

Canada's low-risk alcohol drinking guidelines among post-secondary students



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Fact Sheet

Heavy alcohol consumption is one of the most challenging issues facing institutions of higher education; harmful use or misuse can lead to the degradation of the on-campus environment and affect the quality of education. Recently, the Canadian Centre on Substance Abuse (CCSA) released *Canada's Low-Risk Alcohol Drinking Guidelines* (LRADG).

Recommendations within these guidelines state that women should not exceed two alcoholic drinks per day, 10 per week, and that men should have no more than three alcoholic drinks a day, 15 per week.^a For both sexes, an extra beverage is allowed on special occasions.

The objectives of this project were 1) to assess trends in alcohol use amongst post-secondary students in the City of Greater Sudbury; 2) to assess their awareness of the LRADG; and 3) to identify prevention strategies from which students could benefit.

Key Findings

A total of 1,829 students completed the survey. The majority of respondents attended Laurentian University (n=1,518). The mean age was 22.8 years old and 68.5% (n=1,247) of respondents were between the ages of 19 and 24 years. Seventy-five percent (n=1,360) of the respondents were female.

Ninety-two percent (n=1,677) of the students reported consuming alcohol in the past 12 months. Based on valid cases, forty-seven percent (n=711) of respondents drank in excess of at least one of the LRADG measures in the past year (Daily recommendations: 28.8%; Weekly recommendations: 9.0%; Binge drank regularly: 41.3%). A greater percentage of men, students between the ages of 19 and 24, Caucasians and students living in residence exceeded daily, weekly, and bingeing limits.

Fifteen percent (n=278) of students had seen or heard of the LRADG in the past. The preferred means to receive information about the LRADG were 'through the media' (32.3%; n=576), and 'electronically' (31.7%; n=567).

^a **Canadian Centre on Substance Abuse.** Canada's Low-Risk Alcohol Drinking Guidelines. [Online] 2013. [Cited: August 21, 2014.] <http://www.ccsa.ca/Resource%20Library/2012-Canada-Low-Risk-Alcohol-Drinking-Guidelines-Brochure-en.pdf>.

Conclusions and Recommendations

Our results support the need to encourage the responsible consumption of alcohol in post-secondary institutions in the City of Greater Sudbury. Students, administrators, and health promoters/educators all have a responsibility in implementing strategies and initiatives to reduce and prevent alcohol-related harms. The key to success is to create a campus where responsible drinking behaviours are the social norm, where policies are in place to reduce risks and support students in engaging in healthy behaviours, and health messaging is tailored appropriately for the target audience. Only then will a culture of moderation be embraced.

Executive Summary

Background

Inappropriate alcohol consumption in the post-secondary setting is one of the most challenging issues facing institutions of higher education.¹ Canada's Low-Risk Alcohol Drinking Guidelines (LRADG) are a key component of the National Alcohol Strategy and were developed to help Canadians moderate their alcohol consumption and reduce their immediate and long-term alcohol-related harms.^{2,3} Recommendations within these guidelines state that women should not exceed two alcoholic drinks per day, and no more than 10 per week, while men should have no more than three drinks a day, 15 per week.³ On special occasions, the LRADG allow for one extra alcoholic beverage (three per day for women and four for men), but these exceptions are discouraged for young adults under 24 years of age.^{2,4} Excessive alcohol consumption peaks in young adulthood (ages 18/19-24 years),⁵ the age group that makes up the majority of the undergraduate student population, and that has the highest rates of non-compliance with the LRADG.⁶ Additionally, a significant proportion of students engage in episodic heavy drinking (also referred to as 'binge drinking').⁷ A binge drinking episode is the consumption of five or more drinks in one occasion, and ultimately exceeds any of the daily LRADG recommendations for both sexes. The consequences of exceeding the LRADG are serious and may contribute to the degradation of the on-campus environment and affect the quality of education.⁸

Action to mitigate alcohol-related harms is essential, as according to *The Canadian Community Health Survey 2011/2012*, the percentage of individuals in Ontario between the ages of 19 and 24 who exceed the LRADG is alarming (Exceeds Daily: 29.9%; Exceeds Weekly: 9.2%; Binges Regularly^b: 39.1%).⁹ Rates are said to be as high or higher in post-secondary settings.^{5,10} The prevalence of alcohol misuse among young people underscores the importance of an in-depth examination. Harm-reduction and health promotion efforts require a concerted examination of the culture of alcohol use on campus¹¹ as the assessment of alcohol-related behaviours (e.g. student use, knowledge, awareness of harms) can inform a comprehensive strategy that addresses the extent of misuse, and the context within which it occurs. Furthermore, an approach that involves all post-secondary institution members and partners, including students, has the potential to generate sustained and meaningful change.¹²

^b Once a month or more

As a preliminary step to addressing issues relating to the consumption of alcohol at post-secondary institutions in the City of Greater Sudbury, our team conducted a campus-wide survey of the student populations of Laurentian University, Cambrian College and Collège Boréal. The goals of our study were a) to assess trends in alcohol use among post-secondary students in the City of Greater Sudbury (as per the LRADG); b) to assess their awareness of the LRADG ; and c) to identify – via collaborative input – best practice prevention and intervention strategies from which students could benefit. Results will inform programs designed to target alcohol consumption behaviours. This project will also serve as a model for engaging community partners and ensuring the use of evidence-informed public health practice at post-secondary institutions.

Methods

The *Campus Alcohol Behaviour Survey* – a 50 item questionnaire – was collated based on questions from pre-existing population health surveys using *Gravic's Remark Web Survey*[®]. The intent was to use items with pre-established psychometric properties. All students^c (~15,000) enrolled at one of three post-secondary institutions in the City of Greater Sudbury (Laurentian University, Cambrian College, and Collège Boréal) were given access to both English and French versions of the survey via their student email account in the fall of 2013. Participation was voluntary and an incentive was offered. Survey data were analysed in *IBM[®] SPSS[®] Statistics 21*.

Results

Demographics: A total of 1,829 students completed the survey. The majority of respondents attended Laurentian University (n=1,518). The mean age was 22.8 years and 68.5% (n=1,247) of respondents were between the ages of 19 and 24 years. Seventy-five percent (n=1,360) of respondents were female and 84.4% (n=1,526) were Caucasian. English was identified as the first official language spoken for 65.8% (n=1,197). Twenty one percent of respondents (n=383) lived in residence.

Alcohol Use: Ninety-two percent (n=1,677) of the students reported consuming alcohol in the past 12 months. Collectively, 46.6% (n=711) of respondents (including abstainers) drank alcohol in excess of at least one of the LRADG measures (including binge drinking at least once a month) in the past year. A greater percentage of men, when compared to women, exceeded daily (33.8% vs 27.1%), weekly (13.3% vs. 7.5%), binge drinking (50.7% vs. 38.1%) and combined measures (54.9% vs. 43.8%) limits. A greater percentage of students between the ages of 19 and 24 years, when compared to those younger than 19 or older than 24, exceeded daily (30.8% vs 23.2% and 25.1%), weekly (10.0% vs. 6.0% and 7.1%), binge drinking (46.8% vs. 33.7% and 27.0%) and combined measures (50.7% vs. 38.1% and 36.7%) limits. A greater percentage of Caucasians, when compared to non-Caucasians, exceeded daily (30.1% vs. 21.6%), weekly (9.5% vs.

^c Includes full-time & part time, undergraduate & graduate, and in-person & distance education students. Students attending the Laurentian University satellite campus in Barrie were also eligible to receive the email invitation, and some may have participated in the survey.

6.0%), binge drinking (43.0% vs. 32.1%) and combined measures (48.6% vs. 35.3%) limits. A greater percentage of students living in residence, when compared to those living off-campus with or without parent/s or guardian/s, exceeded the daily (33.9% vs. 21.2% and 31.2%), weekly (11.2% vs. 6.2% and 9.8%), binge drinking (43.2% vs. 38.9% and 42.1%) and combined measures (48.1% vs. 42.7 and 48.4%) limits.

Knowledge: Fifteen percent (n=278) of students had seen or heard of the LRADG. Awareness of the LRADG was higher among women (16.3%; n=222), students older than 24 years (20.1%; n = 74), non-Caucasians (18.9%; n=53) and students living in residence (17.3%; n=66). Awareness of Canada's LRADG was associated with more moderate drinking behaviours^d. The preferred means to receive information about the LRADG was 'through the media' (32.3%; n=576), closely followed by 'electronically' (31.7%; n=567).

Beliefs: Alcohol consumers who exceeded the LRADG were inclined to adopt beliefs that are generally associated with at-risk drinking, while moderate and Alcohol abstainers alike largely held opposing beliefs. Students typically favoured less enforcement from administration and the government, but attitudes towards prevention and education efforts were generally positive. For example, most of the students (85.9%, n=1,447) had a neutral or favourable opinion towards the statement '*there should be more alcohol education programs on campus*'.

Health Information: The majority of students (81.9%, n=1,469) were interested in receiving health-related information or advice. The percentage of students inclined to receive this type of material was greater among women, as well as non-Caucasians. There was no association between age and willingness to receive health information. The preferred means for all demographic groups to receive general health information was electronically (35.0%, n=616).

Conclusions

Our results support the need to encourage the responsible consumption of alcohol in post-secondary institutions in the City of Greater Sudbury. Furthermore, few respondents were familiar with the LRADG. However, raising awareness about these guidelines could contribute to a healthier campus environment, and encouragingly, students demonstrated interest in receiving more education regarding alcohol and their health, especially through media and electronic means.

Recommendations

Our results and review of the literature provide a guide for students, administrators and health promoters to develop a comprehensive program tailored to the needs of the post-secondary student population:

^d i.e. reduced frequency of binge drinking episodes ($\chi^2=11.144$, $p=0.011$), and fewer episodes of drunkenness ($\chi^2=8.234$, $p=0.016$).

1. ***Student leaders*** can develop an awareness and education strategy for students around the risks and harms associated with heavy alcohol consumption. They may also influence actual and perceived social norms by developing an awareness campaign to de-normalize binge drinking, and by establishing peer-led educational programs that allow students to engage in an open and trusting discussion with fellow students.
2. ***Administrators and decision-makers*** need to enforce all current alcohol laws and regulations. They should also implement harm-reduction measures, such as banning drinking games and objects that encourage rapid or high volume consumption, develop and enforce policies for institution-sanctioned and student-led events, provide staff training, and create supportive environments where post-secondary students are safe and encouraged to live healthy lifestyles.
3. ***Health Promoters and educators*** should disseminate health promotion messaging via the media and electronically, offer and implement the use of Screening & Brief Intervention (SBI) tools, deliver LRADG and health promotion messaging to all students, as well as further target high-risk students and high-risk alcohol use.

Introduction

Inappropriate alcohol consumption in the post-secondary setting is one of the most challenging issues facing institutions of higher education.¹ Recently, the Canadian Centre on Substance Abuse (CCSA) released the *Canadian Low-Risk Alcohol Drinking Guidelines* (LRADG).² The LRADG are a key component of the National Alcohol Strategy and were developed to help Canadians moderate their alcohol consumption and reduce their immediate and long-term alcohol-related harm. The LRADG state that women should not exceed two alcoholic drinks per day, 10 per week, and that men should have no more than three alcoholic drinks per day, 15 per week.³ On special occasions, the LRADG allow for one extra beverage (three for women and four for men), but these exceptions are strongly discouraged for young adults under the age of 24.^{2,4} Excessive alcohol consumption peaks in young adulthood (ages 18/19-24 years),⁵ the age group that makes up the majority of the undergraduate student population, and that has the highest rates of non-compliance with the LRADG.⁶ Additionally, a significant proportion of students engage in episodic heavy drinking (also referred to as ‘binge drinking’).⁷ The consequences of exceeding the LRADG are serious and may contribute to the degradation of the on-campus environment and affect the quality of education.⁸

Action to mitigate alcohol-related harms is essential as according to *the Canadian Community Health Survey 2011/2012* the percentage of persons in Ontario between the ages of 19 and 24 who exceed the LRADG is alarming (exceeds weekly- 9.2%; exceeds daily- 29.9%; binges regularly^e- 39.1%).⁹ Rates are said to be as high or higher in post-secondary settings.^{5,10} The sheer prevalence of alcohol misuse amongst these young people underscores the importance of an in-depth examination. Harm-reduction and health promotion efforts require a concerted examination of the culture of alcohol use on campus;¹¹ the assessment of alcohol-related behaviours (e.g. student use, awareness of harms) can inform a comprehensive strategy that addresses the extent of misuse, and the context within which it occurs. Furthermore, an approach that involves all post-secondary institution members and partners, including students, has the potential to generate sustained and meaningful change.¹²

As a preliminary step to addressing issues relating to the consumption of alcohol at post-secondary institutions in the City of Greater Sudbury, our team conducted campus-wide surveys of the student populations of Laurentian University, Cambrian College and Collège Boréal. The goals of our study were a) to assess trends in alcohol use among post-secondary

^e Once a month or more

students in the City of Greater Sudbury (as per the LRADG); b) to assess their awareness of the LRADG ; and c) to identify – via collaborative input – best practice prevention and intervention strategies from which students could benefit. Results will inform programs designed to target alcohol consumption behaviours. This project will also serve as a model for engaging community partners and encouraging the use of evidence informed public health practice at post-secondary institutions.

