



QUEBEC FIRST NATIONS REGIONAL HEALTH SURVEY - 2008

Chapter 9 Alcohol, drugs and gambling



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Thanks

We thank all those who helped prepare this portrait of the health status of First Nations of Quebec, especially all the respondents who participated within First Nations communities. We also thank all those who participated at all stages of the survey and in their realization.

Document also available in French titled: *Enquête régionale sur la santé des Premières Nations du Québec - 2008. Alcool, drogues et jeux de hasard.*

The masculine in this document is intended to lighten the text, and without prejudice against women.

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METHODOLOGICAL NOTE

Background

The First Nations Regional Health Survey (RHS) is a groundbreaking survey in the area of research by and for First Nations. Completely carried out by First Nations, it is an innovative endeavour with respect to the involvement of the communities in the process, ethics and cultural adaptation of research.

The RHS is the first research project to be carried out while completely respecting the principles of ownership, control, access and possession (OCAP). These principles aim to ensure the complete involvement of the First Nations communities in all of the steps of the research.

The governance and coordination of the RHS are ensured by the First Nations Information Governance Centre (FNIGC) at the national level and by the First Nations of Quebec and Labrador Health and Social Services Commission (FNQLHSSC) in Quebec.

This second wave of the RHS was preceded by the wave that took place in 2002 (first wave) as well as by a pilot project (1997). For the past 15 years, the RHS data has contributed to supporting the decision-makers and interveners while contributing to expanding the knowledge on the socio-sanitary situation of the First Nations. We plan on carrying out two phases following this one, which are phase 3 in 2013 and phase 4 in 2016.

1997	2002	2008	2013	2016
Pilot of the RHS Completed	Phase 1 of the RHS Completed	Phase 2 of the RHS Completed	Phase 3 of the RHS	Phase 4 of the RHS

Questionnaire

Three distinct questionnaires were created for three different age groups (children, youth, adults). These questionnaires were administered in person by 63 First Nations interviewers who were trained for this purpose. In order to prevent the error risks, data entry was performed by the interviewers during the interview using laptop computers. With respect to children less than 12 years of age, the questionnaire was administered to the parent or guardian. The following table summarises the themes addressed according to each age group.

Themes addressed in the 2008 RHS questionnaires

Themes	Children	Youth	Adults
	0 – 11 years	12 – 17 years	18 years and up
Vaccination	√		
Child care services	√		√
Demographic characteristics	√	√	√
Household characteristics	√	√	√
Education	√	√	√
Language and culture	√	√	√
Chronic diseases	√	√	√
Injuries	√	√	√
Dental care	√	√	√
Diabetes	√	√	√
Physical activity	√	√	√
Nutrition and traditional foods	√	√	√
Indian residential schools	√	√	√
Mental health		√	√
Community well-being		√	√
Smoking		√	√
Alcohol and drugs		√	√
Sexual health		√	√
Access to health care		√	√
Traditional medicine		√	√
Preventive health care			√
Housing			√
Natural caregivers			√
Depression			√
Migration			√
Employment and income			√
Gambling			√
Food security			√
Home care and limitations			√
Violence			√
State of health index			√

A total of 2 691 individual interviews were carried out (87.3% of the sampling that was initially anticipated).

0-11 years: 727 respondents (94.4% of the sampling initially anticipated).

12-17 years: 600 respondents (77.9% of the sampling initially anticipated).

18 years and up: 1 364 respondents (88.6% of the sampling initially anticipated).

Data collection period

The data collection unfolded from September 2008 to February 2010 among the 21 selected communities in the Quebec region.

Sampling

The RHS was carried out using a two-stage stratified sampling.

First stage: Classification of the communities from each nation according to their sizes among one of the following strata: small (between 75 and 299 residents); medium (between 300 and 1499 residents); large (1500 residents and up). The communities required at least 75 residents in order to be eligible. A random selection of the communities was then performed among each of the strata. With the goal of increasing statistical power, all of the large communities were invited to participate in the RHS. In the event that a stratum was represented by a single community of a given nation, it was automatically invited to participate in the survey.

Second stage: Breakdown of the populations of the selected communities according to eight strata established according to age and gender:

Stratum 1: 0-11 years/male;

Stratum 2: 0-11 years/female;

Stratum 3: 12-17 years/male;

Stratum 4: 12-17 years/female;

Stratum 5: 18-54 years/male;

Stratum 6: 18-54 years/female;

Stratum 7: 55 years +/male;

Stratum 8: 55 years +/female.

The individuals in each of the strata were randomly selected. This selection process was carried out using the band lists of each of the participating communities.

The number of respondents in the sampling was sufficient to allow for verifying the statistical significance of the results observed. As can be read among the survey's chapters, for the majority of the results observed, it is possible to apply the result observed in the sampling to the entire population with a margin of error of less than 5% or, depending on the case, less than 1%.

Communities participating in the 2008 RHS

Nation (8)	Size	Community (21)	Sampling	Population	% of the pop. interrogated
Abenaki	Medium	Odanak	50	309	16.2%
Algonquin	Large	Kitigan Zibi	122	1535	7.9%
		Lac Simon	174	1403	12.4%
	Medium	Pikogan	95	567	16.8%
		Timiskaming	86	604	14.2%
		Eagle Village	55	261	21.1%
Atikamekw	Large	Manawan	167	2122	7.9%
		Opitciwan	183	2117	8.6%
	Medium	Wemotaci	118	1307	9.0%
Hurons-Wendat	Medium	Wendake	111	1332	8.3%
Innus	Large	Betsiamites	252	2848	8.8%
		Mashteuiatsh	183	2022	9.1%
		Uashat Mak Mani-Utenam	246	3080	8.0%
	Medium	Matimekush-Lac John	87	729	11.9%
		Natashquan	128	916	14.0%
		Pakua Shipi	50	314	15.9%
	Small	Unamen Shipu	96	1016	9.4%
		Essipit	38	177	21.5%
Mi'gmaqs	Large	Listuguj	220	2000	11.0%
	Medium	Gesgapegiag	72	608	11.8%
Mohawks	Medium	Kanesatake	94	1328	7.1%
Naskapis	Medium	Kawawachikamach	64	614	10.4%
Total			2691	27209	9.9%

Weighting

All of the data presented in the RHS was weighted in order to provide an estimate with respect to the total First Nations population of Quebec living in the communities.

Representation limits for the Mohawk Nation

Even though the Mohawk Nation in Quebec is made up of Kahnawake, Kanesatake and part of Akwesasne, the only community that participated in the RHS is Kanesatake. Regarding the community of Akwesasne, it was excluded from the sampling plan for the Quebec region because of the fact that the majority of its residents reside on the Ontario side of the provincial border. As for the community of Kahnawake where most of the Mohawk population of Quebec resides, it opted not to participate in the RHS. For these reasons, it is impossible to produce estimates that can be applied to the entire Mohawk Nation of Quebec.

Geographic zone

Some of the RHS data is presented according to geographic zone. This refers to the degree of isolation of the respondents' communities. The degree of geographic isolation is based on a zone system developed by Aboriginal Affairs and Northern Development Canada (AANDC).

Zone 1: The community is located less than 50 km from a service centre with year-round road access.

Zone 2: The community is located between 50 km and 350 km from a service centre with year-round road access.

Zone 3: The community is located over 350 km from a service centre with year-round road access.

Zone 4: The community has no year-round road access to a service centre.

Service centre: The nearest location where the community members must go in order to access service providers, banks and governmental services.


HIGHLIGHTS

Alcohol

- Based on the *Regional Survey on the Health of First Nations of Quebec, 2008* (RHS 2008), 68.2% of respondents aged 12 and up declared that they have had an alcoholic beverage over the year before the survey, a declining trend compared to 72.4% in 2002. Men and women consume alcohol in similar proportions.
- Adults aged 18-34 have the highest proportion of individuals who consume alcohol (84.6%), followed by youths aged 15-17 (71.6%). The latter group is less likely to consume alcohol in 2008 compared to 2002 (81.7%).
- The number of daily alcohol consumers increases with age and household income.
- Men are more likely than women to consume alcohol on a daily basis.
- More than half of respondents (55.2%) say that they have abused alcohol at least once over the year before the survey, 40.4% of which at least once per month.
- Men, individuals aged 18-54, those living in a zone 4 and those with a household income in the lowest or highest range say that they have abused alcohol in a higher proportion.

Drugs

- Based on RHS 2008, 37.2% of respondents aged 12 and up say that they have taken drugs over the year before the survey, with men having a higher proportion than women (43.6% vs. 30.8%).
- Individuals aged 15-34 have the highest proportion when it comes to using drugs (over 50%).
- Drug use is associated with low income, not having a high-school diploma or living in a more remote area.
- In 2008, the most commonly-used types of drugs were cannabis, cocaine and amphetamines. Cocaine has gained in popularity, from 9.7% of users in 2002 to 16.6% in 2008.
- Individuals aged 15-34 are the largest consumers of cannabis and cocaine.
- Between 2002 and 2008, among youths aged 12-17, a slight decrease in cannabis use is noted, but also an increase in cocaine use.
- The use of cocaine is much less widespread in zone 4.
- Cannabis is used primarily on a daily basis, while cocaine is used on an annual basis.

- 
- Amongst youths aged 15-17 who are using cannabis, 38.4% do so every day. Amongst those who use cocaine, 22.5% do so on a weekly or daily basis.
 - In youths aged 12-17 who use drugs, there was an increase in the daily use of cannabis and cocaine between 2002 and 2008.

Gambling

- The RHS 2008 shows that 68.4% of adult respondents have already gambled in their life.
- The proportion of women who have already gambled is higher than that of men (74.0% versus 62.8%).
- Seventeen percent (16.8%) of adult respondents have already borrowed money to gamble.
- Twelve percent (12.1%) have already gambled more than they could afford.
- Eight percent (8.4%) have already experienced personal or financial issues due to gambling.

Psychosocial factors related to substance abuse

- There are generally more alcohol and drug users amongst respondents with mental health issues or who have suffered some traumatism (violence, abuse, foster care).

Cumulation of risk behaviours

- In 2008, 33.6% of respondents aged 12 and up say that they have used both alcohol and drugs over the year before the survey, with men having a higher proportion than women.
- Youths are the most affected; with half of the respondents aged 18-34 and one third of the respondents aged 12-17 who have adopted both behaviours.

Use of services

- Forty two percent (42.4%) of adult respondents used the NNADAP services over the year before the survey. Of that number, 70% were satisfied or very satisfied.
- Seventeen percent (17.4%) of all respondents aged 12 and up have already sought treatment for substance or alcohol abuse, with men having a higher proportion than women.
- Individuals living in a remote zone are more likely to have already sought treatment.
- Nearly a quarter of adults aged 35-54 and about one in five adults aged 18-34 have already sought treatment.

- Four percent of respondents aged 12 and up say that they have been admitted to a treatment facility over the year before the survey. Among them, there are twice as many men than women.
- The vast majority of individuals who were admitted are spread evenly between two age groups: 18-34 and 35-54.
- More individuals living in remote areas were admitted to a treatment facility.

SUMMARY

This chapter shows the results of the *Regional Survey on the Health of First Nations of Quebec, 2008* (RHS 2008) for alcohol, drugs and gambling. It also features the results for service availability and use. The proportion of people who consume alcohol is lower amongst First Nations compared to the rest of Quebec. However, alcohol and drug abuse is higher amongst First Nations. The results show that the situation is not improving, and is even deteriorating on some aspects. For both alcohol and drug abuse, risk groups appear: mainly men, youths and individuals with mental health issues or who have suffered some traumatism. Lastly, gambling is a behaviour which has already been adopted by the majority of adults, especially women.

¹ National Native Alcohol and Drug Abuse Program.

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INTRODUCTION

Psychotropic substances² and gambling have always been part of the human experience (Room, 2005; Anctil, 2008). Before the settlement, alcohol and other psychoactive substances were used by the first inhabitants in various areas of the world. The use of such substances was highly controlled and closely associated to rites and customs (AFN, 2007).

Nowadays, the worry caused by gambling and taking some psychotropic substances (alcohol, drugs) is due to the numerous social and health problems which can derive from them, especially if they become excessive or addictive.

There are common risk factors to First Nations from all over the world which contribute to develop addictions. These factors are stressors which can add up for the same individual: poverty, low level of education, unemployment, racism and unstable family (King, 2009). In a report written by the Aboriginal Healing Foundation in 2007, a key informant is quoted: "Identity, maltreatment or violence, abandonment and isolation are the four main causes for addictions." [Free translation] (Chansonneuve, 2007).

The First Nations of Quebec's health authorities are naturally concerned by drug addictions and the lack of resources to prevent and treat them.

"Addictions to alcohol, drugs, medication and gambling are a growing and very devastating threat for First Nations. These addictions have serious consequences on family life and health."

Quebec First Nations Health And Social Services Blueprint, 2007-2017.

Closing the gaps... Accelerating change

(FNQLHSSC, 2008)

This chapter shows the results of the *Regional Survey on the Health of First Nations of Quebec, 2008* (RHS 2008) for alcohol, drugs and gambling amongst Quebec First Nations. It also features the results for service availability and use. To establish time trends, some results from RHS 2008 are compared to the *Quebec Region First Nations Regional Longitudinal Health Survey, 2002* (RHS 2002). Lastly, comparisons are also made between the results for First Nations surveys and Quebec surveys.

² Substances which act on the central nervous system, modifying sensory perceptions, state of consciousness, intellectual functions or behaviour as a whole, whatever the effect is (depressive, stimulating or disruptive) (Government of Quebec, 2006).

