are likely important determinants of gambling harm for Indigenous Peoples in Canada (MacDonald & Steenbeek, 2015). Due to institutional discrimination and other barriers, Indigenous Peoples are kept in low socioeconomic status and as a result continue to be vulnerable to gambling harms.

Indigenous Peoples (First Nations, Inuit, and Métis) in Canada have higher levels of gambling participation than other groups, with 75.3% of Indigenous Peoples reported engaging in one or more types of gambling compared to 63.9% of non-Indigenous people (Williams et al. 2021a). Indigenous Peoples also have a rate of problem gambling that is much higher compared to non-Indigenous Canadians (2.0% for Indigenous Peoples compared to 0.5% for non-Indigenous; ibid.). Among Indigenous communities in Australia, harms from gambling have included financial difficulties, feelings of guilt and regret about gambling, personal, relationship, family, community, legal, and housing impacts (Hing et al. 2014).

For Indigenous youth, factors connected to either urban or rural location—such as level of isolation and economic disadvantage—seem to be more important predictors of problematic gambling behaviours than whether their residence is urban or rural. For example, Breen and Gainsbury (2013) found that living in an urban area in Canada presents certain risks for Indigenous Peoples, such as isolation, stress and the development of gambling problems—especially if they were young. Additionally, nearly one quarter (24%) of Indigenous Peoples who live in an urban area (excluding the territories) are classified as living in poverty by the market basket measure (MBM) compared to 13% of the non-Indigenous population (Arriagada et al., 2020). For those under the age of 18 and living in urban areas, this is increased as nearly 30% (29.8%) are living in poverty (ibid.).

In Australia, high risk Indigenous gamblers are more likely than gamblers experiencing other levels of risk to gamble as a form of therapy or to escape their reality (Hing et al. 2014). Indigenous high risk gamblers in Australia are found to spend more than \$100 AUD and gamble for significantly longer periods of time than non-risk gamblers (ibid.) A similar study found that for Indigenous Peoples in Canada who had gambled in the past year, the most common reasons for doing so was to win money, for excitement, for entertainment, for fun, and to socialize (Belanger et al. 2016). The motivation to socialize was also found to be unique among some Indigenous Peoples in a study by Williams et al. (2021a).

Lottery (instant win), Bingo, cards/dice, slot machines, and EGMs (including Video Lottery Terminals (VLTs) and slot machines) have been found to be the most popular forms of gambling among Indigenous populations in Canada and Greenland (Larsen et al. 2013; Williams et al. 2016; Williams et al. 2021a; Williams et al. 2021b; Belanger et al. 2017). Indigenous Peoples in Canada reside disproportionately in provinces that have the highest density of EGMs (Williams et al., 2021a). EGM play is the most important predictor of problematic gambling behaviours among Indigenous Peoples in Canada—and more so with higher levels of gambling fallacies (e.g., belief that luck is dispositional, illusion of control, and hot hand fallacy; ibid.). Other factors that increase the predictive power of EGM play included the presence of a mental illness; participating in sports betting; the presence of problematic substance use; gambling to

escape, relax, or relieve stress; non-medical use of drugs (other than alcohol, tobacco, and cannabis); and being male (ibid.). The same study identified past year problematic substance use and past year non-medical use of drugs to be unique to Indigenous Peoples with problematic gambling behaviours.

Among Indigenous Peoples in Canada, women have been found to be more likely to play bingo and play more frequently than men (Gill et al. 2016). Additionally, men were found to spend significantly more money than women per gambling session and were significantly more likely than women to have gambled while under the influence of drugs or alcohol (ibid.).

Indigenous Peoples residing in Ontario who participated in interviews were most familiar with bingo, scratch tickets, pull tickets, keno, slot machines, sports betting, and card games. Similar to the South Asian respondents, Indigenous informants reported more negative experiences with gambling than positive. Positive experiences were limited to the feelings of euphoria one gets when winning. Two participants had negative experience where they had gambled away large sums of money that drastically impacted their relationship with family members as well as their ability to meet basic needs such as rent or food. Despite these negative experiences, participants felt that gambling was either favoured positively by the Indigenous Peoples or was seen as neutral. Indigenous communities are often isolated from other forms of entertainment available to those living in towns or cities, as such gambling is one of the few forms of entertainment available to the community.

Nearly one sixth (15.7%) of Indigenous People in Ontario who gamble⁷ in the survey screened as being high risk. Compared to South Asians and Chinese gamblers, Indigenous gamblers were significantly less likely to gamble online in the past 16-months (42.2% gambled online prior to the pandemic and 71.1% gambled online during the pandemic). However, this group also demonstrated the largest proportion of those reporting their money spent gambling online had increased a lot (5.1%). For those who gambled online, the most popular forms were the same as Chinese and South Asian respondents – lottery or raffle draw (57.8%), instant lottery (41%), and EGMs (27.7%). Indigenous gamblers reported approximately two-times the level of high Positive Play beliefs and behaviours compared to South Asian and Chinese gamblers.

Only a small proportion of gamblers in Australia report seeking help as a result of problems with their gambling, which suggests a need for increased awareness of responsible gambling resources (Hing et al., 2014). One report conducted by the government of Australia looking at barriers to help seeking for Indigenous Peoples who gamble found that shame and stigma from identifying oneself as a 'problem gambler', being geographically isolated from relevant treatment services, being hesitant to access mainstream services (even more so when there is a lack of Indigenous staff members at these services), as well as family members helping out in times of financial difficulty (as this may decrease one's sense of urgency to seek help) to be the most important barriers (Cultural & Indigenous Research Centre Australia (CIRCA), 2011).

Disconnections between current social structures (such as loss of culture, fragmented communities, and family limitations) play an important role in help seeking, as people feel that by pursuing support they are abandoning their traditional lifestyle (Isaak et al., 2020). Predisposing health beliefs and attitudes

⁷ Throughout the rest of the report, we will use the shorthand 'Indigenous gamblers' to refer to Indigenous people who gamble.

including personalized and perceived community stigma were found to create barriers to help seeking as community members did not want to be judged or perceived as weak (ibid.). The study also discovered that the capacity of informal and formal resources both enabled and impeded the use of supports. Many community members rely on resources such as family members, friends, and elders for informal support yet this support is not consistent and the formal support provided through services may be perceived to lack confidentiality and not be culturally relevant (Isaak et al. 2020).

Cultural Influences

Prior to Western colonization, nearly all North American Indigenous communities residing south of the sub-arctic area practiced some form of gambling and had often done so with high stakes (Culin, 1907). In North America, traditional games included dice, hands, riddles, and skill-testing activities and were a source of entertainment at social events (Papineau, 2010). For the Inuit people, traditional gambling involved gambling sticks and dice games, activities that are no longer common (Muckle et al. 2007). Among the Cree people, gambling was a way to bring people together and redistribute wealth (Gill et al. 2016). Modern forms of gambling (e.g., casino games, EGMs, sports-betting, etc.) are a significant departure from traditional ones and often focus on optimizing monetary extraction for operational profit (Binde, 2005).

All of the Indigenous People interviewed noted that they were exposed to gambling as children (around 10 years of age) or in their early teenage years. Some participants recounted having parents engage in weekly bingo or having relatives come over to play card games for money. It was, however, not clear whether the participants played these games with their relatives at this young age. Some participants noted that Christmas and Thanksgiving were popular times to engage in gambling, usually low stakes card games, lottery pools, or community bingo events.