Background

Alcohol is the most widely used psychoactive drug among Canada’s teens and young adults.^{13,14} The National Institute on Alcohol Abuse and Alcoholism (NIAAA) found that young adults who attend post-secondary institutions consume even more alcohol than their non-student counterparts.¹⁵ The Nova Scotia Department of Health and Wellness¹¹ noted that alcohol consumption is often perceived to be a part of the transitioning process from secondary to post-secondary education, a sort of rite of passage. According to the 2004 *Canadian Campus Survey* (CCS), alcohol was consumed by over 85% of Canadian students in the past year.⁷

Post-secondary students display diverse alcohol consumption patterns. Their degrees of use may vary from experimental, to intensive. According to Oei and Morawska,¹⁶ there are four types of drinkers: normal/social drinkers, binge drinkers, regular heavy drinkers, and problem drinkers or alcoholics. Binge drinking is a characteristic of post-secondary students.^{11,17} Binge drinking episodes are frequently defined as the consumption of five or more alcoholic drinks on one occasion for men, and four or more drinks on one occasion for women.^{11,18} However, our study refers to the description (previously) adopted by Statistics Canada¹⁹ and the CCS⁷ that defines binge drinking as having five or more alcoholic drinks on any one occasion, irrespective of sex.^f Binge drinking ultimately exceeds any of the LRADG daily limits for both sexes, and is strongly discouraged. Like any form of excessive drinking, binge drinking may lead to more serious and problematic drinking patterns and alcohol use disorders.²⁰ Its monthly prevalence among Canadian post-secondary students was nearly 30% in the year prior to the CCS.⁷

Consequences of Alcohol Use and Misuse

Alcohol misuse can lead to a variety of harmful outcomes; these include detrimental physical, social, mental, economic and environmental consequences.^{14,21} An array of acute and chronic physical effects from hazardous alcohol consumption exists along a continuum of severity, ranging from minor personal injuries to death. There is a growing body of evidence linking short- and long-term alcohol consumption to more than 60 chronic

^f Since the collection of our data, Statistics Canada has reduced women’s measure for binge drinking to four or more drinks to conform to the World Health Organization and Health Canada guidelines (see <http://www.statcan.gc.ca/pub/82-625-x/2014001/article/14019-eng.htm>).

debilitative conditions¹² including stroke and cancer.^{22,23} According to the World Health Organization (WHO), alcohol is responsible for 3.3 million deaths (or 5.9% of all deaths) annually.²⁴

Excessive use also increases the risk of unplanned sexual activity, unprotected sex, sexual and physical assaults, falls, suicides and motor vehicle collisions.^{11, 25, 22} In 2002 alone, 4,258 deaths of Canadians were attributed to the consumption of alcohol.²⁶ Teenagers and young adults are particularly vulnerable to fatalities due to personal injuries and poisoning that are often alcohol-related.¹⁴ According to Mothers Against Drunk Driving (MADD),²⁷ the leading causes of death among youth 16 to 25 years are motor vehicle collisions, with alcohol and/or drugs being a factor in more than half of accidents.

When individuals of any age engage in harmful drinking patterns, alcohol can interfere with areas of the brain related to executive functioning, either momentarily or permanently.¹⁴ However, the LRADG emphasize that youth in their late teens to age 24 years should never exceed the daily and weekly limits.²⁸ This is due to the fact that the brain is particularly vulnerable during youth and early adulthood, and alcohol misuse can hinder its development and consequently lead to problems in adulthood.^{29, 30} Evidence also suggests a strong association between early initiation of drinking (especially heavy drinking) and later alcohol-related problems.³⁰

Alcohol misuse may also negatively impact a person's mental health.¹⁴ For instance, behaviours such as bingeing can contribute or lead to alcohol dependence, depression,^{12, 22, 31} and elevated distress.⁷ These effects undoubtedly contribute to the elevated rates of mental distress that today's post-secondary students' experience.⁷

Other consequences commonly experienced by those who consume alcohol excessively are feelings of guilt and regret, hangovers, memory loss, and further effects that could hinder the performance of normal everyday activities.⁷ For students, binge drinking is associated with missing classes, falling behind in assignments, having lower grades, sleep disturbances, the deterioration of relationships, and increased contact with the police.⁸

Binge drinking has several peripheral impacts; other students, university faculty, staff, as well as the broader geographic community in which schools are located are negatively affected by students who excessively consume alcohol. These are also known as second hand effects of drinking.³² Examples include: noise and sleep disturbances, property damage, being insulted or humiliated, being involved in serious arguments, being pushed, hit or assaulted, and the increased presence of litter.^{7, 8, 11, 32}

Factors Linked to Student Alcohol Use and Misuse

Individual Factors

Personality traits and cognitive processes can help explain one's drinking patterns.^{13, 33} For example, those with low academic and/or high recreational orientation tend have more excessive alcohol drinking habits.³⁴ Similarly, those who have lowered impulse control

and/or are sensation-seeking and/or who seek independence display riskier alcohol behaviours.^{35,36} Furthermore, a person's motivation helps determine the drinking behaviours that are adopted; many individuals are motivated to drink in order to amplify positive affective states, escape negative ones, express socially inappropriate behaviour, enhance social pleasures, or simply to get intoxicated.³⁵ There also appears to be ethnic, cultural and religious differences.^{30,33}

In terms of gender, the literature clearly shows that male students report heavier and more frequent alcohol consumption than female students.^{14,37} Gliksman, Adlaf, Demers, and Newton-Taylor³⁴ found that men were more likely than women to drink alcohol at least twice per week (27.0% vs. 15.1%) and in greater quantities on a weekly basis (8.8 vs. 4.6 drinks per week in the past-year). On the other hand, women are more likely than men to refuse an alcoholic drink.³⁸ However, despite the fact that men are more likely to drink excessively than women, there are concerns for women's drinking patterns given that the extent of female drinking has increased exponentially in recent years^{39,40} and they are closing the gender gap.¹⁴ It is particularly alarming since women tend to have lower alcohol metabolizing enzyme activity,⁴¹ typically weigh less than men, and relatively speaking, usually have less muscle mass than men do. Thus, even if consuming the same amount of alcohol, blood alcohol concentration in women tends to be higher than men even if they are of the same weight.⁴²

Social Factors

Parents (or guardians) influence student alcohol drinking patterns, especially when students live at home.⁷ Researchers have found that students living off-campus with parents/guardians drink alcohol less often and less heavily than students living without them.^{7,34} Furthermore, the stronger and more positive the student-parent/guardian relationship, the greater the chance a student will consume alcohol responsibly.^{35,43} However, this effect is more likely to occur when the parents/guardians themselves do not engage in excessive alcohol consumption.³⁵ Regardless of living arrangement, parental/guardian influence is significantly reduced once their dependents enter college or university, due in great part to peer influence (commonly referred to as 'peer pressure').⁴³

Alcohol consumption norms have an important impact on drinking practices among post-secondary students.^{13,43} Indeed, there is a strong tendency for people to conform to group patterns and expectations⁴³ and peer influence is undoubtedly one of the most, if not the most powerful predictor of alcohol consumption behavior.^{35,27,43} Being without a drink at a social function typically invites comments or offers of alcohol,³⁸ and represents a classic example of peer pressure. In addition to overt offers of alcohol, peer pressure may also include attempts to conform to actual and perceived social norms.¹³ All of these factors can incite a student to begin drinking or to adopt riskier alcohol drinking behaviours.^{35,38} Moreover, students spend a considerable amount of time off-campus and their social influence is not exclusive to the campus environment.^{13,43}

Environmental Factors

Alcohol consumption is also influenced by living arrangements.³⁷ Researchers have found that students living on-campus drink alcohol more often and more heavily than students living off-campus.^{7,34} Students tend to take advantage of low-priced promotions, happy hours and cover charges for unlimited drinking at bars on campus⁷ and attendance at such promotional events is associated with excessive drinking.³⁹ In the CCS, students who frequently consumed alcohol found the campus environment conducive to their drinking, and heavy drinkers believed that the alcohol policies on their campus were not enforced.⁷ This is consistent with the literature in that alcohol consumption and related harm is positively associated with alcohol availability.⁴⁴

Prevention of Alcohol Misuse in Post-Secondary Institutions

The literature points to events of transition to independence, such as pursuing post-secondary studies, as key periods to address the prevalence of alcohol misuse.^{12,45,46} Post-secondary institutions should therefore endeavour to foster a culture of moderation and health. The best way to achieve this is by adopting a comprehensive health promotion approach as opposed to stand-alone programs,^{12,13} since every individual mode of health education has its own scope of effectiveness.⁴⁷ Intervention and prevention programs need to reach college/university students on all levels; including the individual level (e.g. to seek to reduce the demand for alcohol and individual harms that can result from heavy drinking) and the environmental level (e.g. to focus on reducing the supply and access of alcohol to the students).¹¹ According to the social-ecological model,⁴⁸ comprehensive approaches have several levels of influence; they act on individual, interpersonal, organizational, community and public health policy levels. Accordingly, a comprehensive strategy could involve, but is not exclusive to, education and awareness, social marketing, skill-building, policies, restricting access to alcohol, environmental supports, and community action, in conjunction with treatment and early intervention health services. Furthermore, systems to monitor alcohol use should be developed, and all initiatives ought to be evaluated, to ensure the effective progress of the program.^{12,21}

Policies, Restricted Access to Alcohol and Environmental Support

Ultimately, to address alcohol consumption behaviours and reduce alcohol-related harms at the local level, evidence points first and foremost to policy efforts. As noted by Babor and colleagues,²¹ in order to reduce harm and promote positive health (individual and community), a comprehensive policy approach must focus on seven key areas: Pricing and taxation, the regulation of physical availability, modification of the drinking environment, drinking and driving countermeasures, restrictions on marketing, education and persuasion, as well as early intervention and treatment.

Regulating alcohol availability and consumption should be a priority,¹² particularly since according to the CCS,⁷ “*frequent drinkers find the campus environment conducive to their drinking, and heavy drinkers believe that the alcohol policies on their campus are not enforced*” (p.87). Possible regulations include prohibiting alcohol discounts, ensuring that non-alcoholic beverages are always available and less expensive,¹¹ limiting sponsorships by alcoholic beverage producers and retailers, increasing the price or taxes on alcoholic beverages,^{13, 45, 49} restricting alcohol industry and event advertisement to students on- and off-campus if possible,^{12, 13, 45} restricting the number of alcohol outlets in a given area, restricting hours and days of sale of outlets, and requiring campus bar servers to receive appropriate training and comply with such training.^{21, 50} Given the fact that roughly 90% of first-year students who live in post-secondary residences in Ontario are under the legal drinking age,^{8, 11} institutions should place a particular emphasis on reinforcing the laws prohibiting access and sales to minors, which is now a well-known best practice for reducing underage and risky drinking among that population.^{12, 45, 49, 51, 52, 53}

All policies must be clear to students^{51, 54} and to the rest of the campus community, and must be enforced to ensure adherence.¹² Policies should include standards of conduct, and iterate the consequences for breaking campus rules and regulations. Administration should also monitor and assess the policies on a regular basis and ideally, provide information on the risks associated with the misuse of alcohol.^{11, 45}

On-campus Housing

Findings reported earlier in this document suggest that campus residences should be a main target when attempting to prevent students’ alcohol misuse.⁷ It is suggested, and in some cases attempted, that some residences become completely ‘dry’, or in other words, alcohol-free.³² Many students themselves are in favour of dry residences. When asked, nearly 20% of students express that they either already live in an alcohol-free residence, or that they would like to.⁷ However, this strategy and the reduction of alcohol misuse is questionable because of the self-selection bias that occurs;³² students who voluntarily choose to live in alcohol-free residences often do so because they already prefer not to engage in, or be surrounded by such activities. Nonetheless, dry residences have the potential to help foster a healthy campus culture, and are certainly a valuable option to offer to students who wish not to suffer from the ‘second-hand’ consequences of alcohol misuse.³²

Another mean of treating the issue is by implementing and ensuring enforcement of health-promoting policies,⁵³ in addition to the policies mentioned previously. Examples of residence-oriented policies include: the prohibition of underage drinking, rules that limit when and where alcohol can be consumed, the regulation of the size of alcohol containers, and the prohibition of drinking games or use of drinking objects that encourages rapid or high volume consumption of alcohol (e.g. funnels).^{7, 11} Campus administrators could also designate ‘event staff’, including Residence Assistants, to monitor residence areas and events

⁸ 19 years

where alcohol is involved. Staff could work with the institution to develop a risk management assessment tool, and have students complete it before any event that may involve alcohol. This helps students to think about the hazards of consuming alcohol and thus may promote the adoption of less harmful behaviours.¹¹

Social Marketing Strategies

Numerous studies have shown that alcohol advertising and promotion increases the likelihood that adolescents will start to use alcohol and to drink more if they are already using alcohol.⁵⁵ Conversely, counter-advertising to balance the effects of alcohol advertising can decrease the appeal of alcoholic beverages, and social marketing can help raise awareness about new or changed alcohol policies.¹² Media strategies that have been found to increase the appeal of alcoholic beverages, such as the use of humour,⁵⁶ should also be used in counter-advertising. However, these strategies often result in limited positive behavioural change, and thus should be adopted coincidentally with a variety of other interventions.⁴⁵

Education and Support Services

Educational strategies are also recommended in a comprehensive initiative as their effectiveness is moderate.¹² The most reputable educational methods found in the existing literature include changing students' perceived norms and acting against peer influence by providing personalized normative feedback.^{12, 13, 21} A best practice in this field consists of performing 'Brief Interventions'.^{13, 21, 45, 57} Brief interventions are said to be particularly helpful for binge drinkers (as opposed to dependent drinkers),⁵⁸ and thus cater well to the post-secondary population.²¹ This evidence-based intervention consists of identifying at-risk drinkers, motivating them to change, providing feedback to the individuals about personal risk, explicit advice to change behaviour, and sometimes referral to specialists.^{59, 60, 61} They can range from a brief conversation to many counselling sessions⁵⁸ and may even be completed via mobile and online technology.⁶² These electronic tools present many advantages for the campus setting (e.g.: reach, feasibility, cost-effectiveness).⁶³