³ <http://www.dependances.gouv.qc.ca/index.php?toxicomanie-en>

1. ALCOHOL

This section features the results on drinking (prevalence, frequency, alcohol abuse) globally and based on various characteristics of the population. Questions pertaining to drinking were asked to all respondents aged 12 and up.

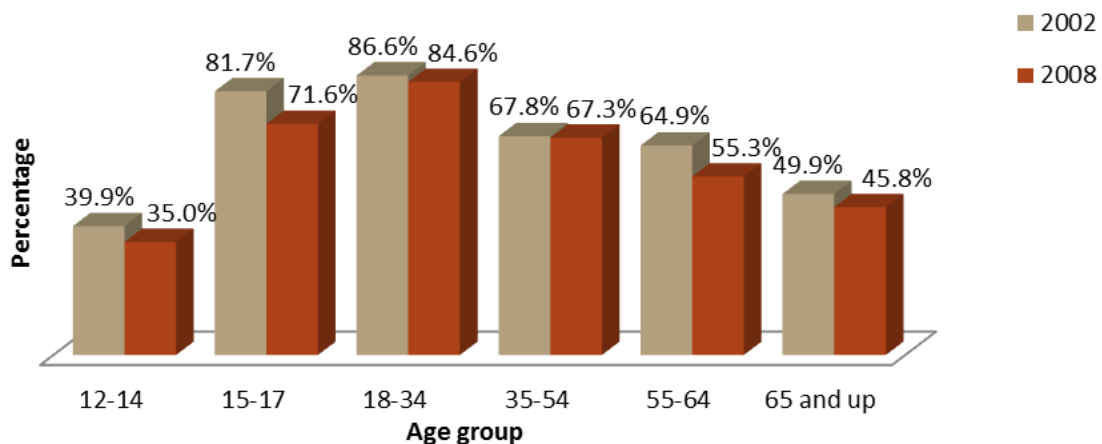
1.1 Global picture

More than two thirds (68.2%) of the respondents to the *Regional Survey on the Health of First Nations of Quebec, 2008* (RHS 2008) say that they have taken alcohol over the year before the survey, which is a non-statistically significant difference compared to 2002, where 72.4% had taken alcohol ($p < 0.05$). Similar proportions of men and women say that they have taken alcohol over the past year (68.2% vs. 68.1% respectively; $p > 0.05$).

There is a significant relation between alcohol and age ($p < 0.001$). The figure 1 shows that it reaches its peak with young adults aged 18-34 who have the highest proportion of drinkers (84.6%). Youths aged 15-17 are the second group with the largest number of drinkers (71.6%). As for non-drinkers, the highest proportions are in the 12-14 and 65 and up age groups (64.5% and 53.8% respectively).

The same trends were noticed for the RHS 2002, with a peak amongst youths aged 15-34. However, the number of youth drinkers aged 15-17 has decreased from 2002 to 2008, from 81.7% to 71.6% ($p < 0.0001$).

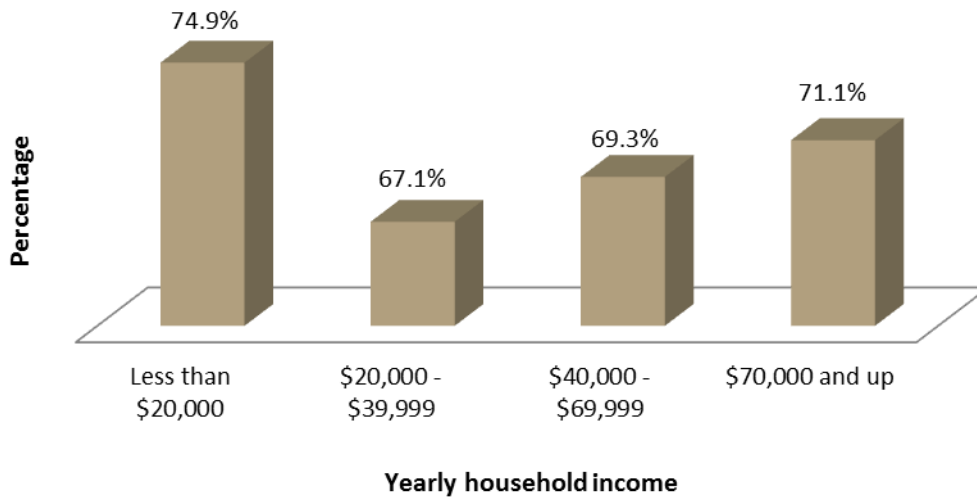
Figure 1: Alcohol consumption over the past 12 years based on age, comparison 2002/2008 (2002: N = 19,952; 2008: N = 22,729)



Note : In this chapter, all the "don't know" or "refused" answers are usually included in the divisor calculation.

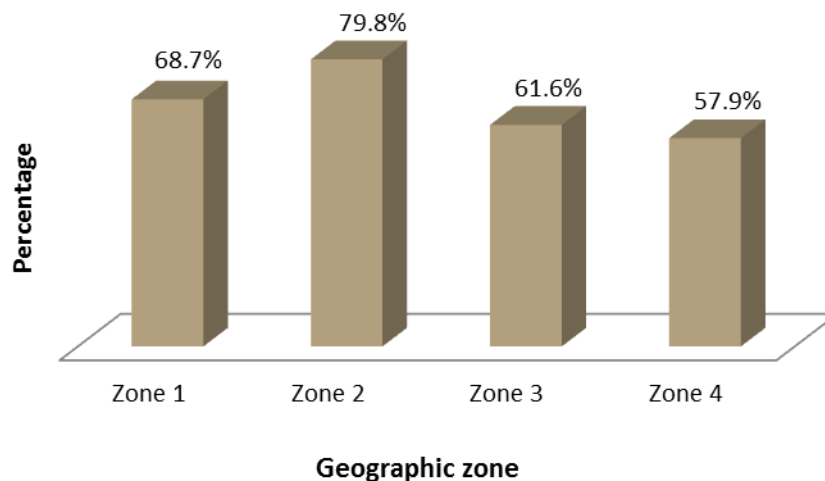
The analysis of consumption based on other socio-demographic factors helps identify various trends. The proportion of drinkers varies slightly based on household income (Figure 2). Thus, it is among adults with an annual household income under \$20,000 that are found most consumers; 75% of them have taken alcohol over the year before the survey. However, the statistical significance of that relation could not be verified due to the small size of the sample. As far as education goes, it has no statistically significant effect on alcohol consumption ($p > 0.05$).

Figure 2: Alcohol consumption over the last 12 months based on household income, adults 18 and up (N = 14,948)



However, alcohol consumption varies significantly based on the geographic zone of the community (zone) where respondents are established ($p < 0.0001$). Therefore, Figure 3 shows that nearly 80% of respondents aged 12 and up living in zone 2 have taken alcohol over the year before the survey, compared to less than 60% of those living in zone 4.

Figure 3: Alcohol consumption over the last 12 months based on geographic zone, adults 12 and up (N = 22,729)



1.2 Consumption patterns

In addition to the volume taken, alcohol consumption patterns determine its impacts on health. For instance, light to moderate drinking is associated to a lower risk of heart disease (Room, 2005), while excessive drinking (binge drinking) can lead to acute myocardial infarction (Flegel, 2011). The regional health survey addresses two patterns: the frequency of alcohol consumption and excessive alcohol consumption; the results in the next section depict consumers for these two.

1.2.1 Frequency of alcohol consumption amongst respondents

Amongst the respondents who said that they have taken alcohol over the past year, 15.5% said that they did it two or three times a year, 55.0% one to three times a month, 22.9% two to three times a week and 5.1% once a day. It should be noted that this does not specify the number of drinks⁴ taken on each occasion.

Figure 4: Frequency of alcohol consumption over the last 12 months based on geographic zone, adults 12 and up (N = 15,497)

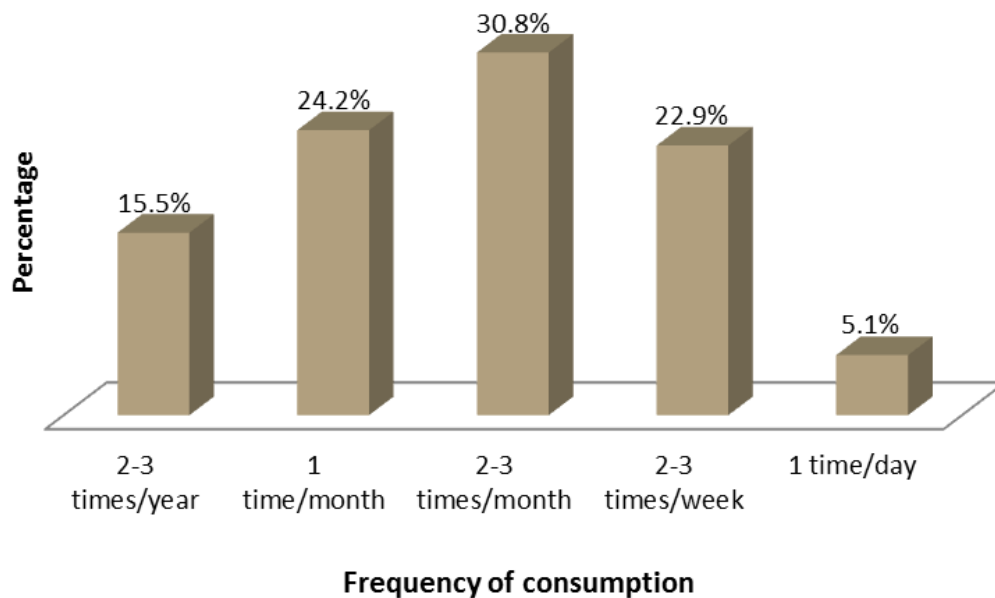


Table 1 shows that, amongst adult drinkers, the frequency of alcohol consumption has varied since 2002 ($p < 0.0001$). While the majority of drinkers take alcohol on a monthly basis, there is some increase in the weekly and daily consumption in 2008. However, comparisons cannot be made with the RHS 2002 survey for consumption frequency amongst all respondents, as that question was not asked to youths.

⁴ In Canada, a standard drink (one glass) contains 341 ml of beer, 142 ml of wine, 85 ml of fortified wine (eg.: port wine) or 43 ml of spirit (INSPQ, 2010).

Table 1: Frequency of alcohol consumption over the last 12 months, adults 18 and up, 2002/2008 comparisons

Frequency of alcohol consumption	Regional Health Survey (RHS) year			
	2002		2,008	
	n	%	n	%
2-3 times/year	2,508	20.3	1,852	13.8
1 time/month	2,563	20.8	3,167	23.6
2-3 times/month	4,129	33.5	4,265	31.8
2-3 times/week	2,442	19.8	3,173	23.7
One time/day	448	3.6	769	5.7
Don't know/Refused	253	2.0	167	1.2
TOTAL*	12,343	100.0	13,393	100.0

* Adding percentages can lead to a value slightly lower or higher than 100%. This is due to values being rounded.

The frequency of alcohol consumption varies based on gender ($p < 0.0001$), men drinking more frequently than women. According to RHS 2008, men are more likely than women to drink alcohol 2-3 times a week and once a day (25.4% vs. 20.4% and 8.5% vs. 1.7%). Women are more likely than men to drink only two or three times a year (19% vs. 12%).

Age has an impact on frequency ($p < 0.0001$). In fact, the proportion of people who drink alcohol on a daily basis increases with age, from none in the 12-14 years old group to 8.4% for adults aged 65 and up. Also, the weekly alcohol consumption first increases with age, from 10% in the 12-14 years old group to 28.1% for adults aged 35-54, then decreases. The majority (62.8%) of youths (age 12-14) who drink alcohol do so between 2-3 times a year and once a month.

While the statistical significance of household income on drinking frequency remains unclear, there are certain differences between income levels. Therefore, 9.8% of individuals with an annual income over \$70,000 say that they drink alcohol on a daily basis, 7% for those with an annual income under \$20,000, 5.3% for those with an annual income between \$20,000 and \$39,999 and 3.4% for those with an annual income between \$40,000 and \$69,999. In addition, individuals from richer households are less likely to drink on an annual basis (2.9% vs. around 15.0% for other income categories).

Consumption frequency varies based on education ($p < 0.05$). Table 2 shows that the daily use of alcohol increases with education. The weekly use of alcohol is higher amongst the respondents who have not completed high school and those with a college diploma (about 7%).

Table 2: Frequency of alcohol consumption over the last 12 months based on education, adults 18 and plus (N = 13,102)

Frequency of alcohol consumption	Incomplete DES†		DES†		DEC†		University education	
	n	%	n	%	n	%	n	%
2-3 times/year	1,032	15.5	318	9.9	303	18.8	138	8.4
1 time/month	1,637	24.6	702	22.0	309	19.2	435	26.6
2-3 times/month	2,015	30.3	1,274	39.8	430	26.7	489	29.8
2-3 times/week	1,380	20.7	770	24.1	441	27.4	514	31.4
One time/day	475	7.1	112	3.5	108	6.7	57	3.5
Don't know/Refused	112	1.7	25	0.8	21	1.3	5	0.3
TOTAL*	6,651	100.0	3,201	100.0	1,612	100.0*	1,638	100.0

* Adding percentages can lead to a value slightly lower or higher than 100%. This is due to values being rounded.