Interviewees also felt that people who have experienced problematic gambling behaviours were more likely to rely on family, elders, and friends for support, rather than external health services (i.e., addictions counselors, online treatment, and therapy). This was further reflected in the online survey, where Indigenous gamblers strongly felt that if their family found out about their gambling habits, they would be supported unconditionally (77.1%). Similarly, some interview respondents noted that family, elders, and peers can provide culturally relevant treatments, such as healing circles or speaking to knowledge keepers, that can help address their gambling harms through traditional practices. However, these types of support related to gambling are not widely available. Willingness to access peer and family-based support may be low, with nearly 70% of Indigenous gamblers in the online survey identifying not wanting to be perceived as weak or judged as being a key barrier and had over two-times the odds of reporting this barrier.

Key informant interviews also revealed that external services are not readily available in community locations and might require significant travel. Similarly, Indigenous survey respondents identified the *location of services* (56%) as a key barrier and had two-times the odds of reporting this barrier compared to Chinese and South Asian gamblers. Indigenous women were more likely than Indigenous men to report lack of awareness of resources (61.5% vs. 34.4%) as a barrier to help seeking. Furthermore, interviewees

commented that internet service can be slow in Indigenous rural communities, limiting access to online services.

Additional barriers identified in interviews include language and the legacy of residential schools. Language is especially a barrier for older generations who may only speak conversational English, making communication difficult unless it is in their native tongue. Due to the impacts of residential schools, a couple of participants noted that some Indigenous Peoples rejected the Canadian public school system and as a result are not literate making written supports inaccessible.

Health and Gambling

Among Indigenous populations in Canada and Greenland, problematic gambling behaviours have been found to be associated with stress, acute mental health concerns, and comorbid substance use. For instance, past trauma/stressful life events (e.g., sexual assault, abuse, residential schooling), family history of alcohol abuse, social transition, anxiety, depression, and problematic substance use have been noted as key risk factors (Mason, 2017; Dion et al. 2015; Larsen et al. 2013; Gill et al. 2016).

Key informant interviews also indicated a link between gambling and mental health issues. Coping with poor mental health, namely depression and anxiety, were reported as some of the motivations for problematic gambling. One participant noted how developmental disorders such as Fetal Alcohol Syndrome (FAS), which is present in many Indigenous communities, impairs impulse control, potentially leading to increased time or money spent gambling. One participant noted that community bingo nights or family card games are seen as a viable form of socialization and entertainment. As a result, gambling is viewed as a lesser vice whereby some people stop consuming alcohol and/or drugs and will instead transition to gambling, which for the community was seen as an improvement. Consistent with these findings, the Indigenous survey respondents reported 2.25-times the odds of being screened for moderate depression, compared to other groups (Figure 5).

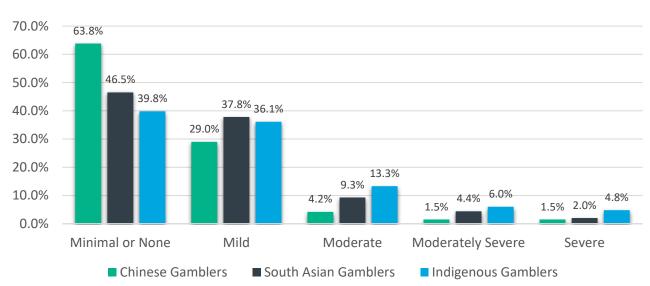


Figure 5: Population Groups by Depression Symptomatology

Prevention Approaches

Knowledge Needs

According to one report prepared by the Australian government, culturally appropriate problem gambling service delivery and promotion should be aimed at harm minimization (i.e., offer advice on budgeting and managing finances, incorporate information on how games work and common myths) and use a holistic approach (i.e., considers the needs of the community and players holistically) (CIRCA, 2011).

Appropriate Message Framing

It is important to recognize when framing messages that Indigenous communities are all unique and have different needs. For example, those living in rural locations may have different needs than those living in urban locations (Breen and Gainsbury, 2013).

The idea of balancing gambling with other activities may be an effective way to frame responsible gambling messaging as balance, with aligned with the concept of wellness in many Indigenous communities (Kowatch, 2017). Interview respondents suggested that messages should have a positive tone and highlight the benefits of protecting oneself against gambling harms (i.e., saving money for fun events such as vacations). There was also a concern that negative messaging could make people feel inadequate for having gambling problems and potentially exacerbate mental health concerns.

Format and Delivery Preferences

Research conducted in Australia suggests that in order to successfully deliver gambling specific prevention messaging, engagement with a community should take place. This can involve a social event followed by a workshop that community members and local service providers are encouraged to attend as well as letting participants in the program produce their own community action plan (Fogarty et al. 2016). In our survey, when asked which methods of delivering responsible gambling messaging to communities would be most effective, social media campaigns (66.3%), booths at gambling venues (62.7%), and advertisements on television (60.2%) were the top three choices among Indigenous People.

In the interviews, almost every respondent noted the importance of including real life stories within the narrative, and perhaps using roundtables or healing circles that allow community members to open up about their lived experiences with problem gambling and suggestions on how to protect oneself against harm. It was recommended that the messaging take advantage of all the mediums available, as many members of the community consume information in different ways (i.e., visual, auditory, written). One interviewee suggested having youth nights that focus more or cooperative games and quick, punchy messages. For elders and adults, programming could include more long form discussions and presentations as they usually have a longer attention span. It was also noted that many Indigenous communities have both physical and digital forums (i.e., band council headquarters, community centres, Facebook groups) where posters and infographics could be shared in multiple languages and widely seen.

Although, there is limited research on gambling specific programming for Indigenous communities, one can look at similar programming for recommendations. For example, alcohol and drug programs in

Australia have found collaborative, culturally sensitive, and family-focused approaches to be effective (Whiteside et al. 2020). In addition, it is recommended that programs be guided by key principles that inform the design of strategies addressing gambling harm. These strategies could include:

- Taking an emancipatory approach;
- o Focusing on community engagement;
- Involving locals in program design;
- Integrating culture into the program;
- o Building community capacity; and
- o Partnering with community service organizations.

Other recommendations include taking a contextual approach to understand the community (i.e., social disadvantage, adverse historical events) as well as adapting programming by incorporating various aspects of the community to meet the needs of the target community (for example cultural knowledge and spirituality; ibid.).

Summary

Indigenous Peoples in Canada have a rate of problem gambling that is much higher compared to non-Indigenous Canadians (2.0% for Indigenous Peoples compared to 0.5% for non-Indigenous; Williams et al. 2021a). Further, survey results show that Indigenous gamblers demonstrated the largest proportion of those reporting their money spent gambling online had *increased a lot*.

When developing prevention messaging for Indigenous People, it is important to recognize the legacy of settler colonialism and government policies on Indigenous Peoples. As problematic gambling behaviours are found to be associated with stress, mental health concerns, and substance use, resources that pertain to these factors will be beneficial to the community. Game-specific messaging for this community could discuss the risks associated with EGMs and sports betting, how to partake in these activities responsibly, as well as include information to debunk common gambling fallacies and the odds of winning. Messaging should be unique to the specific community, for example, for youth who live in rural communities, messaging on alternative activities to gambling that may combat stress and isolation may be beneficial. Messages should also incorporate alternative, prosocial, activities to gambling such as sports or outdoor games that can provide entertainment without the monetary risk.

It is also crucial to take into account barriers that many Indigenous communities face such as location of services, cost, and poor digital infrastructure. Additionally, Indigenous gamblers in the survey identified not wanting to be perceived as weak or judged as being a key barrier and had over two-times the odds of reporting this barrier.

Key Takeaways and Recommendations

The previous sections have given a broad overview of findings for each group related to gambling behaviours and attitudes, cultural influences, and health and gambling, as well as approaches for prevention messaging content, framing, and format. In this section we will examine shared recommendations that target aspects raised by all three groups as well as some of the recommendations unique to each group.

Achieving Culturally-Relevant Messaging Across Groups

Engage Family Members

In order to decrease the stigma associated with gambling related harms, prevention and education programs should be expanded to specifically engage family members of people who gamble who may be experiencing risk and harm.