Post-secondary establishments should also ensure the existence of diversely accessible counselling, screening and treatment programs offered by fully trained professionals, and raise awareness about the availability of these support services. Computer-based interventions can serve as an alternative for individuals who remain hesitant to pursue potentially stigmatizing treatment such as face-to-face counselling or those who are reluctant to identify behaviours as problems.⁶⁴ Nonetheless, post-secondary institutions should make it a priority to prevent the stigmatization sometimes associated with the use of support services.¹³ Promoting equity and diversity as well as establishing anti-stigma practices across the entire campus community would help foster an inclusive and respectful atmosphere.⁶⁵

Skill-building

Researchers also recommend a shift toward interventions that enhance and facilitate adaptive qualities in youth, and away from interventions aimed at reducing risk factors and negative behaviour.⁶⁶ This means using strength-based practices such as building assets and fostering

resiliency in individuals. Encouraging students' connectedness to school is one example of a strength-based practice.¹² When using this positive approach, individuals are seen as being 'at promise' instead of 'at risk' and key strengths are cultivated. In turn, the more protective factors a young individual possesses or experiences, the more resilient they are, and the less likely they are to engage in the use of illicit substances, including alcohol and binge drinking.^{67, 68}

Student Engagement

Involving students in the decision-making process and ensuring their active participation and their taking ownership of programs aimed at the prevention of alcohol misuse merits consideration. In line with the previous paragraph, researchers have suggested that increasing student involvement in their campus and community through productive activities and volunteer services may help to limit overall campus alcohol consumption, thereby reducing associated harm.⁸ Furthermore, it has been found that peer-led initiatives are effective,⁶⁹ and specifically in reducing alcohol use among youth.^{70, 71} However, this health education approach appears to have seldom been considered for college/university age students. Encouraging post-secondary students to initiate prevention initiatives themselves would not only bolster their developmental strengths and sense of empowerment, but also maximize the effectiveness of the initiatives.

Community Partnerships

As discussed earlier, an effective approach to the prevention of alcohol misuse includes as many sectors and members as possible. This being said, campus interventions should be enhanced by community initiatives;¹³ Post-secondary institutions ought to be forming community coalitions^{11, 12, 13, 72} and implementing community-based interventions.⁴⁵ This could entail building sustained partnerships with local partners and stakeholders, including public health, to establish municipal policies aimed at reducing alcohol-related harms from student consumption on and off-campus.^{10, 11, 12, 13, 21} Collaboration with licensed establishments who cater to students may work especially well in reducing alcohol availability and accessibility. Last, educating and engaging parents and guardians in initiatives are also of importance, as they may play a role in moderating their child's alcohol-related behaviours.^{35, 73}

Summary

The drug of choice among college and university students is alcohol and there is reason for concern given the negative consequences of excessive alcohol use. Failure to undertake informed, comprehensive, and long-term efforts to encourage responsible alcohol consumption in post-secondary institutions may not only put students at risk, but negatively impact a university's reputation and can have legal ramifications.⁷⁴ Fortunately, harms associated with alcohol consumption are preventable, and research on comprehensive campus alcohol misuse prevention programs is highly encouraging.¹¹ Enforcing alcohol control policies, reducing access and availability of alcohol, controlling pricing and marketing, providing education and raising awareness, skill-building and forming community

partnerships are sensible strategies that may foster a healthy campus culture if used concurrently. Therefore, taking a holistic approach provides a realistic and promising avenue to addressing the current alcohol consumption patterns on college and university campuses.

Methods

Survey Development

We collated a questionnaire containing 50 items, having a completion time of less than 10 minutes and that included an opportunity to leave comments. The survey was titled: *Campus Alcohol Behaviour Survey*. Members of our research team reviewed pre-existing population health surveys, such as the *Canadian Community Health Survey (CCHS)*, the *Rapid Risk Factor Surveillance System (RRFSS)*, and the *Ontario Student Drug Use and Health Survey (OSDUHS)* to identify relevant questions. Questions from surveys that allowed us to a) assess trends in alcohol use b) evaluate awareness of Canada's LRADG, and c) identify prevention and intervention strategies were included in our survey. The intent was to use items with pre-established psychometric properties that are comparable to national population health data sets. Some questions were tailored according to the objectives of this project. Additional questions were added where necessary.

Once finalized, the survey questions that were not already available in French were translated to French by members of the research team. A back-translation was completed by a non-member to validate the accuracy of the original translation, and both the French and English versions were uploaded to the web. The project received approval from the Research Ethics Boards of all institutions involved.^h The survey was made accessible via the internet using *Gravic's Remark Web Survey*.^{® 75} The web-based version of the questionnaire was hosted on Laurentian University's (LU) secure server, using the proprietary survey software. Information transmitted via the web-based survey was protected by the security protocols of the Information Technology unit at LU. These included hardware and software firewalls to protect the server, and *Hypertext Transfer Protocol Secure (HTTPS)* to encrypt web survey data for the secure transmission of data between the respondent's computer and the LU server.

Data Collection

All studentsⁱ (~15 000) enrolled at one of three post-secondary institutions in the City of Greater Sudbury were given access to the survey via their student email account.^j

^h Collège Boréal, Cambrian College, Laurentian University and the Sudbury & District Health Unit

ⁱ Includes full-time & part time, undergraduate & graduate, and in-person & distance education students

Participation was voluntary. Two e-mails (an initial request to participate, and a reminder two weeks later) were sent to all students at Laurentian University, Cambrian College, and Collège Boréal in the fall of 2013. An incentive was offered: at the end of the survey, the students had the opportunity to enter their email address in a draw for a chance to win one of ten \$100 gift certificates to a bookstore or grocery store of their choice. Email address entries were held separately from the survey responses to protect the participants' anonymity. Notification of the incentive was included in the survey recruitment script to encourage participation.

Statistical Analyses

Survey data were analysed in *IBM® SPSS® Statistics 21*.⁷⁶ Descriptive statistics are presented using frequency distributions and group comparisons are reported using chi-square analyses. Only group level data were examined. For all analyses, missing values were excluded and cell sizes below five were suppressed.

^j Students attending the Laurentian University satellite campus in Barrie were also eligible to receive the email invitation, and some may have participated in the survey

Results

Survey Findings

Respondent Characteristics

A total of 1,829 students completed the *Campus Alcohol Behaviour Survey* in the fall of 2013 (for an estimated response rate of approximately 12%). The majority of respondents attended Laurentian University (n=1,518), followed by Cambrian College (n=212), and Collège Boréal (n=86).^k The mean age was 22.8 years old (range: 17 to 65 years). A total of 68.5% (n=1,247) of respondents were between the age of 19 and 24 years, and 11.0% (n=200) were below the age of 19. Seventy-five percent (n=1,360) of students were female and 84.4% (n=1,526) were Caucasian. English was identified as the first official language spoken for 65.8% (n=1,197) of the sample. Twenty one percent (n=383) lived in residence and 28.3% (n=510) were off-campus with their parent(s) or guardian(s). The remainder (50.5%, n=911) lived off-campus without a parent or guardian.

See Table 1

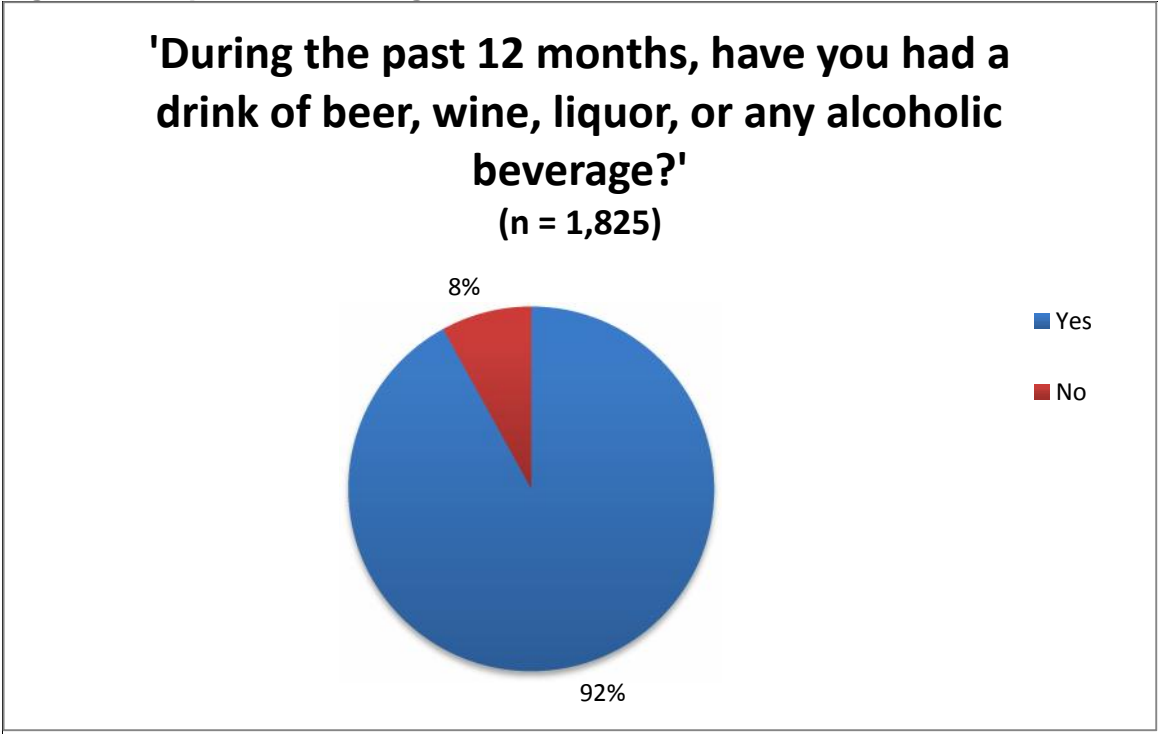
A. Alcohol Use

Ninety-two percent (n=1,677) (see Figure 1) of the students reported consuming at least one alcoholic drink in the past 12 months. Among alcohol consumers, many (76.9%, n=1,289) drank alcohol at least once a month in the past year, and 53.4% (n=895) declared getting drunk^l at least monthly.

^k Institution was not identified for n=13 respondents

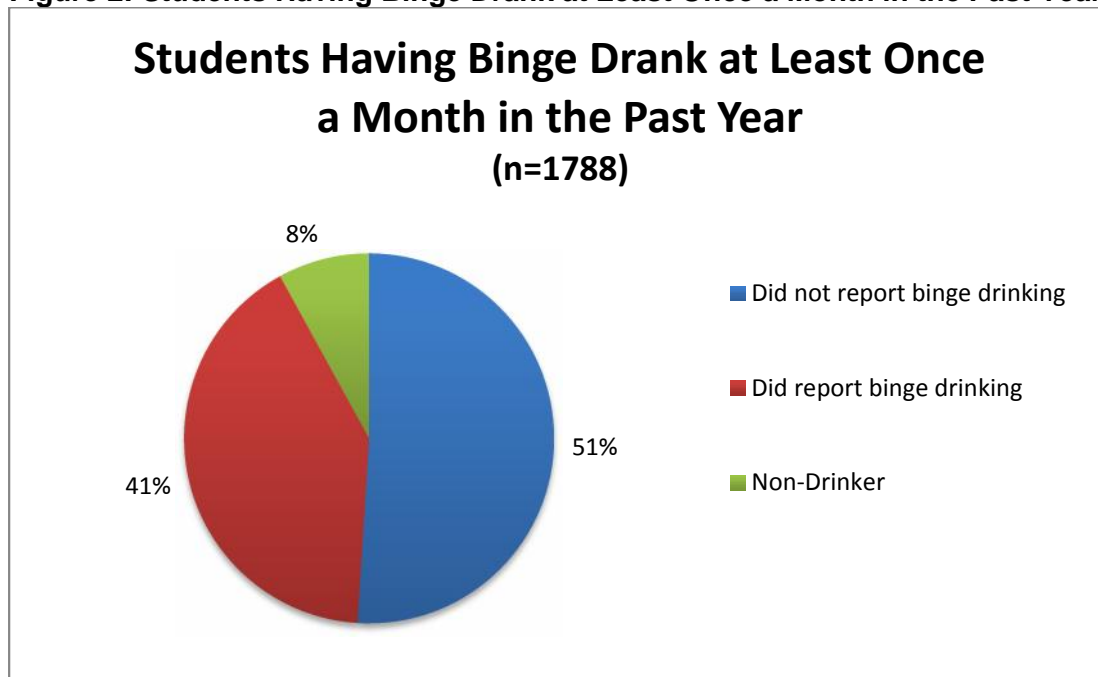
^l i.e. that they ‘got intoxicated to the point of impairment of physical and mental faculties’

Figure 1: Respondents Having Consumed Alcohol in the Past 12 Months



Nine percent of all students^m (n=137) consumed more than the weekly drinking recommended limit (or 9.9% when considering alcohol consumers only), and 28.8% (n=440) (or 31.7% of drinkers) of all students reported being over the daily limitⁿ at least once during the last seven days. Forty-one percent (n=738) of all students (or 44.6% of drinkers) reported binge drinking at least once a month in the past year (see Figure 2). Collectively, 46.6% (n=711) of the students who responded exceeded at least one of the LRADG measures^o in the past year (see Figure 3), which represents just over half (51.2%) of alcohol consumers.