† DES: High-school diploma; DEC: College diploma

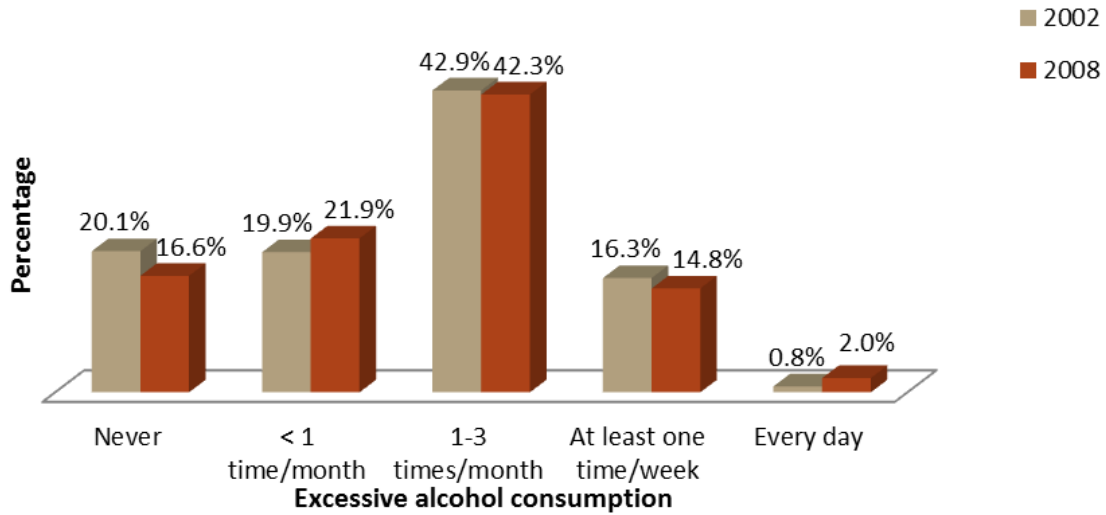
The geographic zone also has an impact on alcohol consumption ($p < 0.05$). Consequently, the weekly and daily consumption is higher for respondents living in zones 1 and 4 (31.7% and 32.2%) than that of respondents in zones 2 and 3 (23.7% and 18.1%).

1.2.2 Alcohol abuse

Alcohol abuse, defined as drinking five or more alcoholic beverages in one occasion, is associated to higher risks of myocardial infarction, violence, unprotected sex and accidents (INSPQ, 2010; Room, 2005; Flegel, 2011). More than half of respondents (55.2%) say that they have abused alcohol at least once over the year before the survey, 40.4% of which at least once per month. Alcohol abuse on a monthly basis (one to three times per month) seems to be more common, with nearly 30% of respondents.

Focusing strictly on drinkers, the majority (81%) say that they have abused alcohol over the past year. Alcohol abuse on a monthly basis is the most common, with 42.3% of drinkers who have exhibited such behaviour over the year before the survey. Change has occurred since RHS 2002, including a decrease in the proportion of respondents who say that they have never abused alcohol (20.1% vs. 16.6%), and an increase in those who do so on a daily basis (0.8% vs. 2.0%) ($p < 0.0001$).

Figure 5: Frequency of alcohol abuse over the last 12 months, adults 12 and up, 2002-2008 (2002, N = 14,040; 2008, N = 15,497)



Amongst drinkers, alcohol abuse varies significantly based on gender ($p < 0.0001$), men tending to exhibit that behaviour more frequently than women. In fact, 20.7% of men say that they have abused alcohol on a weekly or daily basis, compared to 12.9% of women. Conversely, there are more women than men who have never abused alcohol over the past year (19.4% vs.13.7%).

Age has an impact on alcohol abuse frequency ($p < 0.0001$). Amongst drinkers, the respondents aged 12-14 and 65 and up are the least likely to have already exhibited such behaviour (40.3% and 48.3% respectively). Conversely, the proportion of drinkers aged 18-64 say that they have abused alcohol on a weekly or daily basis is around 15% and 20%. Amongst youths 15-17, 13.7% say that they exhibit such behaviour on a weekly or daily basis.

Table 3: Frequency of alcohol abuse over the last 12 months based on age, drinkers 12 and up

Consumption frequency	Age group					
	12-14 (N = 497)	15-17 (N = 1,603)	18-34 (N = 5,846)	35-54 (N = 5,496)	55-64 (N = 1,296)	65 and up (N = 755)
	%	%	%	%	%	%
Never	40.3	15.4	10.9	13.0	31.0	48.3
<1 time/month	21.1	24.6	23.3	19.8	22.3	20.6
1-3 times/month	29.0	43.1	48.4	42.3	29.8	23.8
At least once a week	6.4	13.7	13.3	18.8	13.9	5.5
Every day	0.0	0.0	2.4	2.5	2.0	1.3
Don't know/refused	3.4	3.1	1.6	3.5	1.1	0.5
TOTAL*	100.0	100.0	100.0	100.0	100.0	100.0

* Adding percentages can lead to a value slightly lower or higher than 100%. This is due to values being rounded.

Education has a statistically significant impact on the frequency of alcohol abuse amongst drinkers aged 18 and up ($p < 0.05$). Alcohol abuse on a monthly basis (1-3 times per month) decreases with education, from 45.9% for individuals without a high-school diploma (DES) to 34.2% for those with university education. In addition, there are significantly more respondents with university education who abuse alcohol on a daily basis (3.8%; $p < 0.005$). As far as household income goes, its impact on alcohol abuse cannot be statistically established, considering the small sample size. However, there is an increasing trend in the weekly or daily abuse amongst drinkers with an annual income of \$70,000 or more (26.7%). The results also show that monthly consumption tends to decrease with income, from 46.9% for those with an annual income under \$20,000 to 37.3% for those earning \$70,000 or more.

Lastly, the level of community isolation has a significant impact on the frequency of alcohol abuse ($p = 0.0005$). Therefore, Table 4 shows that the absence of such behaviour is more frequent in less isolated communities, while alcohol abuse increases with isolation. It is also worth mentioning that the respondents from zone 4 are the least likely to abuse alcohol on a daily basis (0.4%).

Table 4: Frequency of alcohol abuse over the last 12 months based on geographic zone, consumers aged 12 and up (N = 15,497)

Consumption frequency	Zone							
	Zone 1		Zone 2		Zone 3		Zone 4	
	n	%	n	%	n	%	n	%
Never	1,715	18.1	438	14.1	143	11.3	119	9.9
<1 time/month	2,006	21.2	800	25.7	330	26.1	204	17.0
1-3 times/month	3,844	40.6	1,400	44.9	678	53.5	741	61.7
At least once/week	1,670	17.7	408	13.1	80	6.3	133	11.1
Every day	224	2.4	68	2.2	35	2.8	5	0.4
Don't know/Refused	1	0.0	1	0.0	1	0.0	0	0.0
TOTAL*	9,460	100.0	3,115	100.0	1,267	100.0	1,201	100.0


* Adding percentages can lead to a value slightly lower or higher than 100%. This is due to values being rounded.

1.3. Comparisons with Quebec

Comparing the RHS 2008 results with those of the general Quebec population, it is worth mentioning that there are less people who drink alcoholic beverages amongst First Nations compared to Quebecers. In fact, while 68.2% of First Nations say that they have taken alcohol over the past year, the Canadian Community Health Survey 2009-2010⁵ (CCHS 2009-2010) shows that 82.9% of Quebecers aged 12 and up have taken alcohol over the year before the survey (ISQ, 2011). As for First Nations, Quebec men say that they drink alcohol in a higher proportion than women (85.5% vs. 80.2%). In Quebec, youths also have the highest proportion of drinkers (92.5% for adults aged 18-24 and 87.4% for adults aged 25-44). For First Nations youths aged 12-17, they would be more likely than their Quebecer counterparts to have taken alcohol over the year before the survey (57.4% vs. 51.3%).

Differences between alcohol consumption can be observed between Quebec First Nations and the general Quebec population. In fact, the RHS 2008 and CCHS 2009-2010 results show that First Nations drink alcohol less frequently than the Quebec population. Therefore, amongst First Nations, monthly consumption dominates: 55% drink between one and three times per month, compared to 21.4% of Quebec drinkers (ISQ, 2011). Conversely, only 22.9% of First Nations consumers say that they drink alcohol on a weekly basis, compared to 61.8% of Quebec drinkers. The frequency of alcohol consumption bases on gender and age varies in similar ways amongst First Nations and the general Quebec population, with men drinking more often than women and older age groups drinking more often than younger groups.

⁵ CCHS does not include First Nations living on reserves.



Conversely, alcohol abuse seems to be more frequent amongst First Nations. In fact, 40.4% of First Nations aged 12 and up say that they have taken five or more alcoholic beverages on a single occasion at least 12 times over the past year, compared to 18.5% for the general Quebec population (ISQ, 2011). In Quebec, men seem to exhibit such behaviour twice as often compared to women (26.1% vs. 11.0%), a bigger difference than amongst First Nations (44.1% vs. 36.5%).

2. DRUGS

This section presents a picture of drug consumption amongst Quebec First Nations (prevalence, drug type, consumption frequency) in general and based on various demographic characteristics. Seven types of drugs were studied in the RHS 2008:

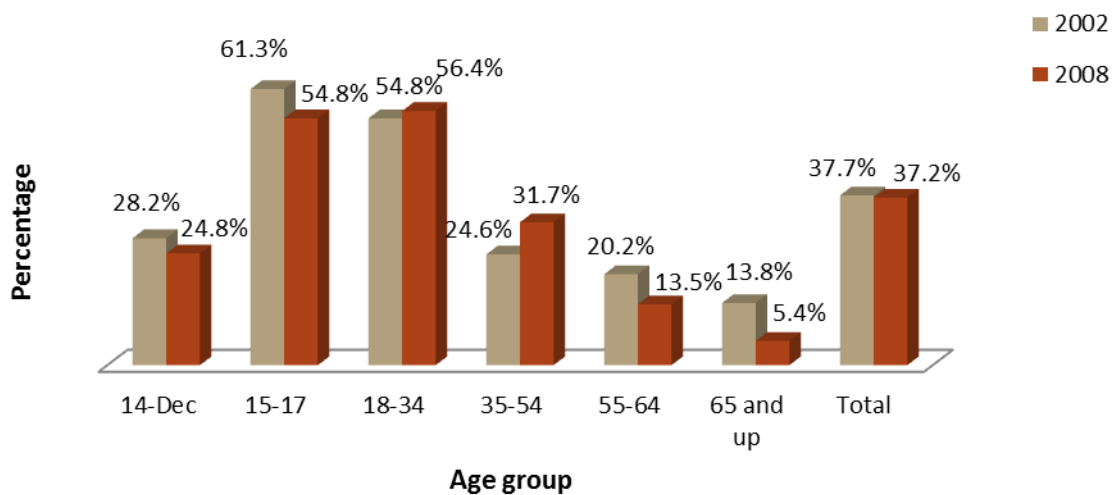
- Cannabis (marijuana, pot, grass, hash, etc.)
- Cocaine (coke, crack, freebase, etc.)
- Amphetamines and other stimulant drugs (crystal meth, speed, ecstasy, etc.).
- Inhalants (solvents, glue, petrol, paint thinner)
- Sedatives and sleeping pills (Valium, Serepax, Rophynol, etc.)
- Hallucinogens (LSD, PCP, acid, ketamine, mushroom, etc.)
- Opioid drugs (heroin, morphine, methadone, codeine, etc.)

2.1 *Global picture*

Amongst all the respondents aged 12 and up, 37.2% said that they have used at least one type of drugs over the year before the survey. Drug use varies based on gender and age ($p < 0.0001$). Therefore, there are more men than women who exhibit that behaviour (43.6% vs. 30.8%). The 15-17 and 18-34 age groups have the highest proportions of drug users, with more than half of the respondents who admitted to using them (54.8% and 56.4% respectively). The prevalence of drug use then decreases with age. It should be noted that, amongst youths aged 12-14, one in four individuals (24.8%) has used drugs in the previous year (Figure 6).

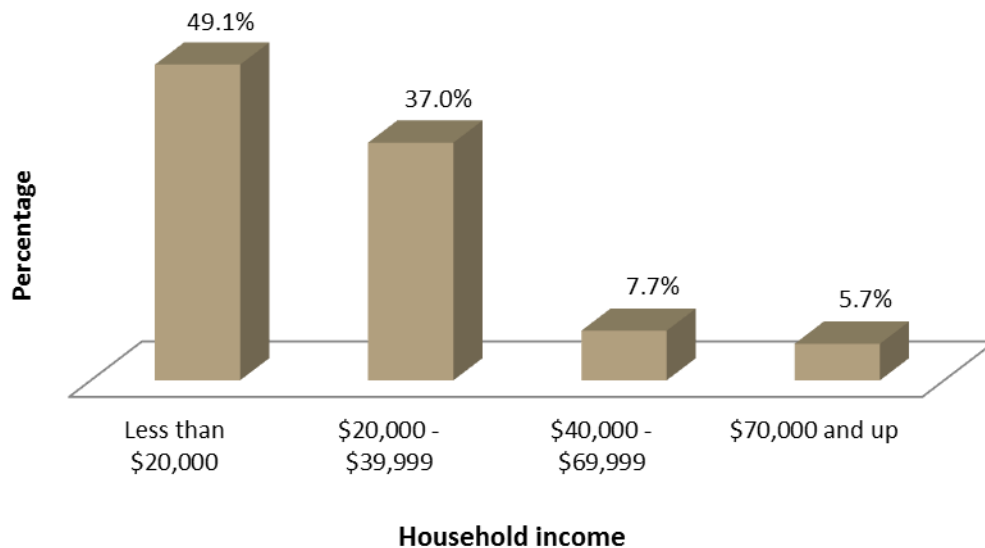
Figure 6 shows the proportions of drug users by age group in 2002 and 2008. It shows that the consumption of drugs for all respondents has not changed much between 2002 and 2008 (38.7% vs. 37.2%) ($p > 0.05$). However, there are differences amongst certain age groups. For instance, drug use seems to be following a decreasing trend amongst youths aged 12-17 (45.6% in 2002 down to 43.2% in 2008) ($p < 0.05$), as is the case for adults aged 55 and up. However, there is a slight increase for adults aged 35-54. These trends should be monitored in the next surveys.