Delivering Messaging

Public awareness strategies should take into consideration how communities prefer to receive information. For example, in the survey Ontarians of Chinese descent who gamble preferred social media campaigns, television ads, and booths at gambling venues; those of South Asian descent preferred social media campaigns, flyers, and advertisements on public transit; and Indigenous People preferred social media campaigns, booths at gambling venues, and television ads.

Promoting Online Resources

For Chinese and Indigenous communities who may not be aware of resources available or have difficulty accessing resources, it is recommended that the availability of resources is promoted, especially resources that are available online.

Language of Materials

Each Indigenous, South Asian, and Chinese community has their own needs, traditional values, and cultures. Every group stressed the need for gambling prevention messaging to be culturally relevant. One method of attaining cultural relevancy is through the availability of gambling prevention materials in appropriate language(s). For example, the Lower-Risk Gambling Guidelines are available in different languages and could be shared with communities in their preferred languages.

Identifying Leaders in the Community

Another method to attain cultural relevancy is by identifying leaders within the community and working with them to develop and disseminate prevention materials. These leaders are critical for adapting the messaging into a framework that best targets the community. This framework could incorporate factors such as core values, gambling beliefs, and ecological facts and may address areas such as: how core values can be leveraged to promote safer gambling or help-seeking, how erroneous or risky gambling

beliefs can be shaped to promote safer gambling, and how ecological factors can be specified as barriers and operationalized as opportunities for improvement.

Tailored Messaging

Messaging should be tailored to acknowledge values and views around gambling in the community and address common gambling misconceptions (i.e., gambling is a way to improve one's financial standing, lucky numbers are more likely to be chosen).

Prevention messages should avoid pathologizing gambling or advocating for abstinence entirely. Many communities engage in gambling during traditional holidays, family events, or cultural celebrations. Gambling can be an important social activity and method of entertainment; therefore, messaging should promote safer play strategies, as well as techniques on how to avoid and identify problem gambling habits.

Members from each community expressed the need for messaging that takes into account the dominant cultural perspectives of the community. For example, messaging for Chinese communities should encourage positive tips for safer play as gambling is an important cultural activity. Approaches for Indigenous communities should focus on having treatment options available that utilize traditional Indigenous practices such as healing circles, sacred fire ceremonies, smudging, and more.



References

- Arriagada, P., Hahmann, T., & O'Donnell, V. (2020). *Indigenous people in urban areas: Vulnerabilities to the socioeconomic impacts of COVID-19.* https://www150.statcan.gc.ca/n1/en/pub/45-28-0001/2020001/article/00023-eng.pdf?st=7EliFDQg
- Belanger, Y. D., Williams, R. J., & Prusak, S. Y. (2017). Tracking the westernization of urban Aboriginal gambling in Canada's Prairie Provinces. International Gambling Studies, 17(1), 1-19.
- Benegal. (2013). Gambling experiences, problems and policy in India: a historical analysis. *Addiction* (Abingdon, England), 108(12), 2062–2067.
- Binde, P. (2005). Gambling across cultures: Mapping worldwide occurrence and learning from ethnographic comparison. *International Gambling Studies*, *5*(1), 1-27.
- Breen, H., & Gainsbury, S. (2013). Aboriginal gambling and problem gambling: A review. *International journal of mental health and addiction*, 11(1), 75-96.
- Chan, E. M. L., Dowling, N. A., Jackson, A. C., & Shek, D. T. L. (2016). Gambling related family coping and the impact of problem gambling on families in Hong Kong. *Asian journal of gambling issues and public health*, 6(1), 1-12.
- Cheung, N. W. (2012). Low Self-Control and Co-occurrence of Gambling with Substance Use and Delinquency Among Chinese Adolescents. *Journal of Gambling Studies*, 30(1), 105–124.
- Chiu, E. Y.-W., & Woo, K. (2012). Problem Gambling in Chinese American Adolescents: Characteristics and Risk Factors. *International Journal of Mental Health and Addiction*, 10(6), 911–922.
- Culin, R. S. (1907). Games of the North American Indians: Twenty-Fourth Annual Report of the Bureau of American Ethnology. Smithsonian Institution, Washington.
- Cultural & Indigenous Research Centre Australia (CIRCA) (2011) Development of Culturally Appropriate Problem Gambling Services for Indigenous Communities. Occasional Paper No. 40, Commonwealth of Australia, Canberra.
- Dion, J., Cantinotti, M., Ross, A., & Collins-Vezina, D. (2015). Sexual abuse, residential schooling and probable pathological gambling among Indigenous Peoples. *Child Abuse and Neglect, 44,* 56-65.
- Dowling, N. A., Suomi, A., Jackson, A. C., & Lavis, T. (2016). Problem gambling family impacts: development of the problem gambling family impact scale. *Journal of gambling studies*, *32*(3), 935-955.
- Fatima, S., Jamil, M., & Ardila, A. (2018). Cognitive Control and Criminogenic Cognitions in South Asian Gamblers. *Journal of Gambling Studies*, 35(2), 501–516.

- Fogarty, M., Coalter, N., Gordon, A., & Breen, H. (2016). Proposing a health promotion framework to address gambling problems in Australian Indigenous communities. *Health Promotion International*, 2016, 1-8.
- Fong, L. H. N., Law, R., & Lam, D. (2014). An examination of factors driving Chinese gamblers' fallacy bias. *Journal of Gambling Studies*, 30(3), 757-770.
- Fong, L. H., So, A. S., & Law, R. (2015). Betting Decision Under Break-Streak Pattern: Evidence from Casino Gaming. *Journal of Gambling Studies*, 32(1), 171–185.
- Fu, W., & Yu, C. K. C. (2015). Predicting disordered gambling with illusory control, gaming preferences, and internet gaming addiction among Chinese youth. *International Journal of Mental Health and Addiction*, 13(3), 391-401.
- George, S., Jaisoorya, T. S., Nair, S., Rani, A., Menon, P., Madhavan, R., Rajan, J. C., Radhakrishnan, K. S., Jose, V., Benegal, V., Thennarassu, K., & Petry, N. M. (2016). A cross-sectional study of problem gambling and its correlates among college students in South India. *BJPsych Open*, 2(3), 199–203.
- George, S., Velleman, R., & Nadkarni, A. (2017). Gambling in India: Past, present and future. *Asian Journal of Psychiatry*, 26.
- Gill, K.J., Heath, L.M., Derevensky, J., & Torrie, J. (2016). The social and psychological impacts of gambling in the Cree communities of Northern Quebec. *Journal of Gambling Studies*, 32, 441-457.
- Hing, N., Breen, H., Gordon, A., & Russel, A. (2014). Gambling harms and gambling help-seeking amongst Indigenous Australians. *Journal of Gambling Studies*, 30, 737-755.
- Isaak, C. A., Mota, N., Medved, M., Katz, L. Y., Elias, B., Mignone, J., ... & Sareen, J. (2020).

 Conceptualizations of help-seeking for mental health concerns in first nations communities in Canada: a comparison of fit with the Andersen behavioral model. *Transcultural psychiatry*, 57(2), 346-362.
- Jaisoorya, T. S., Beena, K. V., Beena, M., Ellangovan, K., Thennarassu, K., Bowden-Jones, H., Benegal, V., & George, S. (2016). Do High School Students in India Gamble? A Study of Problem Gambling and Its Correlates. *Journal of Gambling Studies*, 33(2), 449–460.
- Kam, S. M., Wong, I. L. K., So, E. M. T., Un, D. K. C., & Chan, C. H. W. (2017). Gambling behavior among Macau college and university students. *Asian journal of gambling issues and public health*, 7(1), 1-12.
- Keovisai, M., & Kim, W. (2019). "It's Not Officially Gambling": Gambling Perceptions and Behaviors Among Older Chinese Immigrants. *Journal of Gambling Studies*, 35(4), 1317–1330.
- Kim, W. (2012). Acculturation and gambling in Asian Americans: when culture meets availability. International Gambling Studies, 12(1), 69–88.