Figure 2: Students Having Binge Drank at Least Once a Month in the Past Year

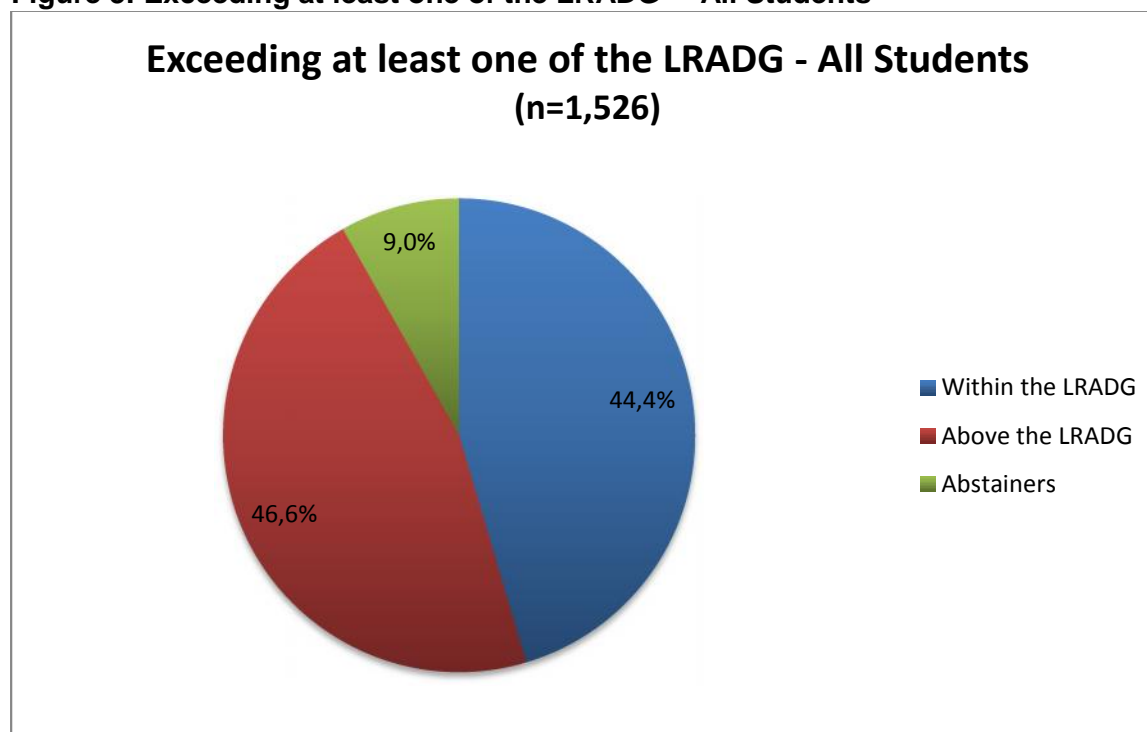


^m Including alcohol abstainers

ⁿ The LRADG guidelines for 'special occasions' were not utilized in the measurement of this variable

^o Exceeding LRADG was categorized as; Exceeding weekly or daily LRADG in the past 7 days or Binge drank at least once a month in the past 12 months.

Figure 3: Exceeding at least one of the LRADG^P - All Students



Associations between *sex* (daily $\chi^2=19.346$, $p<0.001$; weekly $\chi^2=23.563$, $p<0.001$; binge drinking $\chi^2=39.888$, $p<0.001$; combined measures $\chi^2=33.139$, $p<0.001$), *age* (daily $\chi^2=19.199$, $p=0.001$; weekly $\chi^2=18.920$, $p=0.001$; binge drinking $\chi^2=56.771$, $p<0.001$; combined measures $\chi^2=31.957$, $p<0.001$), *ethnicity* (daily $\chi^2=78.236$, $p<0.001$; weekly $\chi^2=78.220$, $p<0.001$; binge drinking $\chi^2=67.206$, $p<0.001$; combined measures $\chi^2=78.727$, $p<0.001$) and *living arrangements* (daily $\chi^2=25.026$, $p<0.001$; weekly $\chi^2=14.013$, $p<0.01$; binge drinking $\chi^2=9.693$, $p<0.05$; combined measures $\chi^2=10.520$, $p<0.05$) were found. There was no significant association between institution type and alcohol consumption behaviors.

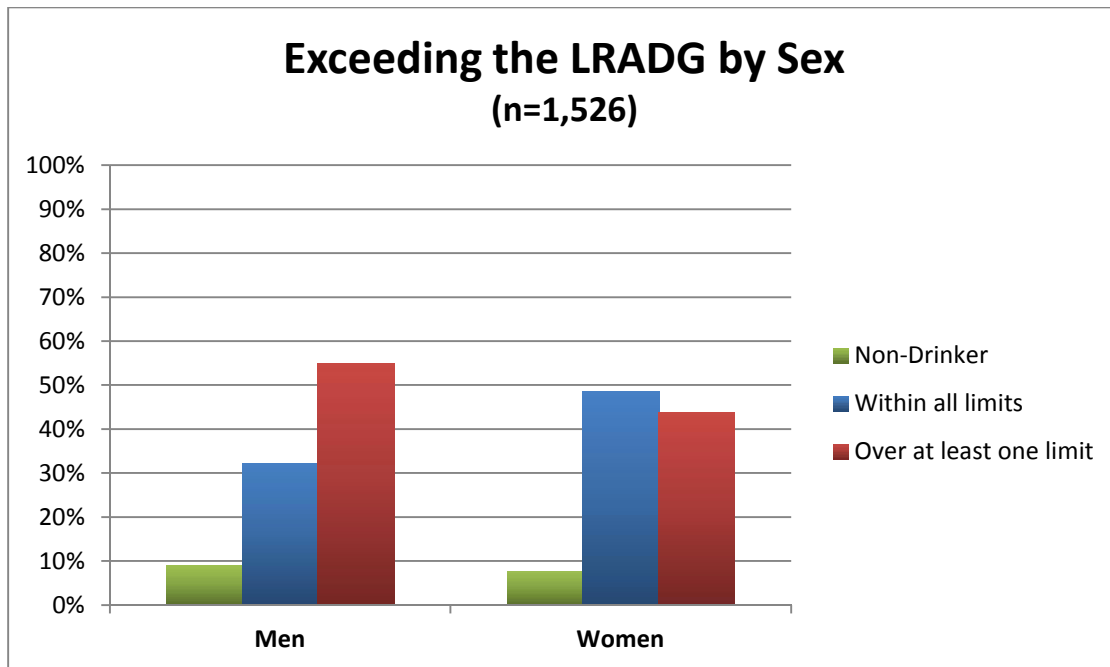
Although in our sample a slightly greater proportion of men (10.9%) completely abstained from alcohol in the past year as compared to women (7.1%) ($\chi^2=6.603$, $p=0.010$), males drank more frequently ($\chi^2=84.739$, $p<0.001$) and in greater quantities, than females. Specifically, a greater percentage of men, when compared to women, exceeded the daily (33.8% vs 27.1%), weekly (13.3% vs. 7.5%), binge drinking (50.7% vs. 38.1%) and combined measures (54.9% vs. 43.8%) (see Figure 4). A greater percentage of students between the ages of 19 and 24 years, when compared to those younger than 19 or older than 24, exceeded the daily (30.8% vs 23.2% and 25.1%), weekly (10.0% vs. 6.0% and 7.1%), binge drinking (46.8% vs. 33.7% and 27.0%) and combined measures (50.7% vs. 38.1% and 36.7%) (see Figure 5). A greater percentage of Caucasians, when compared to non-Caucasians, exceeded daily (30.1% vs. 21.6%), weekly (9.5% vs. 6.0%), binge drinking

^P Exceeding LRADG was categorized as; Exceeding weekly or daily LRADG in the past 7 days or Binge drank at least once a month in the past 12 months

(43.0% vs. 32.1%) and combined measures (48.6% vs. 35.3%). A greater percentage of students living in residence, when compared to those living off-campus with or without parent/s or guardian/s, exceeded the daily (33.9% vs. 21.2% and 31.2%), weekly (11.2% vs. 6.2% and 9.8%), binge drinking (43.2% vs. 38.9% and 42.1%) and combined measures (48.1% vs. 42.7 and 48.4%) limits.

See Tables 2 – 9

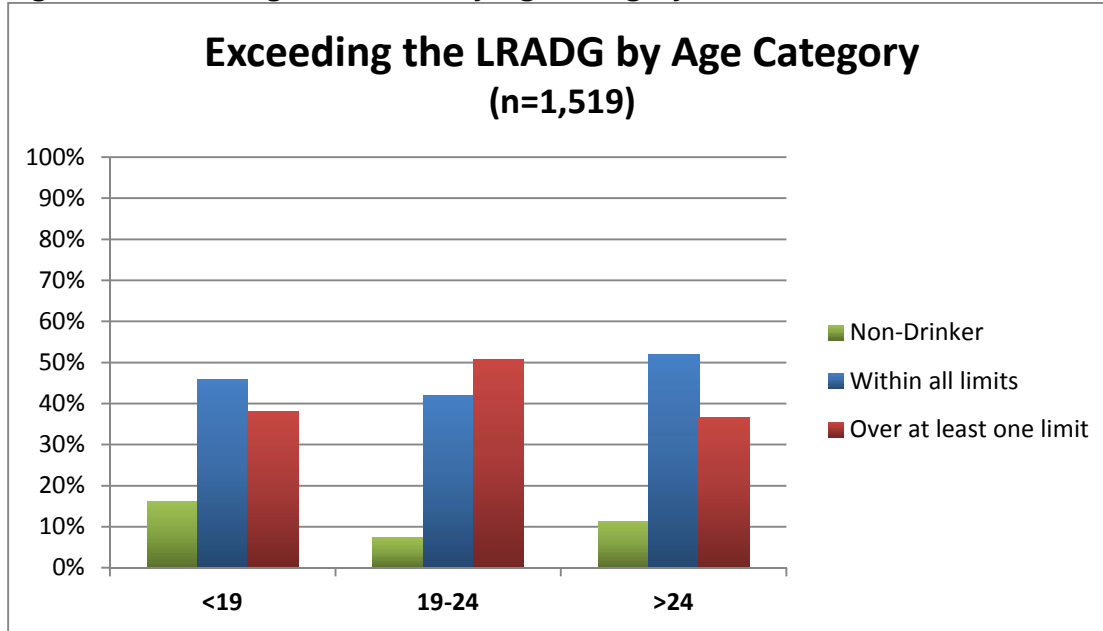
Figure 4: Exceeding the LRADG by Sex^q



Numbers do not exactly total 100% as they were rounded to the nearest unit.

^q ($X^2=33.139$, $p<0.001$)

Figure 5: Exceeding the LRADG by Age Category^r



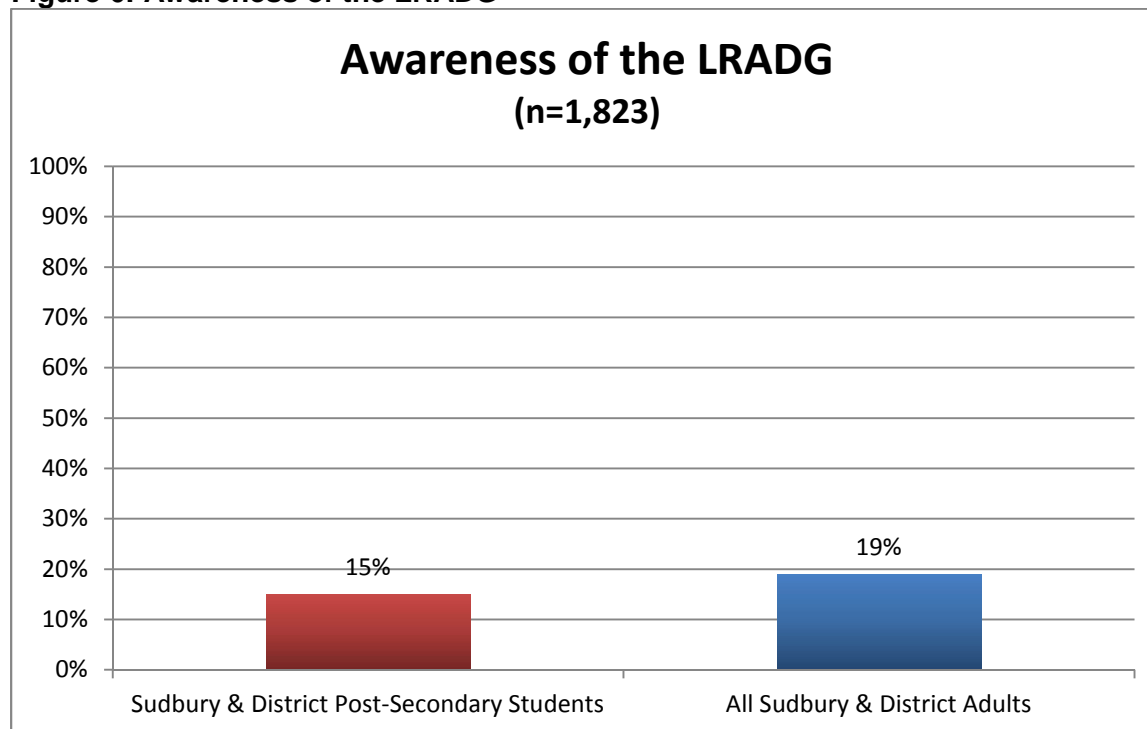
Numbers do not exactly total 100% as they were rounded to the nearest unit.