Figure 6: Drug use over the past 12 months based on age, individuals aged 12 and up, comparison 2002-2008 (2002, N = 19,952; 2008, N = 22,729)



Gender and age aside, household income has an impact on drug use amongst First Nations. Respondents with a household income under \$20,000 have the highest proportion of drug users (49.1%). Conversely, there are fewer individuals with a household income in the higher categories who said that they have used drugs over the year before the survey (Figure 7).

Figure 7: Drug consumption over the last 12 months based on household income, adults 18 and up (N = 14,676)



Education has an impact on the frequency of drug use ($p < 0.001$). The respondents who haven't completed high school have higher proportions of drug users. In fact, nearly half of them (49.3%) have used drugs over the year before the survey.

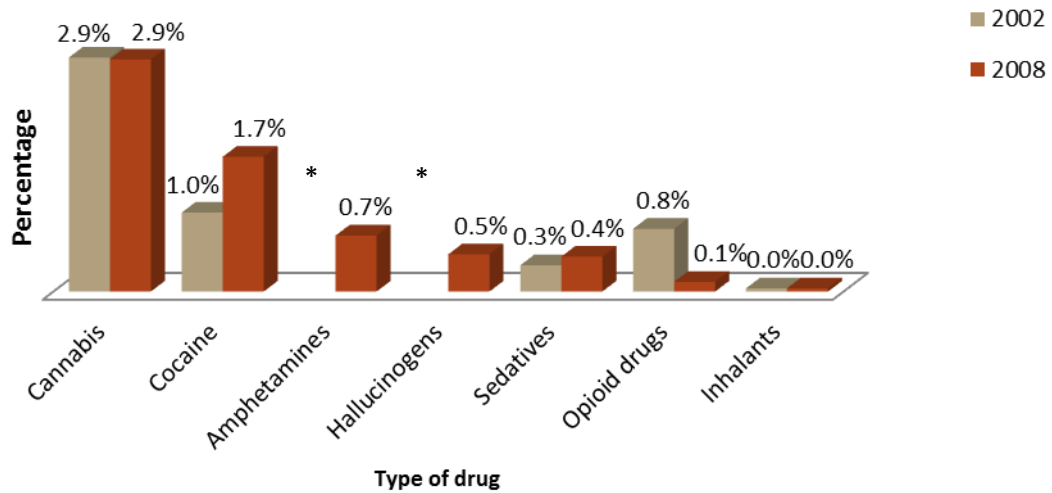
Lastly, drug use seems to be more frequent in zones 3 and 4 communities (46.0% and 44.7%) compared to zones 1 and 2 communities (34.6% and 38.3%) ($p < 0.05$).

2.2 Type of drugs used

Similarly as elsewhere in Quebec, cannabis is the most commonly-used drug amongst First Nations, with nearly one third (28.6%) of respondents who say that they have used it over the year before the survey. It is followed by cocaine (16.6%) and amphetamines (6.9%). The use of prescription drugs (opioid drugs and sedatives) affects 5.5% of RHS 2008 respondents.

Comparing the 2002 and 2008 results, one can notice differences in the use of cocaine and opioid drugs. Cocaine seems to have gained in popularity ($p < 0.0001$), while opioid drugs have greatly decreased, from 7.7% to 1.2% ($p < 0.0001$). However, it is impossible to compare amphetamines and hallucinogen drugs, as the various categories were different in RHS 2002.

Figure 8: Type of drug used over the past 12 months, individuals aged 12 and up, 2002-2008 comparison (2002, N = 19,952; 2008, N = 22,729)



* Substances included in these categories were different in the RHS 2002.

Just like they say that they use drugs in greater proportions, men take significantly more cannabis (36.3% vs. 20.9%) and cocaine (19.8% vs. 13.3%) than women ($p < 0.0002$). They also use more hallucinogens (6.7% vs. 2.5%) ($p < 0.0001$).

Age has an influence on the type of drugs used ($p < 0.05$). Youths aged 12-17 and young adults aged 18-34 have the highest proportions of cannabis users (40.7% and 43.6% respectively). These two groups are two times more likely than adults aged 35-54 to exhibit such behaviour. As for cocaine, the 18-34 age group has a much higher proportion of users compared to any other age group (29.4%). Also, nearly 12% of youths aged 15-17 say that they have used cocaine over the year before the survey. Lastly, young adults aged 18-34 have the highest proportion of hallucinogen users (9.6%). Table 5 shows the type of drugs used based on age.

Table 5: Type of drug used over the past 12 months based on age, adults 12 and up (N = 22,729)

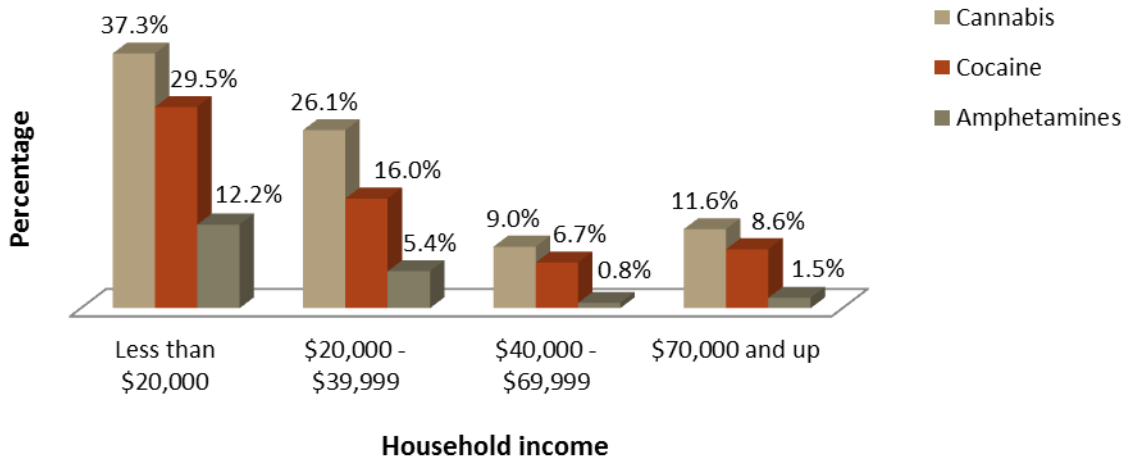
Type of drug	Age group					
	12-14	15-17	18-34	35-54	55-64	65 and up
	(N = 1,420)	(N = 2,237)	(N = 6,908)	(N = 8,169)	(N = 2,341)	(N = 1,650)
	%	%	%	%	%	%
Cannabis	24.1	51.3	43.6	22.9	4.9	0.9
Cocaine	2.2	11.6	29.4	16.3	3.9	0.2
Amphetamines	1.3	12.0	14.5	3.3	0.8	0.2
Inhalants	0.4	1.2	0.7	0.0	0.3	0.2
Sedatives	0.9	0.4	4.7	5.1	6.8	4.0
Hallucinogens	0.4	3.8	9.6	3.3	1.1	0.2
Opioid drugs	0.0	0.6	2.0	1.2	0.5	0.6

Looking more specifically at the situation among youth, individuals in the 15-17 age group distinguish themselves from the 12-14 age group in their higher proportion of users in all three main drug groups: 51.3% vs. 24.1% for cannabis; 11.6% vs. 2.2% for cocaine; 12.0% vs. 1.3% for amphetamines. Youth gender has little influence on the type of drug used. The use of cannabis amongst First Nations youths has decreased between 2002 and 2008 (42.7% vs. 40.7%) ($p > 0.05$). However, the use of cocaine has increased significantly between 2002 and 2008, from 3.7% and 7.9% ($p < 0.0001$).

The use of sedatives increases with age. Amongst adults aged 35-54, amphetamines are replaced by sedatives and become the third most commonly-used drugs. In addition, sedatives represent the most commonly-used type of drug with adults aged 55 and up, in front of cannabis.

The impact of income on the type of drug used is seen in higher categories (\$40,000 - \$70,000), where cocaine use, while not as high as in lower income categories, becomes more important in proportion to other drugs (Figure 9).

Figure 9: Type of drug used over the last 12 months based on household income, adults 18 and up (N = 14,948)



Amongst adults, the use of certain drug types is influenced by education. The use of cannabis, cocaine, amphetamines, sedatives and hallucinogens decreases with the level of education until college (Table 6). Consumption starts increasing again with respondents with complete or incomplete university education.

Table 6: Type of drugs used over the past 12 months based on age, adults 18 and up

	Education							
	Incomplete DES		DES		DEC		University	
	(N = 9,828)		(N = 4,338)		(N = 2,201)		(N = 2,154)	
	n	%	n	%	n	%	n	%
Cannabis *	3,223	32.8	1,165	26.9	260	11.8	320	14.9
Cocaine *	2,417	24.6	500	11.5	188	8.6	301	14.0
Amphetamines*	934	9.5	253	5.8	15	0.7	52	2.4
Inhalants	43	0.4	0	0	15	0.7	0	0
Sedatives †	664	6.8	169	3.9	32	1.5	75	3.5
Hallucinogens*	792	8.1	127	2.9	0	0	46	2.1
Opioid drugs	171	1.7	53	1.2	0	0	26	1.2

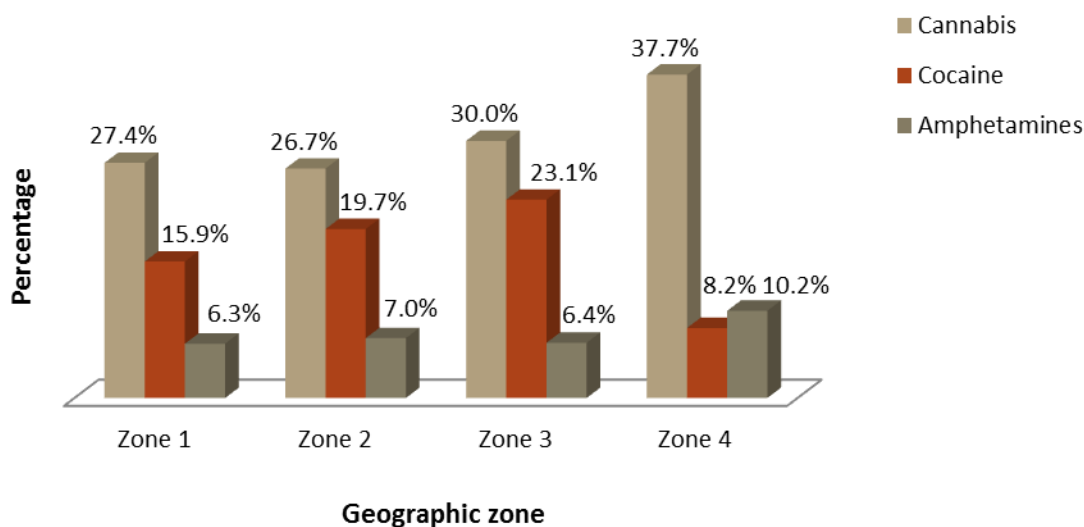
*: p < 0.0001

†: p < 0.05

DES: High-school diploma; DEC: College diploma

Lastly, Figure 10 shows that geographic zones have an influence on drug use ($p < 0.05$). Therefore, cocaine is much less commonly-used amongst individuals in zone 4 (8.2%) than for those living in zone 1 (15.9%), zone 2 (19.7%) or zone 3 (23.1%). On the contrary, the use of cannabis and amphetamines is higher in zone 4.

Figure 10: Type of drug used over the past 12 months based on the geographic zone, individuals aged 12 and up (N = 22,729)



2.3 Consumption frequency

Cannabis and cocaine are the most commonly used and, for that reason, they are the only two drug types for which frequency was studied. This section shows the results on consumption frequency **amongst users**, not amongst all respondents.

Amongst the respondents who said that they have used cannabis during the year before the survey, consumption on a daily and annual basis is more widespread (35.5% and 34.3%), while cocaine is mostly taken on an annual basis (41.7%). It should be noted that nearly 10% of users take cocaine nearly every day and that approximately one in five users take it on a weekly basis (Table 7).

Table 7: Frequency of cannabis and cocaine consumption over the last 12 months, individuals aged 12 and up

Consumption frequency	Cannabis		Cocaine	
	n	%	n	%
One or two times per year	2,228	34.3	1,572	41.7
Monthly	855	13.2	1,167	31.0
Weekly	1,113	17.1	692	18.4
Daily or almost daily	2,308	35.5	335	8.9
TOTAL*	6,504	100.0	3,766	100.0

* Adding percentages can lead to a value slightly lower or higher than 100%. This is due to values being rounded.

The consumption frequency for cannabis and cocaine is influenced by gender ($p < 0.01$). Therefore, there are more male than female users who use cannabis or cocaine daily (38.1% vs. 31.0%; 9.6% vs. 7.9%).

Age also has an impact on drug consumption frequency ($p < 0.0001$). The daily use of cannabis is at its highest amongst youths aged 15-17 and adults aged 35-54; more than two out of three users in those groups say that they use cannabis daily (38.4% and 37.1% respectively). As for cocaine, users aged 35-54 are the most likely to use it weekly or daily (37.6%), while this does not occur in the 12-14 year old and 65 and up age groups. In youths aged 15-17, more than one in five users (22.5%) use cocaine weekly or daily.