- Kong, G., Tsai, J., Pilver, C. E., Tan, H. S., Hoff, R. A., Cavallo, D. A., Krishnan-Sarin, S., Steinberg, M. A., Rugle, L., & Potenza, M. N. (2013). Differences in gambling problem severity and gambling and health/functioning characteristics among Asian-American and Caucasian high-school students. *Psychiatry Research*, 210(3), 1071–1078.
- Kowatch, K. R. (2017). Gambling in Indigenous populations in Canada. Available from http://www.greo.ca/Modules/EvidenceCentre/Details/gambling-in-indigenous-populations-in-canada
- Lam, D. (2007). An observation study of Chinese baccarat players, *UNLV Gaming Research & Review Journal*, 11, 63-73.
- Langham, E., Thorne, H., Browne, M., Donaldson, P., Rose, J., & Rockloff, M. (2015). Understanding gambling related harm: A proposed definition, conceptual framework, and taxonomy of harms.

 BMC public health*, 16(1), 1-23.
- Larsen, C.V.L., Curtis, T., & Bjerregaard, P. (2013). Gambling behavior and problem gambling reflecting social transition and traumatic childhood events among Greenland Inuit: A cross-sectional study in a large Indigenous population undergoing rapid change. *Journal of Gambling Studies*, 29, 733-748.
- Leung, K. C., Wong, I. L. K., Lau, K. M., & Yeung, S. C. (2010). Stress, health and coping resources of Chinese pathological gamblers' spouses. *Asian Journal of Gambling Issues and Public Health*, 1(1), 61-74.
- Liao, M. S. (2018). (rep.). *Asian Americans & Problem Gambling*. San Francisco, CA: NICOS Chinese Health Coalition.
- Loo, J. M., Tsai, J. S., Raylu, N., & Oei, T. P. (2014). Gratitude, hope, mindfulness and personal-growth initiative: Buffers or risk factors for problem gambling?. *PloS one*, *9*(2), e83889.
- MacDonald, C., & Steenbeek, A. (2015). The impact of colonization and western assimilation on health and wellbeing of Canadian Aboriginal people. *International Journal of Regional and Local History*, 10(1), 32-46.
- Mason, E. (2017). An ecological and life course analysis of binge drinking and problem gambling among Indigenous populations in Canada. (Master Thesis). Retrieved from University of Lethbridge database.
- Muckle, G., Chevalier, S., Boucher, O., Laflamme, D., & Rochette, L. (2007). *Alcohol, drug use and gambling among the Inuit of Nunavik: epidemiological profile*. Institut national de santé publique du Québec & Régie régionale de la santé et des services sociaux Nunavik.
- Ortiz, V., Cain, R., Formica, S. W., Bishop, R., Hernández, H., & Lama, L. (2021). Our Voices Matter: Using Lived Experience to Promote Equity in Problem Gambling Prevention. *Current Addiction Reports*, 8(2), 255–262.

- Papineau, É. (2010). Gambling Problems in First Nations and Inuit Communities of Québec: A Brief Status Report. Institut national de santé publique du Québec.
- Papineau, É. (2005). Pathological gambling in Montreal's Chinese community: An anthropological perspective. *Journal of Gambling Studies*, 21(2), 157-178.
- Scull, S., & Woolcock, G. (2005). Problem gambling in non-English speaking background communities in Queensland, Australia: A qualitative exploration. *International Gambling Studies*, 5(1), 29-44.
- Shek, D. T., & Sun, R. C. (2012). The Project PATHS in Hong Kong—Lessons learned and implications for positive youth development programs. *The Scientific World Journal*, 2012.
- Shek, D., & Lee, J. J. (2010). Prevention of problem gambling in Chinese adolescents: Relevance of problem gambling assessment and positive youth development frameworks. *International Journal of Adolescent Medicine and Health*, 22(1), 139–151.
- Shum, M., Sun, W., & Ye, G. (2013). Superstition and 'Lucky' Apartments: Evidence from Transaction– Level Data. SSRN Electronic Journal.
- Subramaniam, M., Abdin, E., Shahwan, S., Vaingankar, J. A., Picco, L., Browning, C. J., ... & Chong, S. A. (2015). Culture and age influences upon gambling and problem gambling. *Addictive Behaviors Reports*, 1, 57-63.
- Tang, C. S.-kum, & Wu, A. M. (2012). Gambling-Related Cognitive Biases and Pathological Gambling Among Youths, Young Adults, and Mature Adults in Chinese Societies. *Journal of Gambling Studies*, 28(1), 139–154.
- Tao, V. Y., Wu, A. M., Cheung, S. F., & Tong, K. K. (2010). Development of an Indigenous Inventory GMAB (Gambling Motives, Attitudes and Behaviors) for Chinese Gamblers: An Exploratory Study. Journal of Gambling Studies, 27(1), 99–113.
- Van der Maas, M. (2016). Problem gambling, anxiety and poverty: an examination of the relationship between poor mental health and gambling problems across socio-economic status. *International Gambling Studies*, 16(2), 281-295.
- Weng, P.-S. (2018). Lucky issuance: The role of numerological superstitions in irrational return premiums. *Pacific-Basin Finance Journal*, 47, 79–91.
- Whiteside, M., Heyeres, M., Maltzahn, K., Griffin, T., & MacLean, S. (2020). Intervening in Indigenous Gambling: A Systematic Review of the Literature. SAGE Open, 10(3), 2158244020947441.
- Williams, R. J., Belanger, Y. D., & Prusak, S. Y. (2016). Gambling and problem gambling among Canadian urban Aboriginals. *The Canadian Journal of Psychiatry*, 61(11), 724-731.
- Williams, R. J., Belanger, Y. D., Leonard, C. A., Stevens, R. M., Christensen, D. R., El-Guebaly, N., ... & McGrath, D. S. (2021a). Indigenous Gambling and Problem Gambling in Canada. *Journal of Gambling Studies*, 1-19.

- Williams, R. J., Leonard, C. A., Belanger, Y. D., Christensen, D. R., El-Guebaly, N., Hodgins, D. C., ... & Stevens, R. M. (2021b). Predictors of gambling and problem gambling in Canada. *Canadian Journal of Public Health*, 112(3), 521-529.
- Wu, A. M. S., Tao, V. Y. K., Tong, K.-kit, & Cheung, S. F. (2012). Psychometric evaluation of the inventory of Gambling Motives, Attitudes and Behaviours (GMAB) among Chinese gamblers. *International Gambling Studies*, 12(3), 331–347.
- Yang, Z. (2011). "Lucky" numbers, unlucky consumers. The Journal of Socio-Economics, 40(5), 692-699.
- Young, M. M., Sztainert, T., & Santoro, M. (2010). The treatment and prevention of problem gambling in Ontario ethno-cultural communities.
- Yu, L., & Ma, C. M. S. (2019). Youth gambling in Hong Kong: prevalence, psychosocial correlates, and prevention. *Journal of Adolescent Health*, 64(6), S44-S51.
- Zheng, W. Y., Walker, M., & Blaszczynski, A. (2011). Mahjong and problem gambling in Sydney: An exploratory study with Chinese Australians. *Journal of Gambling Issues*, (25), 24-35.

Appendix A: Methodological Details

The literature review included a collection of grey documents and peer-reviewed sources on gambling among Chinese, South Asian, and Indigenous people. Peer-reviewed academic articles were identified online using Google Scholar, as well as the Carleton University and Ryerson University digital libraries. Articles were identified using a Boolean keyword search strategy. For example, "Indigenous" AND "gambling" was used to locate peer-reviewed articles that discussed Indigenous Peoples and gambling. All of the reviewed articles were published within the past 15 years and included English-only sources. In total, 50 peer-reviewed and 8 grey sources are included in this literature review.