B. Knowledge and Awareness of the LRADG

When asked if they had seen or heard of the LRADG, 15.2% (n=278) of students said ‘yes’. Associations between *sex* ($\chi^2=4.893$, $p<0.05$), *age* ($\chi^2=9.909$, $p<0.01$), *academic discipline* ($\chi^2=9.863$, $p<0.05$) and *living arrangements* ($\chi^2=7.363$, $p<0.05$) were found. In general, awareness of the LRADG was higher among women than men (16.3% vs. 12.0%), students older than 24 years compared to those under 19 years or between 19 and 24 years (20.1% vs. 16.6% and 13.5%), and students living in residence compared to those living off-campus with their parent/s or guardian/s and those living off-campus without them (17.3% vs. 11.6% and 16.3%). There was no association between institution type and awareness of the LRADG.

^r ($\chi^2=31.957$; $p<0.001$)

Figure 6: Awareness of the LRADG



The overall proportion of students who drank over the daily LRADG and who binge drank at least monthly in the past year was similar whether they knew of the LRADG or not. However, students who were aware of Canada’s LRADG tended to binge drink less frequently than those who did not know about the guidelines ($\chi^2=11.144$, $p=0.011$). Moreover, awareness of the LRADG was associated with a reduction in rates of drunkenness episodes ($\chi^2=8.234$, $p=0.016$).

Twenty-eight percent ($n=507$) of respondents declared that if the LRADG indicated that they had to drink less, they would change the way they drink. This willingness was associated with *sex* ($\chi^2=23.132$, $p<0.001$), *age* ($\chi^2=24.371$, $p<0.001$), and *ethnicity* ($\chi^2=25.560$, $p<0.001$). A greater percentage of women compared to men (30.0% vs. 21.8), older students compared to all others aged 24 and younger (31.0% vs. 27.1), and non-Caucasians compared to Caucasians (31.9% vs. 27.5) indicated they would be willing to modify their drinking habits if the LRADG indicated they should.

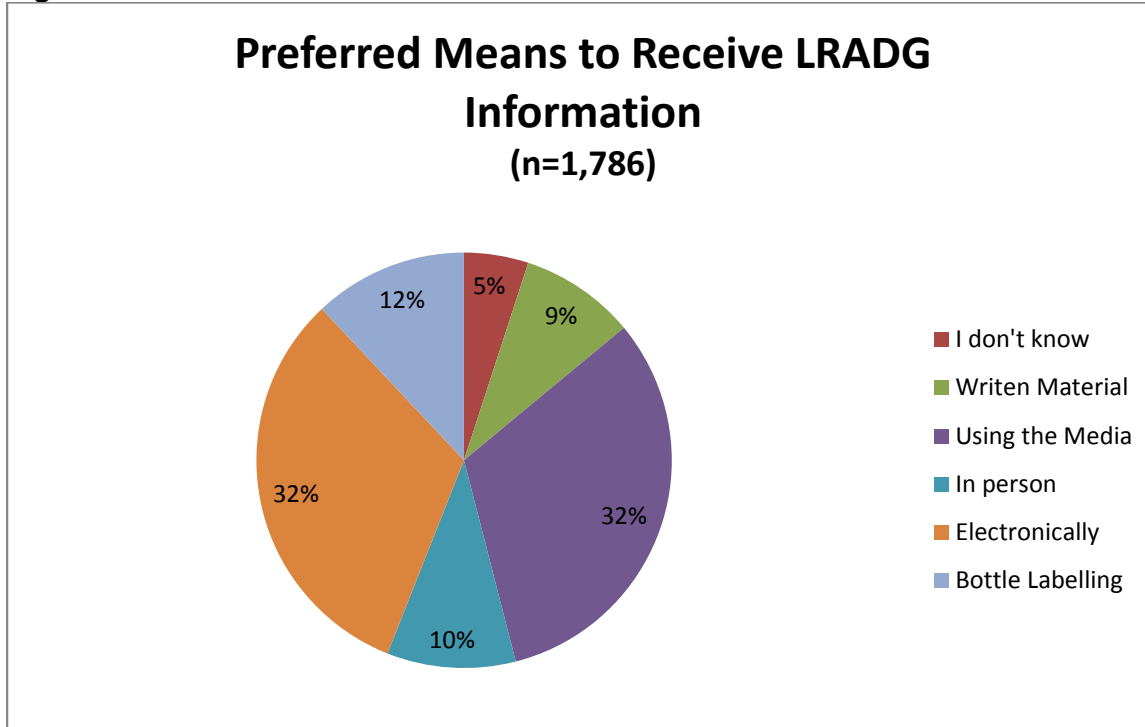
The preferred means to receive information about the LRADG was ‘through the media’^s (32.3%; $n=576$), closely followed by ‘electronically’^t (31.7%; $n=567$) (see Figure 7). This preference was consistent across all demographic groups. Sixty-five percent ($n=1,181$) of

^s E.g. television, radio

^t E.g. text messages, social networking, e-mail

respondents felt that *'bottle labelling that explains the LRADG and the number of drinks in the bottle would help them follow the guidelines'*.

Figure 7: Preferred Means to Receive Information about the LRADG



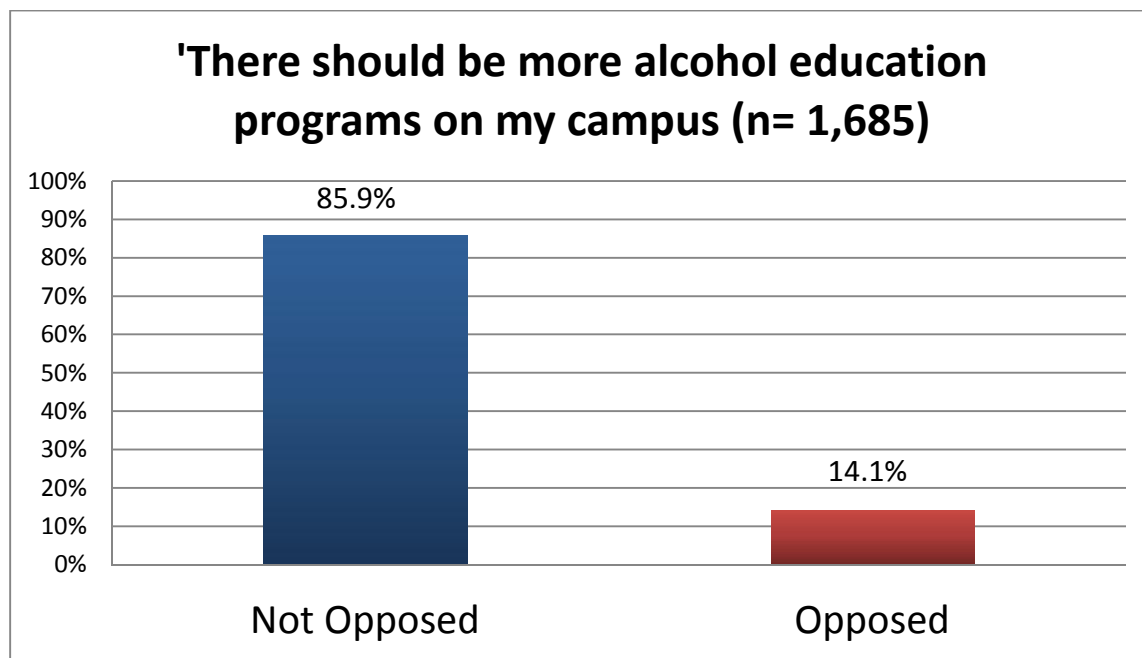
See Tables 10 - 18

C. Beliefs and Attitudes

This section of the survey pertained to beliefs about alcohol consumption, the campus environment, policies and prevention. Student answers were grouped into one of three categories: *Disagree*, *Neutral*, or *Agree*. A large proportion of all students disagreed with statements about the social significance of alcohol consumption such as *'you can't make it socially without drinking'* (71.3%, n=1,288) and *'it's important to show how much you can drink and still hold your liquor'* (55.8%, n=971), but at the same time, over one third believed that *'drinking is an important part of the university/college experience'* (38.2%, n=688). Thirty-seven percent (36.5%, n=456) of respondents believed that *'rules about drinking are almost never enforced on campus'* and 53.3% (n=718) of respondents felt that *'alcohol is easily available on campus'*.

Regarding general enforcement issues, students typically preferred less constraint from administration and the government,^u but attitudes towards prevention and education were more varied; approximately one third of respondents thought that *‘there should be more alcohol-free social events or activities on [their] school campus’* (36.0%, n=594), yet at the same time, 41% (n=723) felt that *‘alcohol should be sold at campus sporting events’*. Also, advertising against drinking was favoured by less than a quarter of respondents (23.0%, n=394), but encouragingly, more than three quarters of respondents (85.9%, n=1,447) were not opposed to the idea that *‘there should be more alcohol education programs on campus’* (see Figure 8). More precisely, upwards of half of students *who responded* (47.5%; n=800) were supportive of the concept, and 38.4% (n=647) felt neutral towards it.

Figure 8: Disposition towards Having More Alcohol Education Programs on Campus



All beliefs were associated with alcohol behaviours. In general, student who drank in excess of the LRADG largely adopted beliefs that were associated with at-risk drinking, and alcohol-abstainers held opposite beliefs. The beliefs of alcohol consumers who remained within the LRADG generally fell between the two aforementioned groups. For example, more than three-quarters (76.9%; n=100) of alcohol abstainers disagreed that *‘drinking is an important part of the university/college experience’*. Forty-nine percent (n=330) of those who drank alcohol within the guidelines also disagreed with the statement. In contrast, only 19.5%

^u These items pertained to: administration control over students’ alcohol use, the Canadian legal drinking age’, ‘the banning of advertisement of alcohol availability at campus events and parties’, and the price of alcohol served on campus pubs at campus activities

(n=137) of those who drank in excess of the LRADG felt the same ($\chi^2=254.502, p<0.001$). This pattern is consistent throughout most of the attitudinal survey items.

Generally, women, students over the age of 24 years, and students who were not Caucasian, each endorsed beliefs that are associated with responsible alcohol use more frequently than their counterparts.

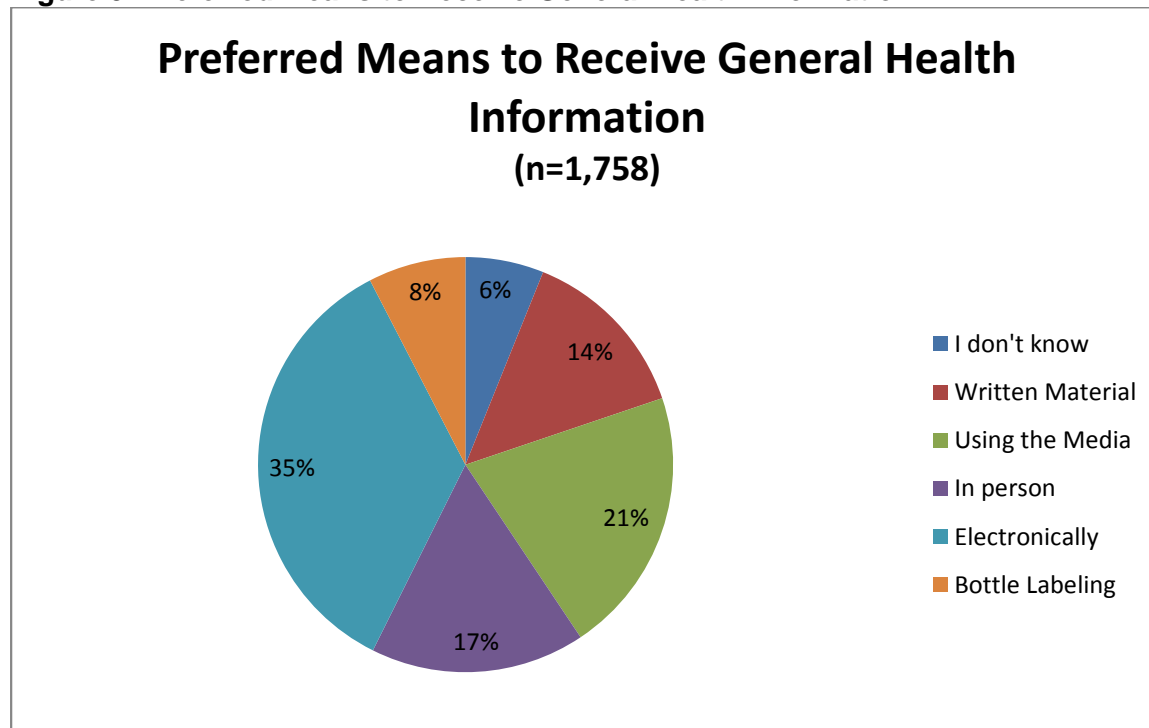
See Tables 19 - 27

D. General Health Information

The majority of students (81.9%, n=1,469) were interested in receiving general health-related information or advice. Willingness to receive health information was associated with *sex* ($\chi^2=28.367, p<0.001$) and *ethnicity* ($\chi^2=13.918, p=0.003$). The percentage of students inclined to receive this type of material was greater among women, as well as non-Caucasians. There was no association between willingness to receive health information and age. Many (59.8%, n=1,076) students reported looking for information for their own health at least once a month, especially women ($\chi^2=16.223, p=0.003$), those who were older ($\chi^2=23.162, p=0.003$), attending university ($\chi^2=28.404, p<0.001$), and/or individuals studying in the field of health sciences ($\chi^2=42.995, p<0.001$). The preferred means for all demographic groups to receive general health information was electronically (35.0%, n=616) (see Figure 9).

See Tables 28 - 35

Figure 9: Preferred Means to Receive General Health Information



Numbers do not exactly total 100% as they were rounded to the nearest unit.