More specifically, for youths, Table 8 reveals that boys aged 12-17 are more likely than girls to use cannabis or cocaine daily (42.7% vs. 24.2%; 24.6% vs. 0%). As for girls, the majority use cannabis or cocaine on an annual basis.

Table 8: Frequency of cannabis and cocaine consumption over the last 12 months based on gender, individuals aged 12-17

Consumption frequency	Cannabis				Cocaine			
	Boys		Girls		Boys		Girls	
	n	%	n	%	n	%	n	%
One or two times per year	293	36.8	313	45.2	36	27.4	94	59.3
Monthly	55	6.9	88	12.7	48	36.4	54	33.8
Weekly	108	13.5	124	17.9	15	11.6	11	6.9
Daily or almost daily	340	42.7	168	24.2	32	24.6	0	0.0
TOTAL*	796	100.0	693	100.0	131	100.0	159	100.0

* Adding percentages can lead to a value slightly lower or higher than 100%. This is due to values being rounded.

Household income also has an influence on consumption frequency. Table 9 shows that the daily use of cocaine is more widespread (13.9%) with users with an annual income of \$70,000 and more. However, these users distinguish themselves by a much lower daily use of cannabis (7.2% compared to 35% and 45% in other household income categories).

Tableau 9 : Fréquence de consommation de cannabis et de cocaïne au cours des 12 derniers mois selon le revenu annuel du ménage, consommateurs de 18 ans et plus

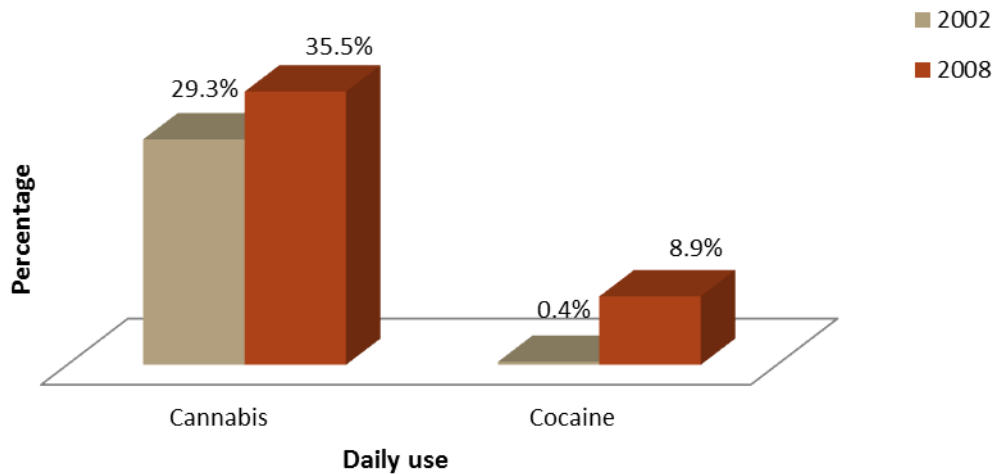
Consumption frequency	Cannabis				Cocaine			
	Household income (\$)							
	Less than \$20,000 (N = 1,882) %	\$20,000 - \$39,999 (N = 1,397) %	\$40,000 - \$69,999 (N = 245) %	\$70,000 and up (N = 194) %	Less than \$20,000 (N = 1,543) %	\$20,000 - \$39,999 (N = 814) %	\$40,000 - \$69,999 (N = 199) %	\$70,000 and up (N = 145) %
One or two times per year	22.1	39.6	42.4	57.4	39.9	42.1	58.2	52.0
Monthly	20.9	8.4	6.0	25.0	30.9	32.3	41.8	16.4
Weekly	19.8	17.6	5.7	10.4	19.9	21.9	0.0	17.7
Daily or almost daily	37.3	34.4	45.9	7.2	9.4	3.7	0.0	13.9
TOTAL*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Adding percentages can lead to a value slightly lower or higher than 100%. This is due to values being rounded.

Amongst cannabis users, the results show some differences in consumption frequency based on geographic zone (Figure 10). Therefore, the daily use of cannabis is higher in zone 3 (46.5% vs. 35.9% in zone 1, 31.3% in zone 2 and 29.2% in zone 4). The respondents living in zone 4 distinguish themselves by a high proportion of use on an annual basis, with 47.9% of users compared to 33.5% in zone 1, 26.8% in zone 2 and 24.6% in zone 3).

Due to the differences in answer options, drawing comparisons between RHS 2002 and RHS 2008 is difficult for consumption frequency of cannabis and cocaine. However, it can be done for the "daily or almost daily" category, which is found in both surveys. There is an increase in the daily use of both cannabis and cocaine amongst users between 2002 and 2008.

Figure 11: Frequency of cannabis and cocaine consumption over the last 12 months, individuals aged 12 and up, comparison between 2002 and 2008



Lastly, amongst youth users aged 12-17, there is a statistically significant upward trend in the daily use of both cannabis and cocaine between 2002 and 2008. In 2002, 24% of them used cannabis daily, which increased to 34% in 2008 ($p < 0.0001$). As for cocaine, no youth admitted to using it daily in 2002; in 2008, 11.1% of them say that they used it daily ($p < 0.0002$).

2.4 Comparisons with Quebec

The results of CCHS 2008 (ISQ) in Quebec⁶ allow us to compare them with the results of RHS 2008 for Quebec First Nations. These comparisons emphasize the much higher drug use amongst First Nations when compared to their Quebec counterparts (Figure 12). The proportions of drug users amongst all First Nations respondents (aged 12 and up) are three times higher than those for Quebecers aged 15 and up, both for men and women. The use of cannabis is two times higher amongst First Nations, while cocaine is approximately 10 times more widespread.

Figure 12: Drug consumption over the past 12 months, comparisons with the rest of Quebec

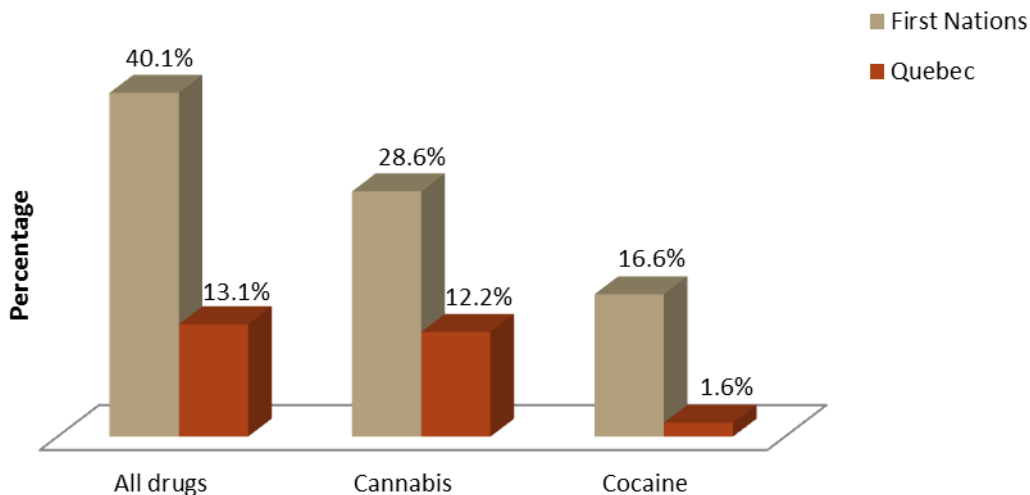


Table 10 details consumption based on gender. It shows that, both for First Nations and other Quebecers, men are more likely to use drugs than women.

⁶ CCHS data available for individuals aged 15 and up.

Table 10: Drug consumption over the past 12 months based on gender, comparisons with the rest of Quebec

	First Nations (12 and up)	Quebec (15 and up)
Proportion of users, regardless of drug type (%)		
Total	40.1	13.1
Men	43.6	17.2
Women	30.8	9.0
Proportion of cannabis users (%)		
Total	28.6	12.2
Men	36.3	16.2
Women	20.9	8.3
Proportion of cocaine users (%)		
Total	16.6	1.6
Men	19.8	2.3
Women	13.3	0.8

Data source for Quebec: ISQ, 2010

Introduction to drugs is often done during teenage years (INSPQ, 2009). It is therefore crucial to study the trends amongst First Nations youths and compare them with those of youths from the rest of Quebec.

Amongst both Quebec and First Nations youths, there is a decrease in drug use. The *Enquête québécoise sur le tabac, l'alcool, la drogue et le jeu chez les élèves du secondaire 2008* (ISQ, 2009) reveals that 27.8% of the students who responded had used drugs at least once over a twelve-month period, a significant decrease compared to 2002, when 41.2% said the same. In First Nations youths aged 12-17, those proportions decreased from 45.6% in RHS 2002 to 43.2% in 2008 ($p < 0.05$), a smaller decrease than for the rest of Quebec.

Looking more closely at cannabis and cocaine use amongst youths, there are some differences between First Nations and the rest of Quebec. Therefore, the use of cannabis amongst First Nations youths went from 42.7% in 2002 to 40.7% in 2008, while this proportion dropped from 39.1% in 2002 to 27.2% in 2008 for Quebec high-school students. While the use of cannabis is declining in both groups, the decrease is more significant amongst Quebec youths.

As for cocaine use, there are opposite trends amongst First Nations and Quebec youths. In fact, the use of cocaine seems to have increased amongst First Nations youths between 2002 and 2008, from 3.7% to 7.9%. For Quebec high-school students, there is a declining trend, down from 5.2% in 2002 to 3.4% in 2008.

3. ALCOHOL AND DRUG USE: ASSOCIATED PSYCHOSOCIAL FACTORS

Some factors are known for their relation to the use of psychoactive substances. Research suggests that addictions are a way to escape chronic stressors, many of which can affect First Nations: racism, poverty, little education, unemployment, family problems, residential school legacy (King, 2009). In fact, a study about young First Nation drug addicts admitted in a treatment facility shows that the main reason for using drugs and alcohol is to forget their problems and pain (FNQLHSSC, 2008). In addition, mental health issues are often related to substance abuse. In fact, studies about patients with severe mental issues revealed a major prevalence of substance abuse (Virgo, 2001).

This section explores the relationship between certain psychosocial factors and alcohol/drug use. Those factors are psychological distress, suicidal thoughts, suicide attempts, as a history of foster family, childhood violence and abuse and residential schools. Data analysis allows us to evaluate the relationship between these factors and using such substances, but not to establish casual links.

The overall results are shown in Table 11, found at the end of this section.

3.1 *Mental health issues*

Analyzing the data from the Canadian Community Health Survey 2002 shows that the prevalence of alcohol or illegal drug addiction is higher with individuals who have already suffered from anxiety or mood disorders (Kairouz, 2008). Drug use is also higher amongst individuals with a high psychological distress index (Kessler scale, K6) (ISQ, 2009).

The psychological distress index was measured among the RHS 2008 adult respondents with the Kessler scale (K10)⁷. Table 11 shows that the adult respondents, whose level of psychological distress over the month before the survey was "high", are significantly more likely to have used drugs or alcohol over the year before the survey (47.4% vs. 30.9% and 77.4% vs. 69.8% respectively).

Clinical studies have showed that cannabis consumption and addiction rates are high amongst individuals who have made a serious suicide attempt (Lynskey, 2004). Individuals with cocaine addiction would also present a higher risk of suicidal behaviour (Roy, 2001). An American study with patients admitted for cocaine addiction reveals that a strong proportion of them have already attempted suicide (Roy, 2001).

Looking at Table 11, one can see that the respondents who say that they have already experienced suicidal thoughts or attempted suicide show significantly higher proportions of alcohol and drug users. This is especially true with the combination of a history of attempted suicide and drug use, where there are nearly twice as many drug users amongst the respondents who have already attempted suicide (63.0% vs. 32.8%).

⁷ Psychological distress, as measured by the Kessler scale (K10) relies on 10 questions to establish how often, over the past month, a person has felt exhausted, nervous, desperate, agitated, sad or depressed, useless or as if everything required an effort. This index separates respondents into two psychological distress categories: low to moderate and high (see Chapter 5).

3.2 Past experiences and traumas

Amongst First Nations, there is a high rate of reporting, child custody and foster by child protection services (FNQLHSSC, 2011). Both for the short and long terms, the children who have been through the child protection system will face many challenges for their social reintegration. Substance abuse is part of these challenges (Goyette, 2009 in FNQLHSSC, 2011).

Amongst the respondents aged 12-16 in RHS 2008, those who have gone through youth centres show significantly higher proportions of individuals who have used alcohol or drugs, compared to youths who haven't (alcohol: 87.9% vs. 56.4%; drugs: 90.5% vs. 40.2%).

Individuals with a history of violence or abuse, either past or present, are more at risk of developing various mental health, substance abuse or interpersonal relationship issues (Cohen, 2003; AHF, 2003). In spite of extensive research on the relationship between sexual abuse and subsequent onset of alcohol problems, establishing a clear link remains rather difficult (AHF, 2003). In fact, many other confusing factors are often present (family dysfunction, negligence, etc.).

Table 11 reveals that the respondents who have a history of childhood abuse or had a personal physical or verbal violence experience over the year before the survey show drug user proportions approximately twice as high ($p < 0.0001$).

Based on a report published by the Aboriginal Health Foundation, individuals who have gone through residential schools are known for their high rate of alcohol abuse (AHF, 2003; Smith, 2005). Some try to explain this by the psychological and social effects of residential schools, which would be passed on from generation to generation (AHP, 2007). These effects include a difficulty to establish relationships of trust and commitment. According to specialists, addictions would be a way to cope with emotional pain. However, it would be an inappropriate method (AHF, 2007).