Article Breakdown		
	Peer Reviewed	Grey
Chinese	25	1
South Asian	4	0
Indigenous	16	6
Not community-specific	5	1

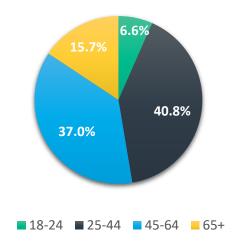
Two focus groups and three one-on-one interviews were conducted with participants recruited from five different community organizations operating in Ontario. We would like to thank [list] for their support. The average length of each interview was approximately 45 minutes and participants were given an honorarium for their time. Responses were transcribed verbatim; however, any identifying information was anonymized. From the Chinese community, there were two participants between the ages of 45-60. Three South Asian people participated, between the ages of 30 and 60. Finally, we spoke with six Indigenous People from various age groups: one elder, two adults, and three young adults. Each discussion was moderated by a member of RGC's research team.

The survey included 900 Ontarian gamblers (473 Chinese people, 344 South Asian people, and 83 Indigenous/Métis people) over the age of 18 and was carried out in August of 2021. Of these, over half of respondents are male (63.6%) and just over one third (35.8%) are female (0.6% identified as 'Other'). Respondents were recruited by Delvinia, an online survey vendor located in Toronto, Ontario. In order to target these communities, the survey was translated into Simplified and Traditional Chinese, Punjabi, Hindi, and Tamil. The survey took approximately 10—15 minutes for respondents to complete.

Appendix B: Survey Demographics

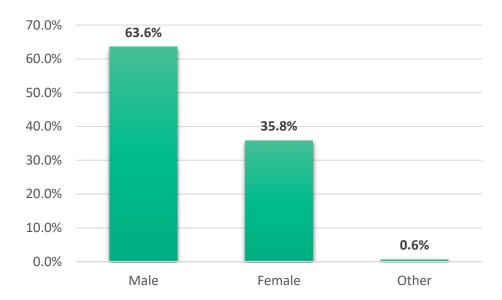
Among survey respondents, 6.6% are between the ages of 18 and 24, 40.8% are between the ages of 25 and 44 and 52.7% are 44 or older (Figure 1). Broken down by community group, of Chinese respondents, 3.6% are between 18 and 24, 31.1% are between 25 and 44, 45.7% are between 45 and 64, and 19.7% are older than 65; of South Asian respondents, 9.6% are between the ages of 18 and 24, 57.8% are between the ages of 25 and 44, 23.3% are between 45 and 64, and 9.3% are older than 65; of Indigenous respondents 10.8% are between the ages of 18 and 24, 25.3% are between the ages of 25 and 44, 44.6% are between the ages of 45 and 64, and 19.3% are older than 65.

Figure 1: Age Distribution



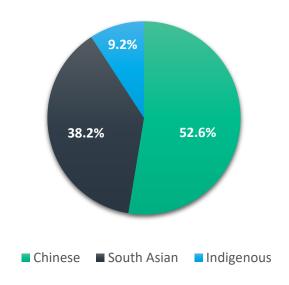
In terms of gender, over half of respondents are male (63.6%) and just over one third (35.8%) are female (0.6% identified as 'Other'; Figure 2). Among the Chinese and South Asian samples the majority of survey respondents are male (67.7% for Chinese and 63.1% for South Asian). Indigenous respondents were more evenly distributed with 42.2% male and 53% female respondents.

Figure 2: Gender Distribution



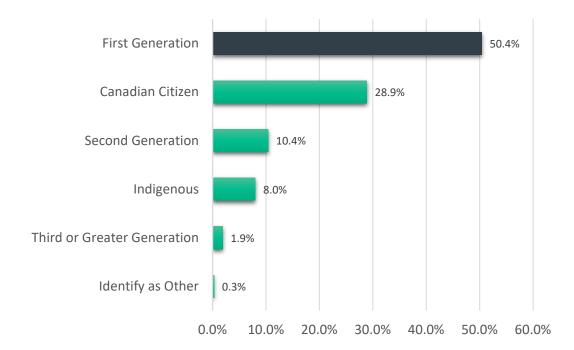
Just over half (52.6%) of those surveyed identify as Chinese, nearly 40% (38.2%) identify as South Asian, and 9.2% identify as Indigenous (Figure 3).

Figure 3: Self-Reported Identity



When asked about immigration status, approximately half (50.4%) of respondents identify as first generation immigrants, meaning they were born outside of Canada (Figure 4). There was a similar split between first and second generation immigrants for Chinese and South Asian respondents (56% first generation and 11.8% second generation among Chinese respondents and 54.7% first generation and 10.5% second generation immigrants among South Asian respondents).

Figure 4: Immigrant Self-Identity



Appendix C: Gambling Behaviour and Experience across Groups

When asked what form of gambling survey respondents typically engaged in over the past 16 months (during the pandemic), the vast majority (80.3%) indicated that they have gambled online (Figure 5). This is a notable level, considering less than half (47.9%) of respondents in RGC's survey of adult gamblers in the province broadly reported gambling online prior to the COVID-19 pandemic (Figure 6). When looking at community groups, 88.4% of South Asian gamblers, 76.1% of Chinese gamblers, and 71.1% of Indigenous gamblers reported that they gambled online in the past 16 months. When looking at online gambling participation before March 2020, 58.7% of South Asian gamblers, 42.2% of Indigenous gamblers, and 41% of Chinese gamblers reported that they gambled online.

Figure 5: Online Gambling (Past 16-Months)

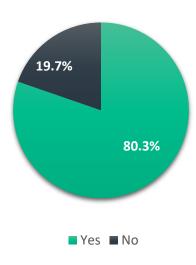
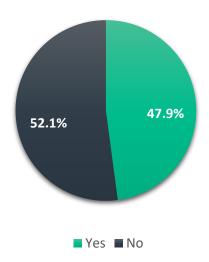
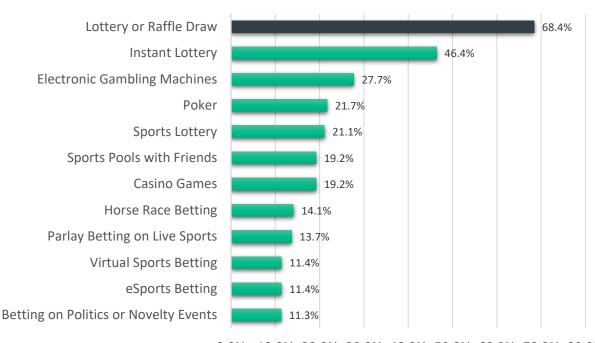


Figure 6: Pre-COVID-19 Online Gambling among Adult Gamblers (Before March 2020)



Of those who reported to have gambled online over the past 16 months, the most popular forms of gambling were lottery or raffle draw (68.4%) followed by instant lottery (46.4%; Figure 7). For all three community groups the most popular forms of gambling were lottery or raffle draw (67.7% Chinese people, 57.8% Indigenous people, 72.1% South Asian people), instant lottery (34.5% Chinese people, 41% Indigenous people, 64.2% South Asian people), and EGMs (20.9% Chinese people, 27.7% Indigenous people, 36.9% South Asian people).