Comparison to Population Data

Our survey results concerning alcohol consumption behaviours were comparable to the 2011/12 CCHS data for the Sudbury & District Health Unit service area and Ontario populations, pointing to a high level of reliability and validity.^v Nevertheless, there appears to be a somewhat higher prevalence of exceeding the LRADG among our post-secondary students, even when controlling for age. Rates for the general Sudbury population were consistently slightly lower, and provincial rates were invariably the lowest of all three samples. This trend could be the result heavier drinking patterns among post-secondary students,¹⁰ and notably at post-secondary institutions in the City of Greater Sudbury.

Our results show that a greater percentage of students enrolled at a Sudbury college or university (91.9%) had consumed at least one alcoholic beverage in the past year compared to the national average reported in the CCS findings (85.7%).⁷ However, in their 2012 report, the Nova Scotia Department of Health and Wellness reported that over 90% of Canadian university students used alcohol.¹¹ Differences in alcohol-related behaviour by sex, age, ethnicity and living arrangements were all consistent with the current body of research. Interestingly, among the student population, we found that a slightly greater proportion of men completely abstained from alcohol compared to women in the past year. Yet, among alcohol users, males drank more frequently than females, and also consumed alcohol in greater quantities. The same phenomenon is reported with data from the CCS. Our survey items concerning beliefs and attitudes had previously been used in the CCS⁷ and our data were, for the most part, reflective of the CCS results.

When asked if they had seen or heard of the LRADG, 15% of students indicated ‘yes’, as compared to 19% of adults reported by the Sudbury & District Health Unit.^{w,77} In both samples, the level of awareness of the LRADG increased with age.

See Table 36

Further consideration should also be given to the fact that 75% of respondents were female in this study. According to the literature, males usually exceed the LRDG at a higher rate than females. Hence, the percentage of students exceeding the guidelines may actually be higher than our current findings. We must also consider that the questionnaire was based on self-

^v CCHS data presented in this document only involves individuals >18 years, however our sample includes some students aged 17 years (n=13).

^w 19+ years old

reported data, and could be biased by social desirability of respondents. Additionally, we are unaware of the demographics and drinking patterns of non-respondents, as compared to the respondents of the questionnaire. Specifically, caution should be interpreted given the number of non-responses (i.e., approximately 300 missing or excluded responses) to the question from which the LRADG variables was derived. Hence, the number of students that are exceeding the guidelines may be slightly higher, or lower, than what has been reported.

Recommendations

According to our review of the literature and survey results, we have identified interventions that are tailored to the needs of post-secondary students within the City of Greater Sudbury. Overall, college and university students displayed similar alcohol consumption behaviour patterns, and thus the following recommendations can be applied to both types of institutions.

Alcohol misuse is the product of multiple levels of influence, and any endeavour to address this issue needs to tackle as many dimensions as possible. A comprehensive approach aimed at reducing alcohol-related harms and the promotion of healthy and safe campus can begin by developing and implementing as many of the recommendations noted below. These were designed and categorized for: students, administrators and decision-makers, and health promoters and educators.

Students

Students themselves can reduce the demand for alcohol by individuals. This can be accomplished by ensuring that students have opportunities to clarify and evaluate their personal beliefs and values, while emphasizing responsible decision-making about alcohol as it relates to their academic goals. Specifically, students need to be provided opportunities to learn and share basic refusal skills and measures to deal with peer intoxication and alcohol poisoning, respectively.

Students who are in a leadership position, such as residence supervisors, floor proctors, and members of student councils within their post-secondary community have a significant role in shifting a student-body culture of alcohol misuse to one that fosters a healthy community, and that ensures moderate alcohol use. Student leaders can participate actively, and collaborate with other students, as well as community partners specific to initiatives, policies and innovative strategies to reduce the harms associated with alcohol misuse. These positive initiatives allow students to develop strengths, skills and knowledge with regards to the implications of alcohol use, while providing them with a sense of empowerment.

Student leaders can:

- **increase awareness and education by developing a strategy to start a conversation among students on the risks and harms associated with heavy and binge drinking.** For example, we recommend providing information sessions on ‘mocktails’ that demonstrate the tastefulness and social aspect of enjoying a non-alcoholic beverage.

- **influence actual and perceived norms by developing a social awareness campaign to de-normalize heavy and binge drinking:** the effects of alcohol misuse can be addressed and promoted as “uncool” or “socially unacceptable”. Shift the focus away from heavy drinking to the true purpose of all events that may involve alcohol, while encouraging events and spaces that are not centered on alcohol.
- **establish peer-led education and programs** that allow students to engage in an open and trusting discussion with fellow students, giving them an opportunity to share their experiences; students listen to their peers.

Since awareness of the LRADG seems to correlate with safer drinking, and many students said they would drink less if the LRADG indicated they should, student leaders ought to have knowledge of, and frame all of their messages around, the LRADG.

Administrators and Decision-Makers

Post-secondary institutions need to recognize the importance of community collaboration to address alcohol misuse on-campus, and off-campus wherever possible. The following recommendations require administration and decision-maker buy-in and support in order to create healthy campuses for post-secondary students.

Administrators and decision-makers need to:

- **enforce all laws and regulations** as outlined by the Liquor Licence Act (LLA) and Alcohol and Gaming Commission of Ontario (AGCO). In addition, consider reviewing campus alcohol policies and ensuring adequate enforcement. Consider regulations restricting hours and locations that alcohol can be sold and consumed, as well as policies that discourage drinking games and objects that encourage rapid or high volume consumption.
- **implement prevention and harm-reduction measures specific to campus bars**, such as offering free non-alcoholic beverages and lower-priced ‘lite’ alcohol products, maintaining minimum pricing on regular alcoholic drinks, ban price discounts or promotions (e.g.: no ‘happy hours’) - and if there is no bar on campus, do not permit one to be instituted.
- **develop and enforce policies for institution-sanctioned and student-led events**, such as implementing a ticket system for alcohol service, prohibiting ‘bring your own booze’ events, checking bags at the door for alcohol, ensuring Party Alcohol Liability^x is in place, ensuring safe passage home (e.g. hire a taxi service, initiate a ‘Operation Red Nose’^y-like service). These policies should cover both student and staff events.

^x <https://www.palcanada.com/en/party-alcohol-liability>

^y <http://operationnezrouge.com/en>

- **provide employee training** which includes a requirement that event staff in post-secondary institutions become ‘Safer Bars’^z ‘trained, in addition to the current requirement of ‘Smart Serve’^{aa} trained.
- **create supportive environments where post-secondary students are safe and encouraged to live healthy lifestyles**, especially to avoid alcohol or use it in moderation, through:
 - **Residence restrictions:** have alcohol-free floors. For floors where alcohol is permitted, discourage activities and events where alcohol use is the focus, such as drinking games. Consider banning alcohol use in public spaces. Ensure all campus alcohol policies are enforced by staff, volunteers and student leaders.
 - **Staff training and emergency preparedness:** All employees should be aware of the LRADG and of the impact of language around alcohol use (re-enforce a culture of moderation). Residence and Security staff should be trained in recognizing and intervening with students who are intoxicated and/or have alcohol poisoning. It is highly recommended that they know the BACCUS maneuver^{bb} and be CPR/First Aid certified.
 - **Policy development for alcohol advertising:** limit sponsorship by the alcohol industry and restrict advertising content. Administration ought to review all advertising that pertains to alcohol and assess for content.

Educators and Health Promoters

Personal and collective initiatives are required for the uptake of health information and adoption of healthy values and behaviours by students. The following recommendations provide direction for health promoters and educators to encourage students in post-secondary institutions to adhere to moderate alcohol consumption.

Health Promoters and Educators need to:

- **deliver LRADG and health promotion messaging to all students**, as the heavy drinking phenomenon affects a broad spectrum of individuals. We recommend utilizing humour when advertising these messages and counter-advertising against messaging that promotes the misuse of alcohol. We suggest putting up materials that reinforce low-risk drinking in bathroom stalls. We also advise that information about safer drinking and campus policies around alcohol use be included in pre-admission packages. Furthermore, given the large

^z http://www.camh.ca/en/education/about/camh_publications/Pages/safer_bars_program.aspx

^{aa} <https://www.smartserve.ca/>

^{bb} <https://www.drinkwise.ca/english/education/the-bacchus-maneuver.html>

presence of female students in post-secondary institutions at a pre-conception age, messaging around alcohol consumption and pregnancy is of merit.

- **further target high-risk students, and high-risk alcohol use behaviours.** Although any health promotion initiatives should reach all students, those below the age of 24,^{cc} who are males or who live in residence should receive special attention from health promotion initiatives. Health promoters can work closely with student leaders to reach these high-risk groups and the rest of students.
- **disseminate health promotion messaging via the media and electronically** (where appropriate) as per students' preference. Most students demonstrated more enthusiasm about receiving information regarding general health than about the LRADG; accordingly, they might be more receptive to information on the latter if it is included under the umbrella of general-health education material. Furthermore, health educators should be careful not to disseminate overwhelming volumes of information.
- **offer Screening & Brief Intervention (SBI) tools:** SBI have proved helpful to rectify beliefs associated with alcohol misuse and are a best practice in the field. Electronic resources being preferred by post-secondary students, short computerized screenings with pertinent personalized normative feedback and referral could be explored as an option since research indicates that they are suitable alternatives to face-to-face SBI sessions. We specifically recommend the eCHECKUP TO GO.^{dd} However, in-person counselling health services and SBI must first and foremost be made easily available to students by trained professionals.

^{cc} Although our results show that students 19-24 years displayed the most harmful alcohol behaviours, we recommend targeting younger students alike as a preventative measure.

^{dd} <http://www.echeckuptogo.com/can/>

Conclusion

Our results support the need to encourage the responsible consumption of alcohol in post-secondary institutions in the City of Greater Sudbury. According to the literature and our own study, daily excess of LRADG limits, particularly the practice of binge drinking, appears to be the most pressing challenge facing post-secondary institutions in Canada. It is important to address this issue in order to minimize the consequences for students as well as for staff, faculty, and the functioning and reputation of our academic establishments. By better understanding the attitudes, beliefs, and alcohol consumption behaviours of students, post-secondary institutions can better collaborate with community partners and public health, in order to implement a wide range of dynamic and complementary approaches to tackle alcohol misuse. The key to success is to create a campus where responsible alcohol use is the social norm, where policies are in place to reduce risks as well as support students in engaging in healthy behaviours, and where meaningful connections are made with peers, faculty, staff, administration and the local community. Only then will a culture of moderation be embraced

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Appendix

Section 1 - Demographics

Table 1: Demographics

	N ^{ee}	% ^{ff}
All	1829	100
Sex		
Male	461	25.3
Female	1360	74.7
	1821	100
Age		
<19	200	11.0
19-24	1247	68.5
>24	373	20.5
	1820	100
Ethnicity		
Caucasian	1526	84.4
Non-Caucasian	283	15.6
	1809	100
Mother Tongue		
English	1197	65.8
Other	623	34.2
	1820	100
Institution Type		
College	298	16.4
University	1518	83.6
	1816	100

^{ee} Missing or invalide values were excluded from all analyses; therefore all totals do not sum 1829.

^{ff} Percentages shown have been rounded to the nearest tenth, and totals may not add up to exactly 100.

	N_{ee}	%^{ff}
Academic Discipline		
Humanities & Natural Sciences	414	23.0
Formal, Physical & Life Sciences	267	14.8
Professions & Applied Sciences	585	32.5
Health Sciences	536	29.7
	1802	100
Living Arrangement		
In residence	383	21.2
Off campus with parent/s or guardian/s	510	28.3
Off campus without parent/s or guardian/s	911	50.5
	1804	100

Section 2 – Alcohol Consumption Behaviours

Table 2: Behaviours (Total)

Question	Answer	All	
		N	%
During the past 12 months, have you had a drink of beer, wine, liquor, or any other alcoholic beverage?	Yes	1677	91.9
	No	148	8.1
		1825	100
During the past 12 months, how often did you drink alcoholic beverages?	Less than once a month	387	23.1
	Once a month	212	12.6
	2-3 times a month	484	28.9
	Once a week	269	16.1
	2-3 times a week	259	15.5
	4 times a week or more	65	3.9
		1676	100
How many times in the past month has drinking alcohol made you drunk? That is, intoxicated to the point of impairment of physical and mental faculties?	Once	401	23.9
	2-3 times	316	18.9
	4 or more times	178	10.6
	I have not been drunk in the past month	622	37.1
	I did not drink alcohol in the past month	159	9.5
		1676	100
How often in the past 12 months have you had 5 or more drinks on one occasion?	Never in the last 12 months	309	18.4
	Less than once a month	623	37.2
	About once a month	456	27.2
	About once a week, or more	288	17.2
		1676	100
How often during the last 12 months have you found that you were not able to stop drinking once you had started?	Never in the last 12 months	1333	80.0
	Less than once a month	190	11.4
	About once a month	93	5.6
	About once a week, or more	51	3.1
		1667	100

Question	Answer	All	
		N	%
How often during the last 12 months have you not done things you were supposed to because of drinking (e.g.: you missed a class)?	Never in the last 12 months	1206	72.1
	Less than once a month	342	20.4
	About once a month	87	5.2
	About once a week, or more	38	2.3
		1673	100
How often during the last 12 months have you had a feeling of guilt or remorse after drinking?	Never in the last 12 months	1063	63.5
	Less than once a month	472	28.2
	About once a month	98	5.9
	About once a week, or more	41	2.4
		1674	100
How often in the last 12 months have you been unable to remember what happened the night before because you had been drinking?	Never in the last 12 months	1080	64.5
	Less than once a month	447	26.7
	About once a month	115	6.9
	About once a week, or more	32	1.9
		1674	100
Have you or someone else been injured as a result of your drinking?	Yes, in the last 12 months	182	11.1
	Yes, but not in the last 12 months	177	78.0
	No	1275	10.8
		1634	100
Has a relative, friend, doctor or other health care worker been concerned about your drinking or suggested you cut down?	Yes, in the last 12 months	83	5.0
	Yes, but not in the last 12 months	73	90.7
	No	1518	4.4
		1674	100
99.2% of respondents have never been in a treatment program during the last year because of their alcohol use. 0.6% of respondents reported being in a treatment program during the last 12 months because of their alcohol use, and 0.2% prior to the last year.			
On average during the past 12 months, how many hours of sleep do you get per night?	Less than 6 hours	229	12.6
	Between 6 and 8 hours	1203	66.3

Question	Answer	All	
		N	%
	More than 8 hours	382	21.1
		1814	100
Behaviours as per the LRADG^{gg}			
LRADG weekly limits <i>Among drinkers</i>	Within the LRADG weekly limits	1251	90.1
	Over the LRADG weekly limits	137	9.9
		1388	100
<i>Among all</i>	Alcohol abstainer	138	9.0
	Within the LRADG weekly limits	1251	82.0
	Over the LRADG weekly limits	137	9.0
		1526	100
LRADG daily limits (3/2)^{hh} <i>Among drinkers</i>	Within the LRADG daily limits	948	68.3
	Over the LRADG limits	440	31.7
		1388	100
<i>Among all</i>	Alcohol abstainer	138	9.0
	Within the LRADG daily limits	948	62.1
	Over the LRADG limits	440	28.8
		1526	100
Binge drinking <i>Among drinkers</i>	Binged less than 1x/month in the past year	911	55.2
	Binged 1x/month or more in the past year	738	44.6
		1649	100
<i>All students</i>	Alcohol abstainer	139	7.8
	Binged less than 1x/month in the past year	911	51.0

^{gg} Based on valid cases for analyses and excludes women who reported being pregnant or breastfeed in the last 12 months. Individuals who did not indicate being male or female were excluded from LRADG Derived Variables.