Table 11 shows that adults who have been through residential schools have the lowest consumption of alcohol or drugs (58.2% vs. 73.4%; 24.6% vs. 38.7%). While the opposite would have been expected, the cohort effect may have an influence. Therefore, the individuals who have been through residential schools are currently older and their consumption reflects their age (alcohol and drug consumption decreases with age; see sections 1.1 and 2.1).

Amongst adult respondents, 29.8% say that at least one of their parents has been in a residential school. Alcohol and drug use is significantly higher for these respondents than for those whose parents have not been in a residential school (78.7% vs. 64.1%; 50.5% vs. 30.3%).

Table 11: Proportion of alcohol or drug users over the past 12 months amongst respondents with certain characteristics

Characteristic	Percentage of alcohol users (over the past 12 months)	p	Percentage of drug users (over the past 12 months)	p
Psychological distress (adults)				
High	77.4	< 0.05	47.4	< 0.0001
Low to moderate	69.8		30.9	
History of suicidal thoughts				
Yes	77.5	< 0.0001	53.1	< 0.0001
No	64.7		30.8	
History of attempted suicide				
Yes	82.7	< 0.0001	63.0	< 0.0001
No	66.0		32.8	
Sent to a youth centre over the past year (youths)				
Yes	87.9	< 0.0004	90.5	< 0.0001
No	56.4		40.2	
History of childhood abuse				
Yes	71,3	< 0,05	50.1	< 0.0001
No	66,8		32.3	
Experience in residential schools (adults)				
Personal				
Yes	58,2	< 0,0001	24,6	< 0,0002
No	73,4		38,7	
At least one parent				
Yes	78,7	< 0,0001	50,5	< 0,0001
No	64,1		30,3	
Personal experience of physical violence over the past year				
Yes	88,7	< 0,0001	68,0	< 0,0001
No	65,5		27,3	
Personal experience of verbal violence over the past year				
Yes	81,9	< 0,0001	53,6	< 0,0001
No	64,7		27,0	

4. GAMBLING

Gambling has been installed for many years in many cultures and societies, especially among First Nations (Dion, 2010a). First Nations used to play games such as bones, sticks and hand games. However, those traditional games gave way to North American games, such as bingo, lottery and casinos.

The gambling landscape has changed over the last years. Starting in the 1990s, new forms of legalized gambling started appearing in Canada, such as casinos, video lottery in communities and, more recently, Internet games (Cox, 2005; Korn, 2000). This increased access to gambling, its acceptance, promotion and legalization are partly responsible for the interest it generates (Dion, 2010a).

For many, gambling remains an activity associated with dreams, relaxing or mingling (Dion, 2010a). However, some individuals will develop gambling issues. There are many risk factors associated to gambling: poverty, unemployment, exposition to gambling, alcohol and drug addiction, history of childhood abuse, mental health issues (Dion, 2010b; Korn, 2000). Unfortunately, those risk factors are usually more present for Aboriginal peoples than the general population.

Gambling issues can lead to various consequences, including the worsening of the financial situation, relationships with family, relatives and community, self-esteem, academic or professional performance, physical or mental health; in short, the general quality of life (Papineau, 2010; Marshall, 2003).

This section shows a portrait of the gambling situation in First Nations communities by describing the gambling offerings, the participation and some signs suggesting gambling problems.

4.1. Access to gambling

Before showing the results about the prevalence of participation to gambling and its consequences, it is essential to describe the gambling offerings within or near First Nations communities. In fact, the access to gambling is a key factor, and studies show that there are more gambling issues in areas with high concentrations of video lottery devices or near a permanent casino (Cox, 2005). In 1999, the Canadian Public Health Association started recommending to governments that they reduced access to video lottery devices (Courteau, 2003).

In the RHS 2008's community survey, a question allowed to describe the access to gambling for individuals living in communities. The results show that out of the 22 interrogated First Nations communities, 17 have access to video lottery devices within the community. However, the access to a casino is not nearly as easy. Unfortunately, the access to other highly popular forms of gambling within communities, including bingo, is not part of RHS 2008.

4.2. Global portrait of participation to gambling

In RHS 2008, the respondents aged 18 and up were asked if they have already gambled, that is if they had already spent money to play (bingo, cards, lottery tickets, video lottery), or to bet on sports events. There were also some questions on signs of gambling issues.

It is worth mentioning that the results do not correspond to the situation over the previous year, but rather the respondents' lifetime experience. Unfortunately, no comparison can be made with RHS 2002, as questions were then aimed at the participation over the year before the survey.

In RHS 2008, questions about gambling participation were asked to adults aged 18 and up and they reveal that more than two thirds (68.4%) have already participated. Analyzing the results by gender, there are significantly more women than men who have already gambled (74.0% vs. 62.8%; $p < 0.0001$). The proportions of individuals who have already played those games are similar through all age groups ($p > 0.05$).

Annual household income at the time of the survey has no statistically significant impact on whether or not individuals have already gambled ($p < 0.05$). Education has an influence on gambling ($p < 0.05$). In fact, participation in gambling activities is lower amongst those with a high-school diploma (63.6%), and higher amongst individuals with a college diploma (76.2%). However, participation in gambling activities varies significantly based on the declared zone of residence at time of survey, albeit without any defining trend ($p < 0.0001$). In fact, individuals living in zones 4 or 2 have a stronger history of gambling (81.3% and 76.3% respectively) than those living in zones 1 or 3 (66.9% and 48.5% respectively).

4.3. Signs of gambling issues

While gambling is harmless for many, it can become an issue for some. There are three types of gamblers: 1) the **recreational** gambler, who has no issues when he's playing, 2) the **problematic** gambler, who experiences some negative impacts associated with gambling, without any severe consequences, and 3) the **pathological** gambler, who experiences a series of major problems caused by a severe addiction to gambling with money involved⁸.

Gambling issues can translate into many signs: lying, gambling to win the lost money back, gamble more than planned, borrowing money to gamble, gambling increasing amounts and be concerned by gambling. RHS 2008 focused on three signs of gambling: borrowing money to gamble, gambling too much money and financial issues caused by gambling.

It is worth mentioning that the statistical significance of the relationships addressed in this section could not be verified, due to the small sample size.

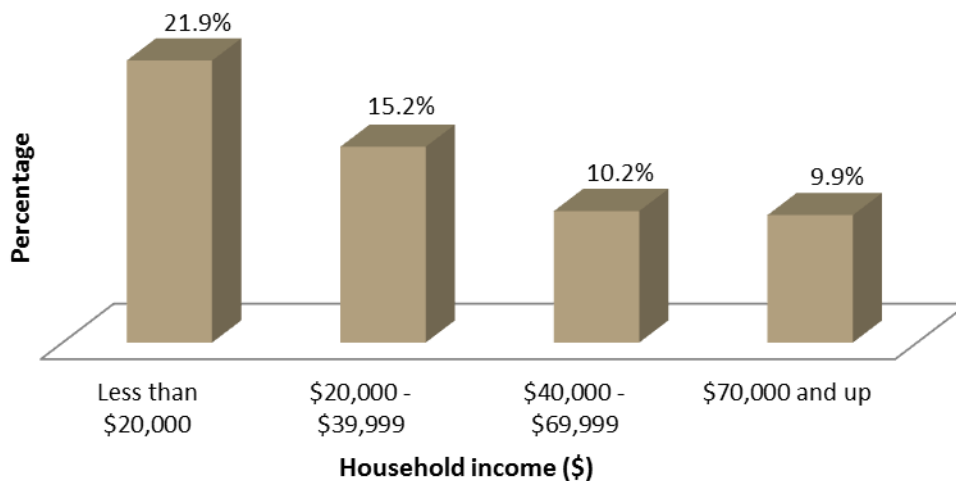
⁸ http://www.depandances.gouv.qc.ca/index.php?jeu_pathologique_en

4.3.1. Borrowing money to gamble

RHS 2008 shows that 16.8% of the respondents aged 18 and up have already borrowed money to gamble. Women seem more likely to do so (19.8%) than men (13.8%). In addition, young adults are more likely to have a history of borrowing money (18.5% for adults aged 18-34; 18.0% for 35-54; 14.1% for 55-64 and 7.9% for adults aged 65 and up).

Figure 13 shows that the history of borrowing money for gambling decreases with the declared household income for the year before the survey. Respondents with a household income under \$20,000 have the highest proportion of individuals who borrow money, with more than one out of four respondents (21.9%).

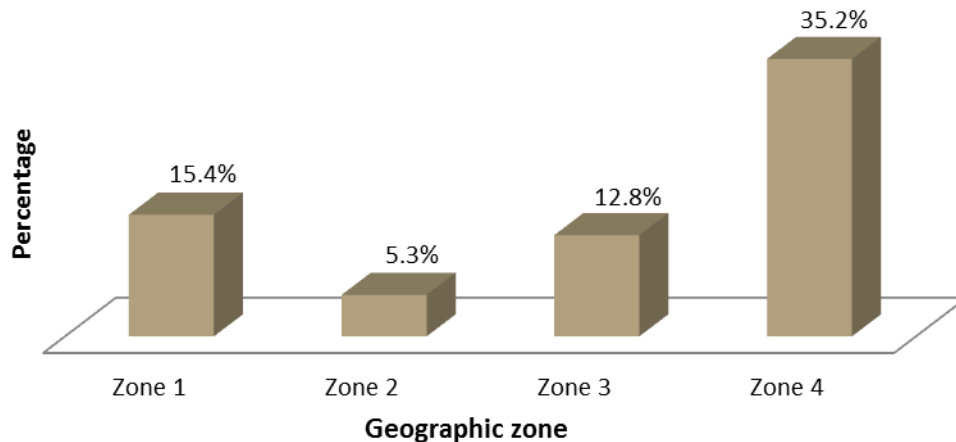
Figure 13: Money borrowing based on household income, adults 18 and up (N = 14,947)



There are differences in the history of borrowing money based on education at the time of RHS 2008. The respondents with no high-school diploma seem more likely to have already borrowed money to gamble (20.8%) compared to other education levels (11.7% for individuals with a high-school diploma, 13.2% with a college diploma and 13.7% with a university diploma).

Lastly, the geographic zone of residence seems to have an impact on borrowing money to gamble. In fact, individuals living in zone 4 are more likely to declare that they have already borrowed money to gamble; more than one out of three individuals says so.

Figure 14: Money borrowing based on geographic zone, adults 18 and over (N = 19,068)



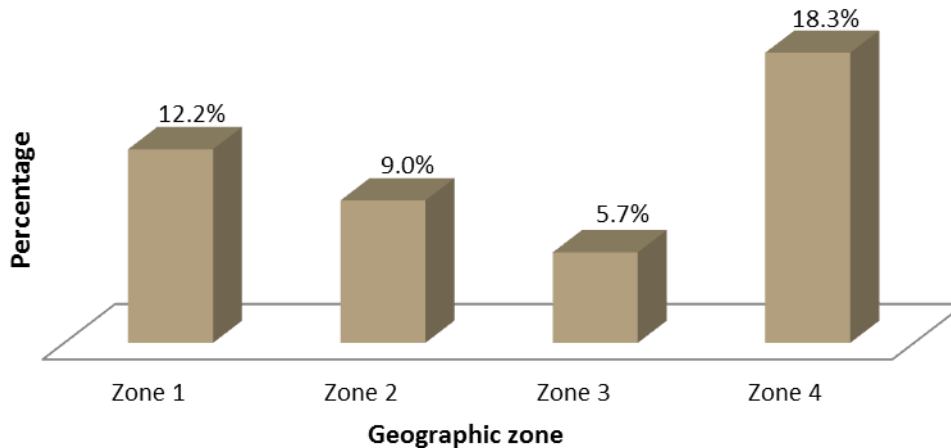
4.3.2. Excessive amounts gambled

When asked "Have you ever bet more than you could afford to lose?", 12.1% of the respondents said "yes". Men and women say that they have played more than they could afford to lose in similar proportions (11.5% vs. 12.8%). Just like borrowing money, betting more than one can afford seems to decrease with age, dropping from 13.0% for adults aged 18-54 to 4.3% for adults aged 65 and up.

Household income at the time of survey does not seem to influence betting more money than one can afford to lose. However, it is worth mentioning that, amongst adults whose yearly household income is under \$20,000, those with an annual income between \$1,000 and \$4,999 are the most likely to say that they have bet more than they could afford (37.3%). Analyzing the results based on education, there are higher proportions of excessive amounts played in individuals who have not completed high school or with a college diploma (14.5% and 14.8% respectively) than for individuals with a high school diploma or who have attended/completed university (7.2% and 9.2% respectively).

Lastly, the respondents from zone 4 have "bet more than they could afford to lose" in higher proportions than individuals from other zones.

Figure 15: Excessive money played based on geographic zone, adults 18 and up (N = 19,068)



4.3.3. Financial problems caused by gambling

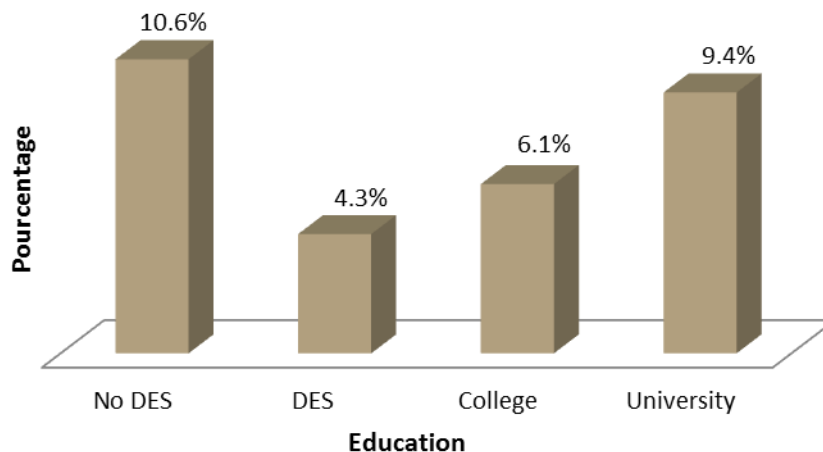
Finally, 8.4% of the respondents said that they have experienced personal or household financial problems caused by gambling. Gender and age at the time of survey seem to have little influence on the occurrence of such financial problems⁹, but adults aged 65 and up seem to be less likely to have gone through such issues (3.2%).