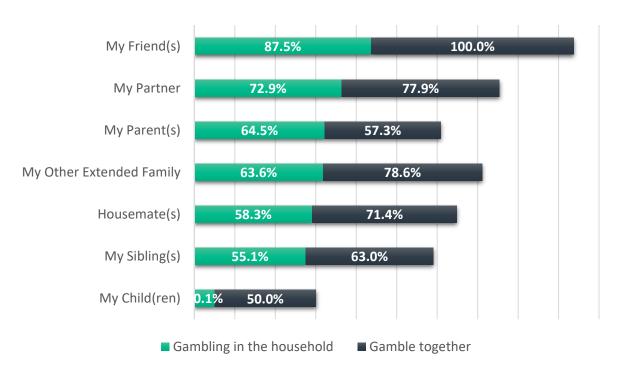
Figure 7: Online Gambling Activities (Past 16-Months)



0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0% 80.0%

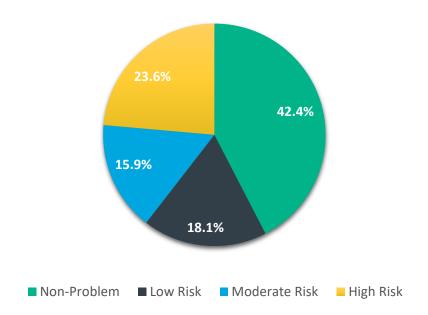
Survey respondents were asked about their living situation and if they live with others. This was done to learn more about who in their household gambles and if the respondent gambles with them. Of those who reported living with their friend(s) (n=8), the vast majority (87.5%) indicated that their friend(s) gamble (Figure 8). Of importance is that of those who indicated that their friend(s) gamble, 100% reported that they gamble with their friend(s). Of those who live with a partner (n=576), nearly three quarters 72.9% reported that their partner gambles and over three quarters gamble with their partner (77.9%; Figure 8). Broken down by community group, 77.2% of Chinese respondents, 78.7% of South Asian respondents, and 77.9% of Indigenous respondents gamble with their partner. Looking outside of the immediate family, 75% of Chinese respondents, 83.3% of South Asian respondents, and 75% of Indigenous respondents gamble with their extended family.





Gambling risk was measured using the Problem Gambling Severity Index (PGSI). Overall, almost one quarter (23.6%) of respondents screened as high risk gamblers (Figure 9). Among Chinese respondents, 18.6% screened as high risk and 12.3% as moderate risk, among South Asian respondents, 32.3% screened as high risk and 20.1% screened as moderate risk, and among Indigenous respondents, 15.7% screened as high risk and 19.3% screened as moderate risk.

Figure 9: Problem Gambling Severity Index (PGSI)



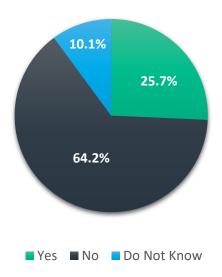
Gambling harm was measured using the Short Gambling Harms Screen (SGHS). The average number of harms experienced was 2.1. Nearly one third (30.4%) of respondents indicated that they had less spending on recreational expenses as a result of their gambling (Figure 10). Over one quarter of respondents indicated that they had regrets that made them feel sorry about gambling (27.2%), a reduction of savings, (26.9%), and/or a reduction of available spending money (26.4%). For all three groups, the top four harms experienced were less spending on recreational expenses (27.5% of Chinese respondents, 35.5% of South Asian respondents, and 26.5% of Indigenous respondents), had regrets that made me feel sorry about my gambling (24.5% of Chinese respondents, 32% of South Asian respondents, and 22.9% of Indigenous respondents), reduction of savings (24.3% of Chinese respondents, 31.7% of South Asian respondents, and 21.7% of Indigenous respondents), and reduction of available spending money (23% of Chinese respondents, 31.1% of South Asian respondents).

Figure 10: Short Gambling Harms Screen (SGHS)



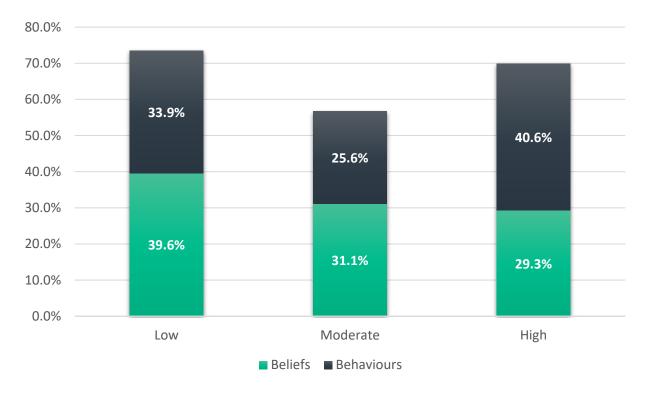
Approximately one quarter (25.7%) of respondents have a family member or a personal relation who has experienced gambling problems (Figure 11). Further, looking at community groups, 15.9% of Chinese respondents, 26.7% of South Asian respondents, and 19.3% of Indigenous respondents have been negatively impacted by someone close to them who has experienced problems with their gambling.

Figure 11: Family or Personal Relation Who Has Experienced Gambling Problems



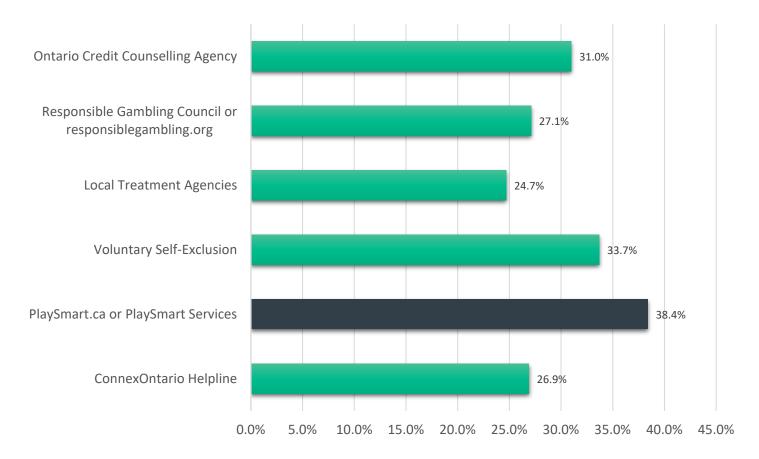
The Positive Play Scale was used to understand respondents' responsible gambling behaviours and beliefs over the previous year (Figure 12). Approximately 40% of respondents scored high on positive behaviours and nearly one third scored high on positive beliefs. It is interesting to note that nearly 40% of respondents scored low on positive beliefs. Broken down by community group, 29.6% of Chinese respondents scored low in beliefs and 31.3% scored low in behaviours, 57% of South Asian respondents scored low in beliefs and 40.7% scored low in behaviours, and 24.1% of Indigenous respondents scored low in beliefs and 20.5% scored low in behaviours.

Figure 12: Positive Play Scale



Overall, awareness of player support services was weak. The service with the highest level of awareness was Ontario Lottery and Gaming Corporation's (OLG) PlaySmart.ca and PlaySmart services with 38.4% of respondents being aware of what this is (Figure 13). This was followed by the Voluntary Self-Exclusion Program (VSE) with 33.7% of respondents being aware of this service and Ontario Credit Counselling Agency with 31% of respondents reporting awareness of this service. Chinese respondents were most aware of PlaySmart Centres (31.5% reported being very or somewhat aware) and self-exclusions programs (29.8% reported being very or somewhat aware). South Asian respondents were most aware of PlaySmart Centres (45.6% reported being very or somewhat aware) and an Ontario credit counselling agency (41.9% reported being very or somewhat aware). Indigenous respondents were also most aware of PlaySmart Centres (48.2% reported being very or somewhat aware) and an Ontario credit counselling agency (45.8% reported being very or somewhat aware).