^{hh} From late teens to age 24, youth should never have more than 2 drinks a day (for girls) or 3 drinks a day (for boys). From: <http://www.ccsa.ca/Resource%20Library/2012-Canada-Low-Risk-Alcohol-Drinking-Guidelines-Brochure-en.pdf>

Question	Answer	All	
		N	%
	Binged 1x/month or more in the past year	738 1788	41.3 100
Total (Weekly, Daily (3/2) or Binge) <i>Among drinkers</i>	Within all limits Over at least one of the limits	677 711 1388	48.8 51.2 100
<i>Among all</i>	Alcohol abstainer Within all limits Over at least one of the limits	138 677 711 1526	9.0 44.4 46.6 100

Table 3: Behaviours by Sex

Question	Answer	All		Male		Female		Chi-Square test	
		N	%	N	%	N	%	χ^2 Value	P Value
During the past 12 months, have you had a drink of beer, wine, liquor, or any other alcoholic beverage?	Yes	1671	91.9	408	89.1	1263	92.9	6.603	p=0.010
	No	147	8.1	50	10.9	97	7.1		
During the past 12 months, how often did you drink alcoholic beverages?	Less than once a month	385	23.1	59	14.5	326	25.8	84.739	p<0.001
	Once a month	210	12.6	32	7.8	178	14.1		
	2-3 times a month	484	29.0	108	26.5	376	29.8		
	Once a week	268	16.0	74	18.1	194	15.4		
	2-3 times a week	258	15.4	103	25.2	155	12.3		
	4 times a week or more	65	3.9	32	7.8	33	2.6		
		1670	100						
How many times in the past month has drinking alcohol made you drunk? That is, intoxicated to the point of impairment of physical and mental faculties?	Once	400	24.0	93	22.8	307	24.3	44.792	p<0.001
	2-3 times	316	18.9	81	19.9	235	18.6		
	4 or more times	177	10.6	74	18.1	103	8.2		
	I have not been drunk in the past month	619	37.1	142	34.8	477	37.8		
	I did not drink alcohol in the past month	158	9.5	18	4.4	140	11.1		
		1670	100						
How often in the past 12 months have you had 5 or more drinks on one occasion?	Never in the last 12 months	309	18.5	58	14.2	251	19.9	52.419	p<0.001
	Less than once a month	619	37.1	118	28.9	501	39.7		
	About once a month	456	27.3	118	28.9	338	26.8		
	About once a week, or more	286	17.1	114	27.9	172	13.6		
		1670	100						
How often during the last 12 months have you found that you were not able to stop drinking once you had started?	Never in the last 12 months	1329	80.0	310	76.7	1019	81.1	5.498	p=0.139
	Less than once a month	190	11.4	57	14.1	133	10.6		
	About once a month	91	5.5	21	5.2	70	5.6		
	About once a week, or more	51	3.1	16	4.0	35	2.8		
		1661	100						
How often during the last 12 months	Never in the last 12 months	1201	72.0	282	69.5	919	72.9	2.485	p=0.478

Question	Answer	All		Male		Female		Chi-Square test	
		N	%	N	%	N	%	χ^2 Value	P Value
have you not done things you were supposed to because of drinking (e.g.: you missed a class)?	Less than once a month	342	20.5	93	22.9	249	19.7		
	About once a month	86	5.2	23	5.7	63	5.0		
	About once a week, or more	38	2.3	8	2.0	30	2.4		
		1667	100						
How often during the last 12 months have you had a feeling of guilt or remorse after drinking?	Never in the last 12 months	1059	63.5	253	62.3	806	63.9	1.434	p=0.698
	Less than once a month	471	28.2	115	28.3	356	28.2		
	About once a month	97	5.8	25	6.2	72	5.7		
	About once a week, or more	41	2.5	13	3.2	28	2.2		
	1668	100							
How often in the last 12 months have you been unable to remember what happened the night before because you had been drinking?	Never in the last 12 months	1076	64.5	243	59.7	833	66.1	9.597	p=0.022
	Less than once a month	446	26.7	115	28.3	331	26.2		
	About once a month	115	6.9	37	9.1	78	6.2		
	About once a week, or more	31	1.9	12	2.9	19	1.5		
	1668	100							
Have you or someone else been injured as a result of your drinking?	Yes, in the last 12 months	181	11.1	46	11.6	135	10.9	0.164	p=0.921
	No	1270	78.0	307	77.7	963	78.1		
	Yes, but not in the last 12 months	177	10.9	42	10.6	135	10.9		
		1628	100						
Has a relative, friend, doctor or other health care worker been concerned about your drinking or suggested you cut down?	Yes, in the last 12 months	81	4.9	35	8.6	46	3.7	16.559	p<0.001
	Yes, but not in the last 12 months	73	4.4	15	3.7	58	4.6		
	No	1514	90.8	358	87.7	1156	91.7		
		1668	100						
On average during the past 12 months, how many hours of sleep do you get per night?	Less than 6 hours	227	12.6	68	15.0	159	11.8	3.221	p=0.200
	Between 6 and 8 hours	1199	66.4	293	64.5	906	67.0		
	More than 8 hours	381	21.1	93	20.5	288	21.3		
		1807	100						

Question	Answer	All		Male		Female		Chi-Square test	
		N	%	N	%	N	%	χ^2 Value	P Value
Behaviours as per the LRADG									
LRADG weekly limits: <i>Among drinkers</i>	Within the LRADG weekly limits	1251	90.1	288	84.7	963	91.9	14.891	p<0.001
	Over the LRADG weekly limits	137	9.9	52	15.3	85	8.1		
<i>Among all</i>	Alcohol abstainer	138	9.0	50	12.8	88	7.7	23.563	p<0.001
	Within the LRADG weekly limits	1251	82.0	288	73.8	963	84.8		
	Over the LRADG weekly limits	137	9.0	52	13.3	85	7.5		
		1526	100						
LRADG daily limits (3/2) <i>Among drinkers</i>	Within the LRADG daily limits	948	68.3	208	61.2	740	70.6	10.553	p=0.001
	Over the LRADG daily limits	440	31.7	132	38.8	308	29.4		
<i>Among all</i>	Alcohol abstainer	138	9.0	50	12.8	88	7.7	19.346	p<0.001
	Within the LRADG daily limits	948	62.1	208	53.3	740	65.1		
	Over the LRADG daily limits	440	28.8	132	33.8	308	27.1		
		1526	100						
Binge drinking <i>Among drinkers</i>	Binged less than 1x/month in the past year	907	55.2	176	43.1	731	59.2	31.959	p<0.001
	Binged 1x/month or more in the past year	736	44.8	232	56.9	504	40.8		
<i>Among all</i>	Alcohol abstainer	138	7.7	50	10.9	88	6.7	39.888	p<0.001
	Binged less than 1x/month in the past year	907	50.9	176	38.4	731	55.3		
	Binged 1x/month or more in the past year	736	41.3	232	50.7	504	38.1		
		1781	100						
Total (Weekly, Daily (3/2) or Binge) <i>Among drinkers</i>	Within all limits	677	48.8	126	37.1	551	52.6	24.741	p<0.001
	Over at least one of the limits	711	51.2	214	62.9	497	47.4		
<i>Among all</i>	Alcohol abstainer	138	9.0	50	12.8	88	7.7	33.139	p<0.001
	Within all limits	677	44.4	126	32.3	551	48.5		
	Over at least one of the limits	711	46.6	214	54.9	497	43.8		

Question	Answer	All		Male		Female		Chi-Square test	
		N	%	N	%	N	%	χ^2 Value	P Value
		1526	100						

Table 4: Behaviours by Age Category

Questions	Answers	All		<19		19-24		>24		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
During the past 12 months, have you had a drink of beer, wine, liquor, or any other alcoholic beverage?	Yes	1669	91.9	173	86.5	1166	93.6	330	89.2	16.218	p<0.001
	No	147	8.1	27	13.5	80	6.4	40	10.8		
		1816	100								
During the past 12 months, how often did you drink alcoholic beverages?	Less than once a month	384	23.0	Analyses not performed due to small cell sizes							
	Once a month	210	12.6								
	2-3 times a month	482	28.9								
	Once a week	269	16.1								
	2-3 times a week	258	15.5								
	4 times a week or more	65	3.9								
		1668	100								
How many times in the past month has drinking alcohol made you	Less than once a month	384	23.0	49	28.3	242	20.8	93	28.3	35.919	p<0.001
	Once a month	210	12.6	28	16.2	145	12.4	37	11.2		
	2-3 times a month	482	28.9	47	27.2	366	31.4	69	21.0		
	Once a week	269	16.1	30	17.3	194	16.6	45	13.7		
	2+ times a week	323	19.4	19	11.0	219	18.8	85	25.8		
		1668	100								
How many times in the past month has drinking alcohol made you	Once	400	24.0	42	24.3	295	25.3	63	19.1	66.028	p<0.001
	2-3 times	316	18.9	32	18.5	248	21.3	36	10.9		
	4 or more times	177	10.6	25	14.5	133	11.4	19	5.8		

drunk?	I have not been drunk in the past month	618	37.1	49	28.3	396	34.0	173	52.4				
	I did not drink alcohol in the past month	157	9.4	25	14.5	93	8.0	39	11.8				
		1668	100										
How often in the past 12 months have you had 5 or more drinks on one occasion?	Never in the last 12 months	304	18.2	38	22.0	173	14.8	93	28.3	57.447	p<0.001		
	Less than once a month	621	37.2	68	39.3	413	35.4	140	42.6				
	About once a month	456	27.3	44	25.4	350	30.0	62	18.8				
	About once a week, or more	287	17.2	23	13.3	230	19.7	34	10.3				
		1668	100										
How often during the last 12 months have you found that you were not able to stop drinking once you had started?	Never in the last 12 months	1326	79.9	131	77.1	914	78.8	281	85.4	9.114	p=0.167		
	Less than once a month	190	11.5	25	14.7	139	12.0	26	7.9				
	About once a month	93	5.6	9	5.3	69	5.9	15	4.6				
	About once a week, or more	50	3.0	5	2.9	38	3.3	7	2.1				
		1659	100										
How often during the last 12 months have you not done things you were supposed to because of drinking (e.g.: you missed a class)?	Never in the last 12 months	1199	72.0	Analyses not performed due to small cell sizes									
	Less than once a month	341	20.5										
	About once a month	87	5.2										
	About once a week, or more	38	2.3										
		1665	100										
	Never in the last 12 months	1199	72.0	132	76.3	790	68.0	277	83.9	34.948	p<0.001		
	Less than once a month	341	20.5	30	17.3	269	23.1	42	12.7				
	About once a month, or more	125	7.5	11	6.4	103	8.9	11	3.3				
		1665	100										
How often during the last 12 months have you had a feeling of guilt or remorse after drinking?	Never in the last 12 months	1057	63.4	114	66.3	706	60.6	237	72.0	16.509	p=0.011		
	Less than once a month	470	28.2	46	26.7	351	30.1	73	22.2				
	About once a month	98	5.9	7	4.1	78	6.7	13	4.0				
	About once a week, or more	41	2.5	5	2.9	30	2.6	6	1.8				
		1666	100										
How often in the last 12 months have you been unable to remember what happened the night before because	Never in the last 12 months	1073	64.4	Analyses not performed due to small cell sizes									
	Less than once a month	447	26.8										
	About once a month	114	6.8										
	About once a week, or more	32	1.9										
		1666	100										