There seems to be a decreasing trend in experiencing financial problems as income increases. In fact, 10.6% of the respondents who have declared a household income under \$20,000 have already experienced financial problems caused by gambling, compared to 10.3% of those in the \$20,000 - \$39,999 category, 7.1% for those in the \$40,000 - \$69,999 category and 6.2% for those with an income of \$70,000 or more.

The past occurrence of financial issues caused by gambling also varies based on the education level declared in the survey. The respondents without a high-school diploma are more likely to have experienced them (10.6%), followed by those who have attended/completed university (9.4%), those who have a college diploma (6.1%) and those with a high-school diploma (4.3%).

⁹ The majority of the statistic tests performed in this section cannot be interpreted, as the proportion of cells with a sample size lower than five is over 20.0%.

Figure 16: Financial issues caused by gambling, based on education, adults 18 and up (N = 18,522)



Once again, geographic isolation at the time of survey seems to have an impact on experiencing financial issues. Therefore, individuals in zone 4 have experienced such issues twice as often as the entire population (17% vs. 8.4%).

5. CUMULATION OF RISK BEHAVIOURS

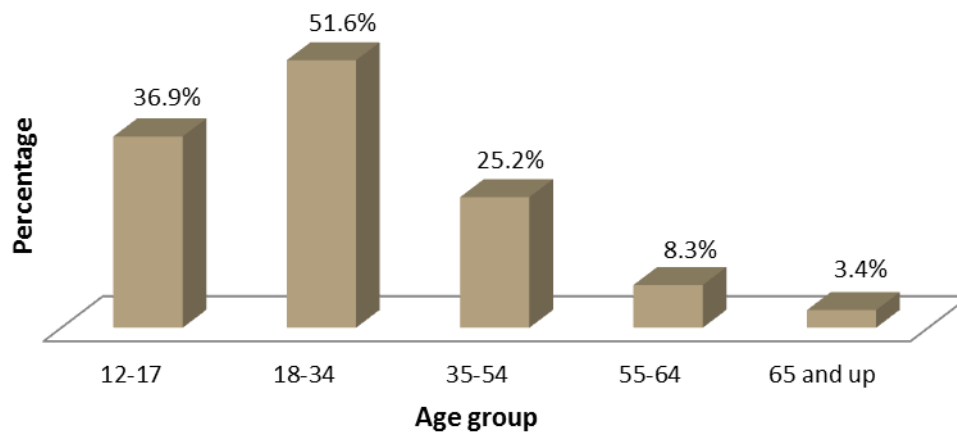
The phenomenon of poly drug use, which is the use of multiple types of psychoactive substances by a single individual at the same time or successively (Stohler, 2003) is an increasing problem in Quebec (Government of Quebec, 2006). Analysis based on the *Enquête québécoise sur le tabac, l'alcool, la drogue et le jeu chez les élèves du secondaire 2004* shows that the cumulation of several risk behaviours is widespread amongst Quebec students (Émond, 2005). There are 27% of them who have experienced three or four risk behaviours over the past year.

It would have been interesting to evaluate the cumulation of three behaviours: alcohol use, drug use and gambling participation. However, as the questions on gambling focused on the respondents' entire life rather than the year before the survey, it is difficult to combine three behaviours to determine their coexistence. That is why we only focus on the combined used of alcohol and drugs for individuals aged 12 and up.

Based on RHS 2008, 33.6% of the respondents say that they have used both alcohol and drugs over the year before the survey, compared to 31.7% in 2002 ($p > 0.05$). In Quebec, in 2002, 10% of individuals aged 15 and up had used cannabis and alcohol over the previous year, and 2.2% had used alcohol, cannabis and other illegal substances (ISQ, 2008). Within First Nations, significant differences exist based on gender, with men using both substances in a proportion of 36.1% and women

at 27.2% ($p < 0.0001$). Age also has a significant impact ($p < 0.001$) on the coexistence of alcohol and drug use, as shown in Figure 17. Young adults aged 18-34, most affected by alcohol and drugs consumption taken separately, are also the group where these two habits coexist the most (51.6%). Special attention must also be given to youths, more than a third (36.9%) of which are using both alcohol and drugs.

Figure 17: Coexistence of alcohol and drug use over the past 12 months based on age, individuals aged 12 and up (N = 22,230)



The co-use of alcohol and drugs varies based on household income ($p < 0.0001$). There is a downward trend of such behaviour as income increases. Thus, 41.9% of the respondents with a household income under \$20,000 over the year before the survey have had that behaviour, compared to 29% for individuals in the \$20,000 - \$39,999 category, 11.2% for those in the \$40,000 - \$69,999 category and 13% for those in the \$70,000 and up category.

Education also has a significant impact on the coexistence of alcohol and drug use ($p < 0.0001$). There is a decrease of such behaviour with education, but the proportion goes back up for individuals with university education. In fact, this behaviour is adopted by 37% of the respondents without a high-school diploma (DES), 28.9% of individuals with a DES, 12.1% of those with college education and 21.9% of those with university education.

Lastly, there are minor differences in the co-use of alcohol and drugs based on the geographic zone, albeit not statistically significant ($p > 0.05$). The respondents living in zone 3 have the highest proportion of co-users (38.1%), while 29.3% of individuals in zone 1 do the same. Similar co-use proportions are shown in zones 2 and 4 (35.1% and 34.2% respectively).



6. SERVICE AVAILABILITY AND USE

Care services access and use are crucial to a good health and fair health situation (WHO, 2009). This section will focus on the portrait of available services, their use and customer satisfaction.

6.1. Services from the National Native Alcohol and Drug Abuse Program (NNADAP)

The National Native Alcohol and Drug Abuse Program (NNADAP) is a Health Canada program mostly managed by First Nations communities and organizations. Its main objective is to help Inuit and First Nations to develop and provide programs to lower the high rates of alcohol and drug abuse amongst community residents. First Nations-specific social and cultural sections are included in the NNADAP¹⁰.

The NNADAP contributes to three main types of activities:

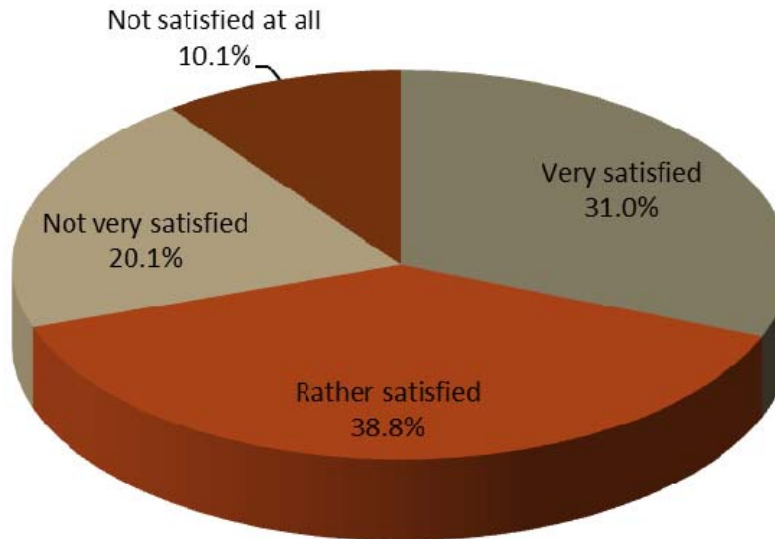
- Prevention: series of awareness activities to prevent serious alcohol and drug abuse issues.
- Intervention: series of activities to treat abuse issues as soon as possible.
- Treatment: provide short-term rehabilitation programs.

The NNADAP services are available for all of Quebec First Nations communities, where one or two agents are usually on hand to take care of the above-mentioned activities.

Of the 42.5% of the adults respondents who have used the NNADAP services, the majority were very satisfied or rather satisfied (69.8%). It is however worth mentioning that nearly one in three users (30.2%) were rather unsatisfied or very unsatisfied. However, the evolution of satisfaction cannot be evaluated, as the question was not asked in 2002.

¹⁰ <http://www.cssspnql.com/en/areas-of-intervention/social-services/addictions>

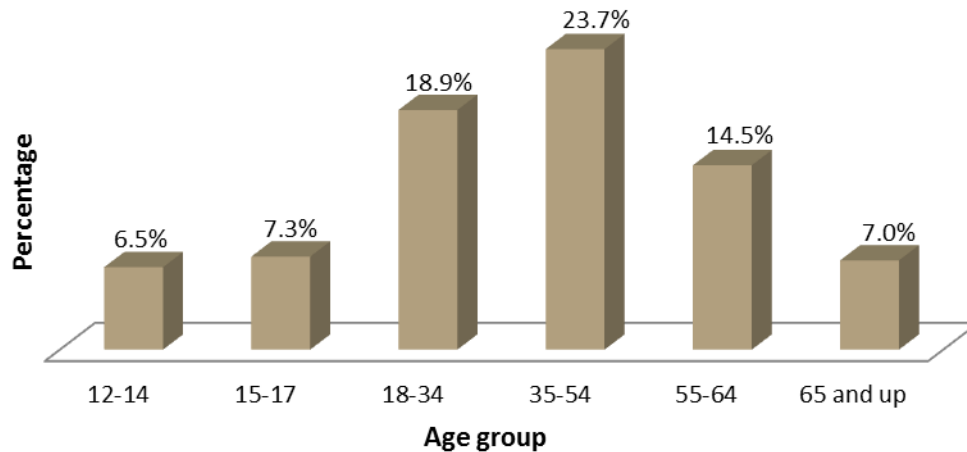
Figure 18: Satisfaction with the NNADAP services, adults 18 and up (N = 17,706)



6.2. Treatment seeking

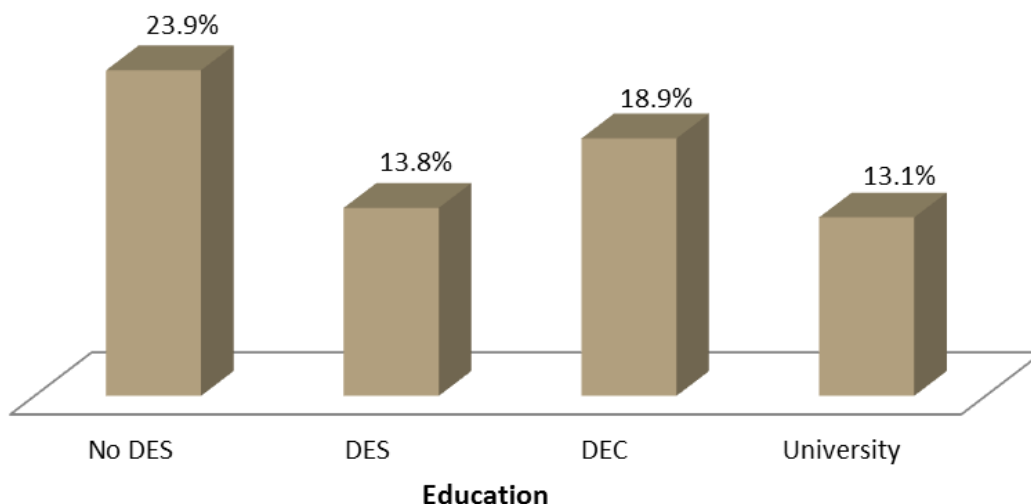
The data from RHS 2008 reveal that 17.4% of the respondents aged 12 and up have already sought treatment for substance abuse or addiction in their lives. Men are slightly more likely to have already done so than women (19.1% vs. 15.7%). Treatment seeking is influenced by age ($p < 0.0001$). Indeed, it seems that younger generations are more likely to seek treatment for drug addiction. Figure 19 shows that adults aged 18-54 have the highest proportions of respondents who have already sought treatment for alcoholism or drug addiction: nearly one in five individuals (18.9%) for adults aged 18-34 and nearly one in four individuals (23.7%) in the 35-54 category. When it comes to youths, about 7% have already sought treatment. In 2002, 16.8% of adults “had already been treated for substance abuse”.

Figure 19: Treatment seeking for alcoholism or drug addiction based on age, population aged 12 and up (N = 22,728)



Treatment seeking for alcoholism or drug addiction seems more widespread amongst individuals with a household income under \$20,000 per year. In fact, more than one in four individuals (26.0%) have already sought such treatment, compared to 18.4% for those with an household income between \$20,000 and \$39,999, 12.7% for those in the \$40,000 - \$69,999 category and 22.5% for those with a household income over \$70,000. When it comes to education, it seems to have a significant impact on treatment seeking ($p < 0.001$). The respondents who have not completed high school seem to be more likely to seek treatment than those with higher education.

Figure 20: Treatment seeking for alcoholism or drug addiction based on education, population aged 18 and up (N = 18,522)



The proportion of respondents who have sought treatment for an addiction increases with isolation ($p < 0.05$). Thus, 16.4% of the respondents in zone 1 have already done so, compared to 17.1% for those in zone 2, 20.2% in zone 3 and 24.6% in zone 4. This is a good portrait of the alcohol and drug use reality in the various zones (see sections 1 and 2).