Figure 13: Awareness of Player Support Services



When asked if respondents have felt they could benefit from additional information or support nearly 40% (39.1%) strongly agree or agree that they could benefit from learning about their odds of winning a particular game (Figure 14). Over one third of respondents indicated that they could benefit from strategies for keeping gambling fun (38%) and how to manage time and money spent gambling (34.8%). For Chinese respondents, the most common response was learning about their odds of winning a particular game with 33.4% strongly agreeing or agreeing. For South Asian respondents and Indigenous respondents, the most common response was strategies for keeping gambling fun (49.4% of South Asian and 34.9% of Indigenous respondents reporting strongly agree or agree).

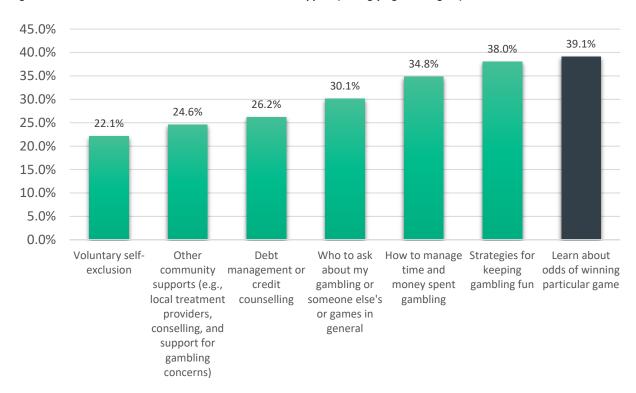
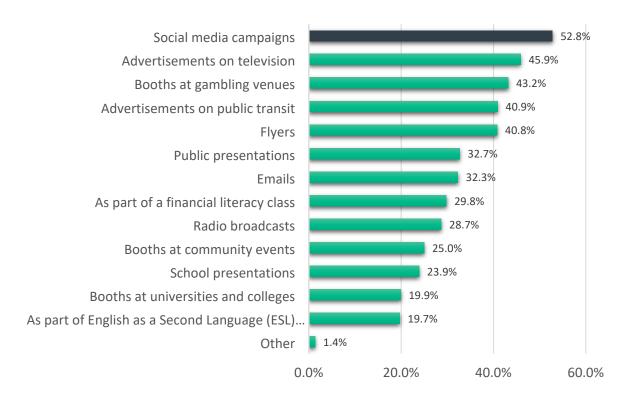


Figure 14: Perceived benefit of additional information or support (Strongly Agree or Agree)

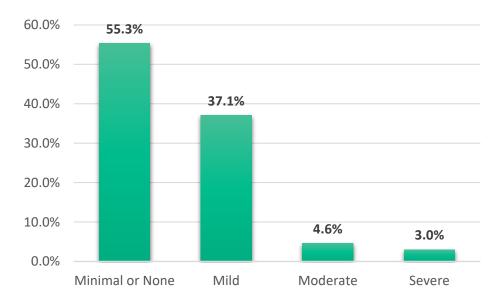
When asked what methods of message delivery would be most effective the most popular methods were social media campaigns (52.8%), advertisements on television (45.9%), and booths at gambling venues (43.2%; Figure 15). For Chinese respondents, the most common responses were social media campaigns (51%), advertisements on television (47.8%), and booths at gambling venues (42.1%). For South Asian respondents, the most common responses were social media campaigns (52%), flyers (45.6%), and advertisements on public transit (40.7%). For Indigenous respondents the most common responses were social media campaigns (66.3%), booths at gambling venues (62.7%), and advertisements on television.



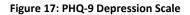


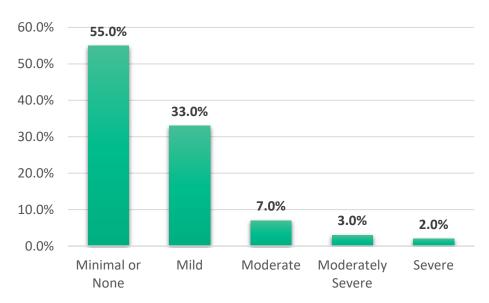
The Generalized Anxiety Disorder (GAD) -7 Scale was used to assess anxiety among respondents. The vast majority (92.4%) of respondents reported having mild to no anxiety (Figure 16). Broken down by community group, 4.8% of Chinese respondents, 9.6% of South Asian respondents, and 14.4% of Indigenous respondents screened as having moderate or severe anxiety.

Figure 16: GAD-7 Anxiety Scale



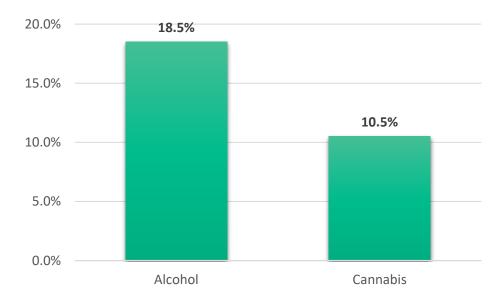
The Patient Health Questionnaire (PHQ) – 9 Scale was used to assess depression among respondents. Similar to anxiety, the vast majority (88%) of respondents had mild to no symptoms of depression. Broken down by community group, 3.0% of Chinese respondents, 6.4% of South Asian respondents, and 10.8% of Indigenous respondents screened as having moderately severe or severe depression.





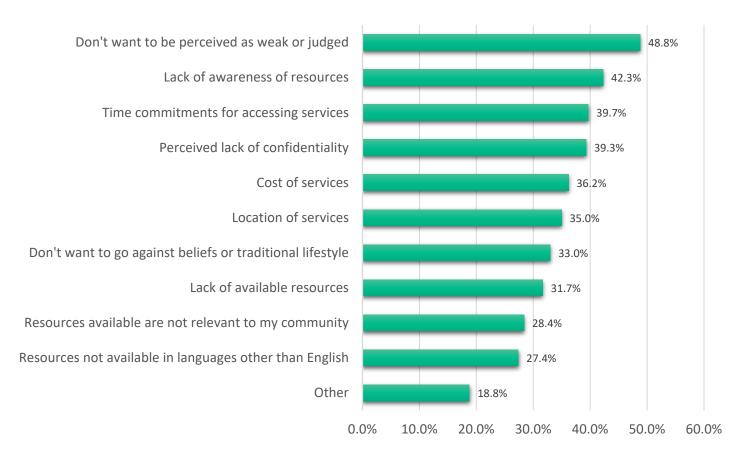
Respondents were asked if they had gambled under the influence of alcohol or cannabis in the past year. Nearly one fifth of respondents (18.5%) reported gambling under the influence of alcohol and 1 in 10 reported gambling under the influence of cannabis. Of Chinese respondents, 11.9% reported gambling under the influence of alcohol and 4.4% under the influence of cannabis. Of South Asian respondents, 27.0% reported gambling under the influence of alcohol and 16.4% under the influence of cannabis. Lastly, 15.3% of Indigenous respondents reported gambling under the influence of cannabis.

Figure 18: Intoxicated Online Gambling



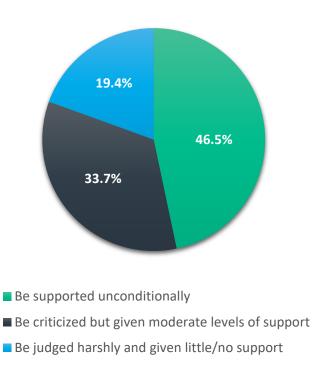
The most common barriers for seeking help were not wanting to be perceived as weak or judged (48.8%), a lack of awareness of resources (42.3%), time commitments for accessing services (39.7%), and a perceived lack of confidentiality (39.3%; Figure 19). Across community groups not wanting to be perceived as weak or judged was the most common barrier (51.3% of Chinese respondents, 53.5% of South Asian respondents, and 69.7% of Indigenous respondents). For Chinese gamblers, the second and third most common barriers were a lack of awareness of resources (44.7%) and time commitments for accessing services (41.0%). For South Asian gamblers, time commitments for accessing services (49.5%) was the second most common barrier and a perceived lack of confidentiality (49.2%) was the third most common. For Indigenous gamblers, the location of services (56.0%) and lack of awareness of resources (52.0%) were the second and third most common barriers.