6.3. Admission to a treatment facility

Some individuals with addiction problems will be able to access the services provided in a treatment facility within the NNADAP network for the Quebec region. The network totals six treatment or rehabilitation facilities throughout the territory, each of which can accommodate between 8 and 16 individuals. Five of these facilities are aimed at adults and one is reserved for minors aged 12-17. Treatments last between 4 and 6 weeks.

Amongst the RHS 2008 respondents, 4% said that they have been admitted to one of those treatment facilities over the year before the survey. Among those, there are twice as many women compared to men (66% vs. 34%) ($p < 0.05$). The vast majority of the individuals admitted in a treatment facility are adults aged 18-34 (43.6%) and 35-54 (46.6%). Adults aged 55 and up represent roughly 10% of the patients. Based on the RHS 2008 results, no youths who have answered the questionnaire have been admitted in a treatment facility over the year before the survey. However, it is a known fact that some of them are admitted to the centre that is reserved for them. For instance, in 2007, about 60 of them were admitted (FNQLHSSC, 2008). The apparent absence of youths is due to the sampling for the RHS 2008.

Figure 21: Admission to an addiction treatment facility over the last 12 months, based on age, adults (N = 917)

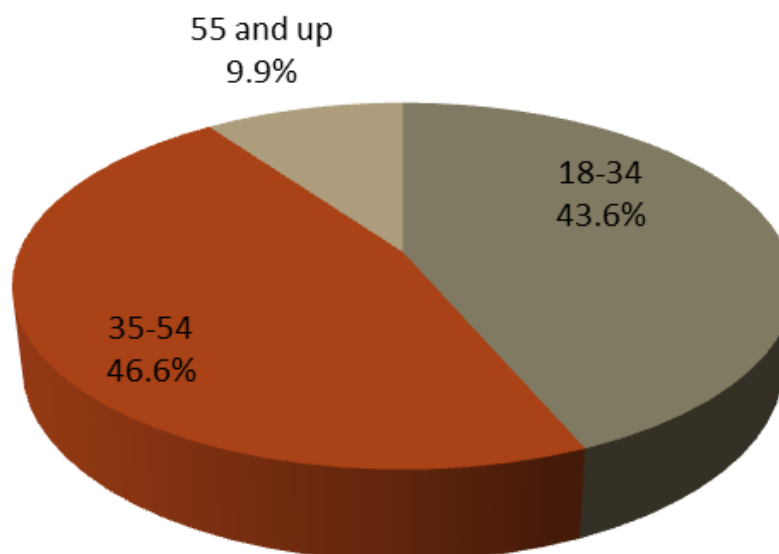
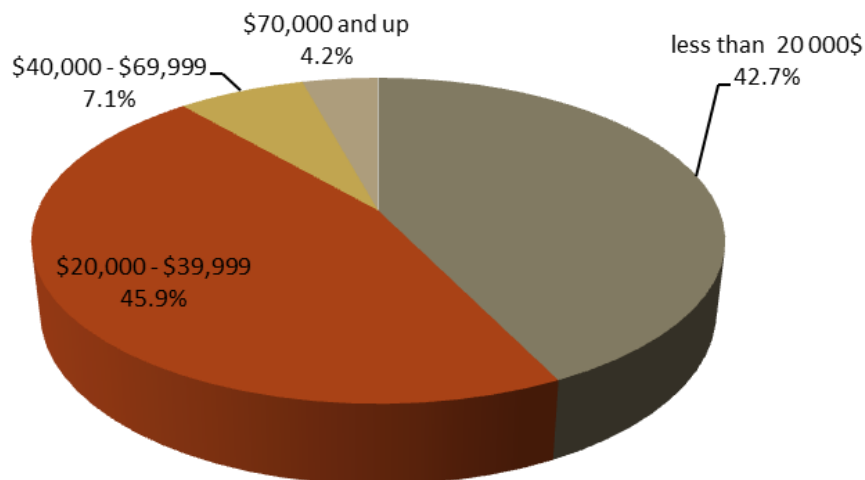


Figure 22 shows some trends with respect to the influence of household income on the admission to treatment facilities. Therefore, the vast majority of admitted adults (90%) have a household income under \$40,000, with 42.7% under \$20,000. Education has no influence on the admission to an addiction treatment facility.

Figure 22: Admission to an addiction treatment facility over the last 12 months, based on household income, adults (N = 718)



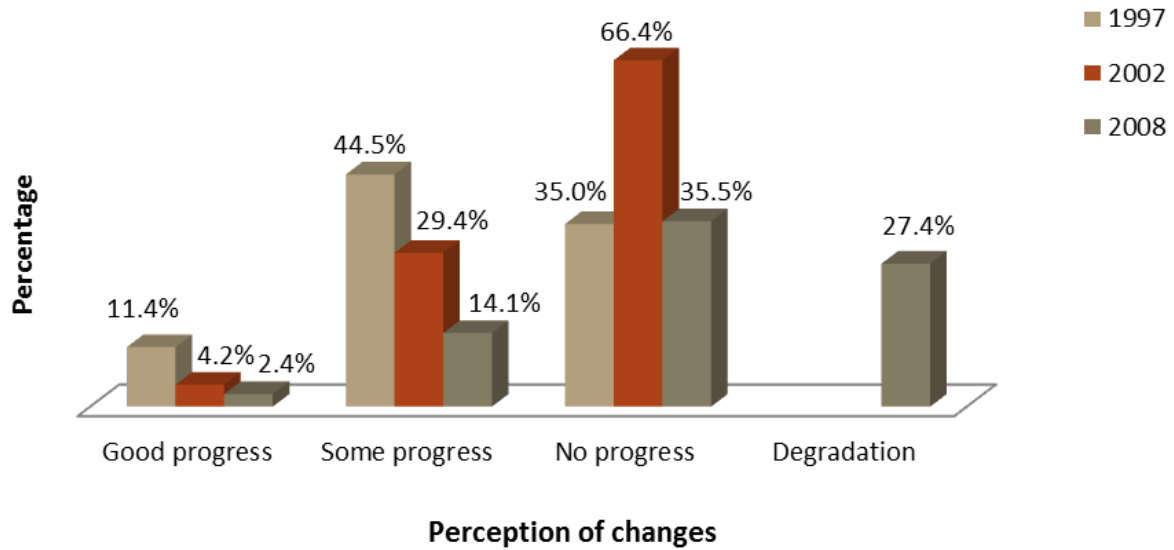
Lastly, geographic isolation seems to have an influence on the admission to a treatment facility ($p < 0.05$). Indeed, more respondents from zones 3 and 4 (5.0% and 7.6% respectively) say that they have been in a treatment facility over the last year, compared to zones 1 and 2 (3.7% and 2.5%).

7. PERCEPTION OF ISSUES RELATED TO ADDICTIONS

The RHS 2008 allowed respondents to voice their opinion on their communities' major issues. 83.6% of them said that these issues include alcohol and drug use.

Adult respondents already thought that the issue of addictions had not improved already back in the Regional Medical Survey in 1997 and the RHS 2002. In fact, the proportion of respondents who said that no progress had been made in that field has nearly doubled between 1997 and 2002 (35.0% vs. 66.4%). Conversely, 11.4% said that they had seen significant progress in 1997 (vs. 4.2% in 2002) and 44.5% had seen some progress (vs. 29.4% in 2002). Figure 23 shows that this trend is still true in 2008. In fact, the majority of respondents (62.9%) see no change or, even worse, believe that the situation has degraded.

Figure 23: Perception of changes in terms of drug addiction over the last 12 months, population aged 12 and up, 1997-2002-2008 comparison



*The question on degradation was not asked in 1997 and 2002.

Drug addictions remain a major issue for the majority of the First Nations population who, sadly, sees very little improvement in that field, if not a degradation.

DISCUSSION

Based on the results of the *Regional Survey on the Health of First Nations of Quebec, 2008* (RHS 2008), it is clear that the drug-addiction issue is still very real within Quebec First Nations communities. While there is some improvement, including an increase in alcohol abstinence, there is mostly a stagnation or degradation of the situation between 2002 and 2008, both in terms of numbers and perception.


Alcohol consumption patterns amongst First Nations are more risky than for the rest of the province. In fact, while there is a higher abstinence rate and a lower consumption, excessive consumption or binge drinking is two times higher than for the rest of Quebec. Yet, the risks associated to such high consumption are known: increased risk of myocardial infarction, violence, unprotected sex and accidents (INSPQ, 2010; Room, 2005; Flegel, 2011). It would be interesting to investigate the reasons why First Nations rely on that type of consumption, in order to better focus the required actions.

In addition to the above-mentioned risks, there are specific risks associated with the use of alcohol in pregnant women. In fact, women who take alcohol during pregnancy can give birth to a child suffering from the foetal alcohol spectrum disorder (FASD), including its most visible form, the foetal alcohol syndrome (FAS) (PHAC, 2006). In addition, it is estimated that the incidence of FASD and FAS is higher amongst a few First Nations communities in Canada (PHAC, 2006). RHS 2002 revealed that 29.6% of women had taken alcohol during pregnancy, compared to 17.7% of women in the rest of Quebec, based on the ESCC 2005 (April, 2010). Unfortunately, all questions on alcohol use amongst pregnant women were removed from RHS 2008, which prevents us from monitoring trends.

Drug use is also much higher amongst First Nations compared to the rest of the province. Between 2002 and 2008, the proportion of respondents who said that they had used at least one type of drugs went from 36.2% to 37.2%. The most commonly-used drugs are the same for First Nations and the rest of the Quebec population: cannabis and cocaine. However, the use of cannabis is two times higher, and cocaine, nearly ten times higher. Amongst First Nations youths, the use of cocaine has increased more than two-fold since 2008, while in Quebec, there is a decreasing trend. These worrying results with respect to cocaine trigger questions about the information bias due to surveying methods. For instance, an individual could say that he has used cocaine, when the substance he got and used was in fact not really cocaine.

Unfortunately, it is difficult to analyze the trends for the use of amphetamines amongst First Nations; in RHS 2002, they were in the same category as some hallucinogen drugs. In addition, while the results of RHS 2008 reveal a decrease in the use of opioid drugs, recent field observations rather suggest that the use of this type of prescription drugs is increasing. It would be interesting to monitor this trend in the future. Lastly, it is worth mentioning that the use of cocaine is significantly lower in zone 4 communities. It would be interesting to study the causes of that difference: is it a matter of access to cocaine or different drug-use behaviour?

The use of alcohol or drugs rarely comes alone. The cumulation of risky behaviours (use of alcohol and drugs) affects more than one third of the First Nations population; this is three times higher than the rest of Quebec. Young adults are particularly



at risk, with more than half who are using both alcohol and drugs. Focusing on this issue seems important, as the effects of the various substances can be amplified, which can lead to more serious health risks: overdose, increased risk-taking (unprotected sex, sharing of injection materials, driving under the influence), bad response to addiction treatments (Stohler, 2003; Trudel, 2010).

Risk groups usually distinguish themselves for both drugs and alcohol. They are men, youths, individuals living in a remote community and those with a low household income. Youths aged 12-17 are also a group worth keeping an eye on; experimenting alcohol and drugs at a young age is a key factor to a future, recurrent use (Vega, 1993). In addition, a number of studies show that there are many consequences on the youths' physical (blood-borne and sexually transmitted infections, youth pregnancy, traumatism), mental (anxiety, depression, dependence) and psychosocial (academic issues, dropping out, delinquency, violence) health among those who use drugs (INSPQ, 2010). Finally, as previously demonstrated in the literature, individuals with mental health issues or with a history of certain traumatism (violence or abuse, residential schools) have higher proportions of alcohol and drug use. Knowing all these socio-demographical aspects should allow us to focus our actions by identifying the groups at risk.

The gambling portrait for First Nations is not easy to assess. Contrary to RHS 2002, RHS 2008 did not focus on gambling over the previous year, but rather on its prevalence over the entire life. Consequently, parallels with variables that could have changed over time are more or less appropriate (income, education, geographic zone). In fact, it is interesting to understand the time relationship between a year's income and gambling in the same year, for instance. In the future, it would be well-advised to ask questions on gambling over the past year. In addition, questions about the participation to gambling activities should also be asked to youths aged 12-17, since 10% of Quebec high-school students do so (Émond, 2005).

Treatment seeking is important for youths aged 18-34; nearly one in five individuals have already sought treatment for alcoholism or drug addiction. This is higher than the previous generation. Is that reality of how high the prevalence of addictions really is amongst youths? Or is it due to a better access to services or the fact that drug addiction and their treatment is not as taboo anymore?

Finally, the data gathered have some limitations due to the topic and method used. Consequently, the social desirability bias is a key factor and could lead to an underestimation of consumption. However, this bias is the same for all surveys and does not make, for instance, any comparisons with Quebec any less worthy. A memory bias is of course present, but its impact on answers is not significant.

CONCLUSION

Faced with such a worrying situation, it is important for everyone to work together to stop the increase of drug use in Quebec First Nations communities. Many challenges are surfacing, such as the trivialization of drug use, the ease of access to substances and gambling, the arrival of new products with unknown toxicity and a wide spectrum of major consequences to addictions. Efficient response measures must be taken or enforced with all concerned parties. Recommendations and an action plan have been prepared following a summit on Quebec First Nations addictions, held in February 2011. These recommendations address the prevention and improvement of the care continuum (AFNQL, 2011), and they include actions on the development of individuals and interveners' capacities, reducing access to substances, promoting healthy living habits and culture, and the improvement of services.

*"Wake up! Open your eyes! We've had enough of running around in circles
and ending up nowhere!"*

Kanapeush Vollant, youth representative (FNQLHSSC, 2011)

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