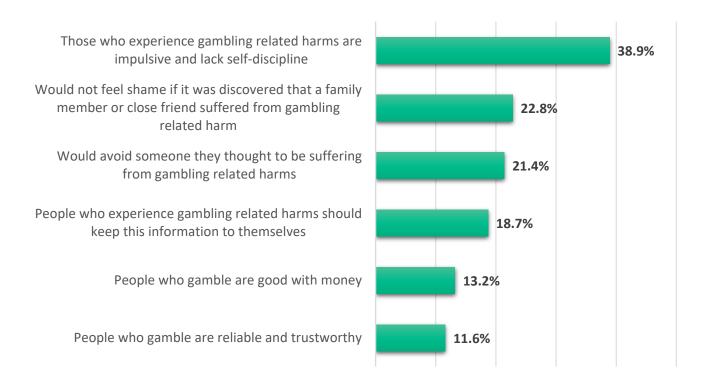
Similar to barriers for seeking help, gamblers may be hesitant to seek help due to the reaction they may have from their family. Just less than half (46.5%) of respondents reported that they would be supported unconditionally by their families (Figure 20). When looking at groups, 41.5% of Chinese respondents, 49.1% of South Asian respondents, and 63.8% of Indigenous respondents strongly agree or agree that they would be supported unconditionally by their families. Nearly one fifth (19.4%) of respondents reported that they would be judged harshly and given little or no support by family if they told their family or if their family found out about their gambling habits. Again, looking at groups, 16.5% of Chinese respondents, 24.1% of South Asian respondents, and 15.6% of Indigenous respondents strongly agree or agree that they would be judged harshly and given little or no support by family.





Similarly, respondents were asked how people in their community may respond to someone having gambling related harms. Nearly 40% of respondents think that people in their community believe that those who experience gambling related harms are impulsive and lack self-discipline. When broken down by community, 51.4% of Chinese respondents, 37.1% of South Asian respondents, and 11.5% of Indigenous respondents think people in their community believe those who experience gambling related harms are impulsive and lack self-discipline.

Figure 21: Beliefs about Gambling Related Harms in your Community (Strongly Agree or Agree)



Gambling Risk and Harm

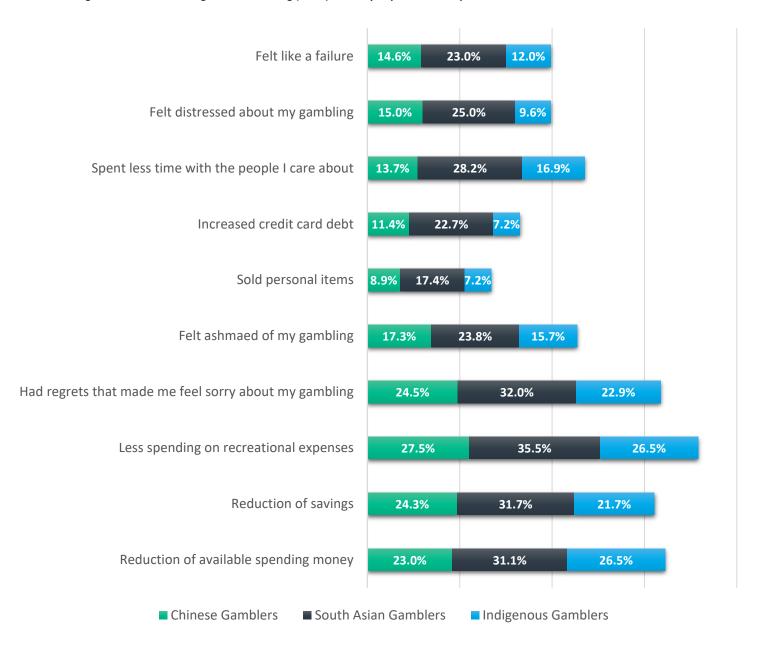
When comparing PGSI scores across populations, South Asian gamblers were significantly more likely to be moderate risk and high risk (1.6- and two-times the odds of Chinese and Indigenous gamblers).

Figure 22: Problem Gambling Risk (PGSI) by Population Groups



As with problem gambling risk (PGSI), South Asian gamblers were significantly more likely to experience each of the gambling harms listed in the SGHS (on average this group experienced 2.7 harms compared to 1.8 harms on average experienced by Chinese respondents and 1.6 by Indigenous respondents) with increased credit card debt and spending less time with people cared about featuring the highest odds (over 2.3-times Chinese and Indigenous gamblers; Figure 23). In addition, South Asian gamblers were far more likely to report negative personal impacts from other's gambling problems (28.4%, 1.87 times the odds of other groups), and often indicating these people were spouses (26%), sisters (10.4%), or a classmate (9.4%).

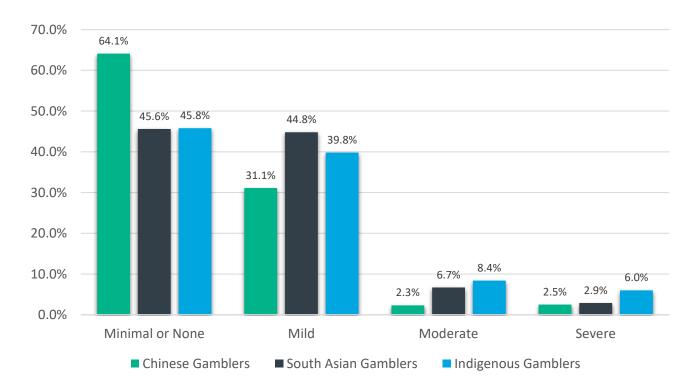
Figure 23: Short Gambling Harms Screening (SGHS) Items by Population Groups



Mental Health and Substance Use

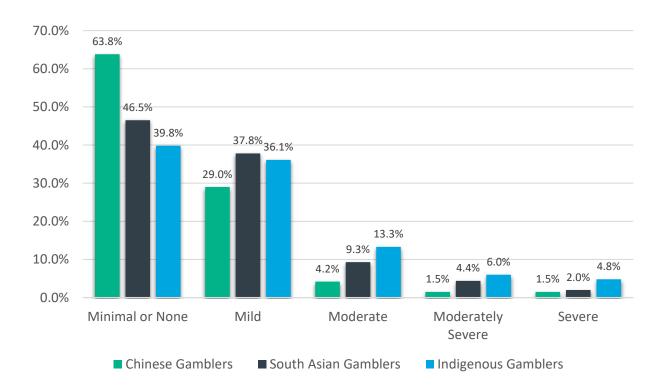
Mental health comorbidities as well as intoxicated gambling varied between groups, with South Asian gamblers again emerging as the leading at-risk population. With regard to anxiety, South Asian gamblers reported over two-times the odds of moderate anxiety than Chinese and Indigenous gamblers. Chinese respondents displayed over two-times the likelihood of minimal or no anxiety on the GAD-7 scale.

Figure 24: Population Groups by Anxiety Symptomatology



A similar pattern emerged for groups screened for depression severity. South Asian gamblers reported a significantly higher likelihood of moderate depression (over 1.5-times that of other groups). However, Indigenous respondents noted even higher odds (2.25-times) of moderate depression. Chinese respondents again reported over two-times the likelihood of minimal or no depression.

Figure 25: Population Groups by Depression Symptomatology



Finally, intoxicated gambling was significantly higher in the South Asian sub-sample. This population reported 2.6-times and 2.98-times the odds of intoxicated online gambling under the influence of alcohol (27%) and cannabis (16.4%), respectively.

Figure 26: Population Groups by Intoxicated Online Gambling