you had been drinking?	Never in the last 12 months	1073	64.4	108	62.4	693	59.5	272	82.7	62.395	p<0.001
	Less than once a month	447	26.8	51	29.5	348	29.9	48	14.6		
	About once a month, or more	146	8.8	14	8.1	123	10.6	9	2.7		
		1666	100								
Have you or someone else been injured as a result of your drinking?	Yes, in the last 12 months	182	11.2	22	13.5	151	13.3	9	2.8	33.743	p<0.001
	No	1267	77.9	127	77.9	853	75.0	287	88		
	Yes, but not in the last 12 months	177	10.9	14	8.6	133	11.7	30	9.2		
		1626	100								
Has a relative, friend, doctor or other health care worker been concerned about your drinking or suggested you cut down?	Yes, in the last 12 months	83	5.0	12	6.9	59	5.1	12	3.6	3.841	p=0.428
	Yes, but not in the last 12 months	73	4.4	6	3.5	49	4.2	18	5.5		
	No	1510	90.6	155	89.6	1055	90.7	300	90.9		
		1666	100								
On average during the past 12 months, how many hours of sleep do you get per night?	Less than 6 hours	228	12.6	38	19.1	127	10.3	63	17.0	20.475	p<0.001
	Between 6 and 8 hours	1195	66.2	124	62.3	841	68.0	230	62.2		
	More than 8 hours	382	21.2	37	18.6	268	21.7	77	20.8		
		1805	100								
Behaviours as per the LRADG											
LRADG weekly limits <i>Among drinkers</i>	Within the LRADG weekly limits	1245	90.1	131	92.9	883	89.2	231	92.0	3.208	p=0.201
	Over the LRADG weekly limits	137	9.9	10	7.1	107	10.8	20	8.0		
		1382	100								
LRADG weekly limits <i>Among all</i>	Alcohol abstainer	137	9.0	27	16.1	78	7.3	32	11.3	18.920	p=0.001
	Within the LRADG weekly limits	1245	82.0	131	78.0	883	82.7	231	81.6		
	Over the LRADG weekly limits	137	9.0	10	6.0	107	10.0	20	7.1		
		1519	100								
LRADG daily limits (3/2) <i>Among drinkers</i>	Within the LRADG daily limits	943	68.2	102	72.3	661	66.8	180	71.7	3.481	p=0.175
	Over the LRADG limits	439	31.8	39	27.7	329	33.2	71	28.3		
		1382	100								
LRADG daily limits (3/2) <i>Among all</i>	Alcohol abstainer	137	9.0	27	16.1	78	7.3	32	11.3	19.199	p=0.001
	Within the LRADG daily limits	943	62.1	102	60.7	661	61.9	180	63.6		
	Over the LRADG limits	439	28.9	39	23.2	329	30.8	71	25.1		
		1519	100								

Binge drinking <i>Among drinkers</i>	Binged less than 1x/month in the past year	904	55.1	105	61.0	577	50.0	222	70.3	43.702	p<0.001
	Binged 1x/month or more in the past year	737	44.9	67	39.0	576	50.0	94	29.7		
<i>Among all</i>	Alcohol abstainer	138	7.8	27	13.6	79	6.4	32	9.2	56.771	p<0.001
	Binged less than 1x/month in the past year	904	50.8	105	52.8	577	46.8	222	63.8		
	Binged 1x/month or more in the past year	737	41.4	67	33.7	576	46.8	94	27.0		
		1779	100								
Total (Weekly, Daily (3/2) or Binge) <i>Among drinkers</i>	Within all of the limits	672	48.6	77	54.6	448	45.3	147	58.6	16.458	p<0.001
	Over at least one of the limits	710	51.4	64	45.4	542	54.7	104	41.4		
<i>Among all</i>	Alcohol abstainers	137	9.0	27	16.1	78	7.3	32	11.3	31.957	p<0.001
	Within all of the limits	672	44.2	77	45.8	448	41.9	147	51.9		
	Over at least one of the limits	710	46.7	64	38.1	542	50.7	104	36.7		
		1519	100								

Table 5: Behaviours by Ethnicity

Questions	Answers	All		Caucasian		Non-Caucasians		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
During the past 12 months, have you had a drink of beer, wine, liquor, or any other alcoholic beverage?	Yes	1662	92.0	1437	94.2	225	79.8	67.259	p<0.001
	No	145	8.0	88	5.8	57	20.2		
During the past 12 months, how often did you drink alcoholic beverages?	Less than once a month	385	23.2	315	21.9	70	31.2	12.970	p=0.024
	Once a month	211	12.7	192	13.4	19	8.5		
	2-3 times a month	478	28.8	423	29.4	55	24.6		
	Once a week	265	16.0	228	15.9	37	16.5		
	2-3 times a week	258	15.5	222	15.4	36	16.1		
	4 times a week or more	64	3.9	57	4.0	7	3.1		
		1661	100						
How many times in the past month has drinking alcohol made you drunk?	Once	399	24.0	349	24.3	50	22.2	2.254	p=0.689
	2-3 times	315	19.0	278	19.4	37	16.4		
	4 or more times	174	10.5	150	10.4	24	10.7		
	I have not been drunk in the past month	617	37.2	525	36.6	92	40.9		
	I did not drink alcohol in the past month	156	9.4	134	9.3	22	9.8		
		1661	100						
How often in the past 12 months have you had 5 or more drinks on one occasion?	Never in the last 12 months	306	18.4	251	17.5	55	24.6	8.064	p=0.045
	Less than once a month	617	37.1	537	37.4	80	35.7		
	About once a month	454	27.3	394	27.4	60	26.8		
	About once a week, or more	284	17.1	255	17.7	29	12.9		
		1661	100						
How often during the last 12 months have you found that you were not able to stop drinking once you had started?	Never in the last 12 months	1320	79.9	1139	79.7	181	81.5	2.319	p=0.509
	Less than once a month	190	11.5	165	11.5	25	11.3		
	About once a month	93	5.6	85	5.9	8	3.6		
	About once a week, or more	49	3.0	41	2.9	8	3.6		
		1652	100						
How often during the last 12 months have you not done things you were	Never in the last 12 months	1196	72.1	1028	71.7	168	74.7	1.697	p=0.638
	Less than once a month	339	20.4	300	20.9	39	17.3		

Questions	Answers	All		Caucasian		Non-Caucasians		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
supposed to because of drinking (e.g.: you missed a class)?	About once a month About once a week, or more	86 37 1659	5.2 2.2 100	74 31	5.2 2.2	12 6	5.3 2.7		
How often during the last 12 months have you had a feeling of guilt or remorse after drinking?	Never in the last 12 months Less than once a month About once a month About once a week, or more	1054 468 98 40 1660	63.5 28.2 5.9 2.4 100	923 396 87 30	64.3 27.6 6.1 2.1	131 72 11 10	58.5 32.1 4.9 4.5	7.426	p=0.059
How often in the last 12 months have you been unable to remember what happened the night before because you had been drinking?	Never in the last 12 months Less than once a month About once a month About once a week, or more	1069 445 114 31 1659	64.4 26.8 6.9 1.9 100	912 398 99 26	63.6 27.7 6.9 1.8	157 47 15 5	64.4 26.8 6.9 1.9	4.773	p=0.189
Have you or someone else been injured as a result of your drinking?	Yes, in the last 12 months Yes, but not in the last 12 months No	181 175 1264 1620	11.2 10.8 78.0 100	164 149 1086	11.7 10.7 77.6	17 26 178	7.7 11.8 80.5	3.202	p=0.202
Has a relative, friend, doctor or other health care worker been concerned about your drinking or suggested you cut down?	Yes, in the last 12 months Yes, but not in the last 12 months No	82 73 1505 1660	4.9 4.4 90.7 100	69 63 1303	4.8 4.4 90.8	13 10 202	5.8 4.4 89.8	0.394	p=0.821
On average during the past 12 months, how many hours of sleep do you get per night?	Less than 6 hours Between 6 and 8 hours More than 8 hours	225 1193 378 1796	12.5 66.4 21.0 100	175 1007 333	11.6 66.5 22.0	50 186 45	17.8 66.2 16.0	11.384	p=0.003
Behaviours as per the LRADG									
LRADG weekly limits <i>Among drinkers</i>	Within the LRADG weekly limits Over the LRADG weekly limits	1241 136 1377	90.1 9.9 100	1090 123	89.9 10.1	151 13	92.1 7.9	0.795	p=0.373

Questions	Answers	All		Caucasian		Non-Caucasians		Chi Square Test	
		N	%	N	%	N	%	χ ² Value	P Value
<i>Among all</i>	Within the LRADG weekly limits	1241	82.0	1090	84.2	151	69.3	78.220	p<0.001
	Over the LRADG weekly limits	136	9.0	123	9.5	13	6.0		
	Alcohol abstainer	136	9.0	82	6.3	54	24.8		
		1513	100						
LRADG daily limits (3/2) <i>Among drinkers</i>	Within the LRADG daily limits	940	68.3	823	67.8	117	71.3	0.814	p=0.367
	Over the LRADG limits	437	31.7	390	32.2	47	28.7		
		1377	100						
<i>Among all</i>	Within the LRADG daily limits	940	62.1	823	63.6	117	53.7	78.236	p<0.001
	Over the LRADG limits	437	28.9	390	30.1	47	21.6		
	Alcohol abstainer	136	9.0	82	6.3	54	24.8		
		1513	100						
Binge drinking <i>Among drinkers</i>	Binged less than 1x/month in the past year	902	55.2	770	54.5	132	60.0	2.367	p=0.124
	Binged 1x/month or more in the past year	732	44.8	644	45.5	88	40.0		
		1634	100						
<i>Among all</i>	Binged less than 1x/month in the past year	902	50.9	770	51.4	132	48.2	67.206	p<0.001
	Binged 1x/month or more in the past year	732	41.3	644	43.0	88	32.1		
	Alcohol abstainer	137	7.7	83	5.5	54	19.7		
		1771	100						
Total (Weekly, Daily (3/2) or Binge) <i>Among drinkers</i>	Within all of the limits	671	48.7	584	48.1	87	53.0	1.390	p=0.238
	Over at least one of the limits	706	51.3	629	51.9	77	47.0		
		1377	100						
<i>Among all</i>	Within all of the limits	671	44.3	584	45.1	87	39.9	78.727	p<0.001
	Over at least one of the limits	706	46.7	629	48.6	77	35.3		
	Alcohol abstainer	136	9.0	82	6.3	54	24.8		
		1513	100						

Table 6: Behaviours by Mother Tongue

		All		English		Other		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
During the past 12 months, have you had a drink of beer, wine, liquor, or any other alcoholic beverage?	Yes	1671	91.9	1098	91.8	573	92.0	0.016	p=0.901
	No	148	8.1	98	8.2	50	8.0		
		1819	100						
During the past 12 months, how often did you drink alcoholic beverages?	Less than once a month	384	23.0	237	21.6	147	25.7	8.781	p=0.118
	Once a month	212	12.7	140	12.8	72	12.6		
	2-3 times a month	484	29.0	309	28.2	175	30.5		
	Once a week	268	16.0	188	17.1	80	14.0		
	2-3 times a week	258	15.4	175	16.0	83	14.5		
	4 times a week or more	64	3.8	48	4.4	16	2.8		
	1670	100							
How many times in the past month has drinking alcohol made you drunk?	Once	401	24.0	259	23.6	142	24.8	8.815	p=0.066
	2-3 times	316	18.9	216	19.7	100	17.5		
	4 or more times	177	10.6	130	11.8	47	8.2		
	I have not been drunk in the past month	617	36.9	398	36.2	219	38.3		
	I did not drink alcohol in the past month	159	9.5	95	8.7	64	11.2		
	1670	100							
How often in the past 12 months have you had 5 or more drinks on one occasion?	Never in the last 12 months	306	18.3	191	17.4	115	20.1	5.518	p=0.138
	Less than once a month	622	37.2	417	38.0	205	35.8		
	About once a month	455	27.2	288	26.3	167	29.1		
	About once a week, or more	287	17.2	201	18.3	86	15.0		
	1670	100							
How often during the last 12 months have you found that you were not able to stop drinking once you had started?	Never in the last 12 months	1329	80.0	881	80.8	448	78.6	4.603	p=0.203
	Less than once a month	189	11.4	112	10.3	77	13.5		
	About once a month	93	5.6	62	5.7	31	5.4		
	About once a week, or more	50	3.0	36	3.3	14	2.5		
	1661	100							
How often during the last 12 months have you not done things you were	Never in the last 12 months	1202	72.1	764	69.6	438	76.8	11.754	p=0.008
	Less than once a month	340	20.4	239	21.8	101	17.7		

		All		English		Other		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
supposed to because of drinking (e.g.: you missed a class)?	About once a month	87	5.2	68	6.2	19	3.3		
	About once a week, or more	38	2.3	26	2.4	12	2.1		
		1667	100						
How often during the last 12 months have you had a feeling of guilt or remorse after drinking?	Never in the last 12 months	1059	63.5	670	61.1	389	68.0	8.326	p=0.040
	Less than once a month	471	28.2	326	29.7	145	25.3		
	About once a month	98	5.9	70	6.4	28	4.9		
	About once a week, or more	40	2.4	30	2.7	10	1.7		
		1668	100						
How often in the last 12 months have you been unable to remember what happened the night before because you had been drinking?	Never in the last 12 months	1077	64.6	688	62.7	389	68.2	7.528	p=0.057
	Less than once a month	445	26.7	301	27.4	144	25.3		
	About once a month	115	6.9	86	7.8	29	5.1		
	About once a week, or more	31	1.9	23	2.1	8	1.4		
		1668	100						
Have you or someone else been injured as a result of your drinking?	Yes, in the last 12 months	182	11.2	113	10.5	69	12.4	7.347	p=0.025
	No	1269	77.9	828	77.2	441	79.5		
	Yes, but not in the last 12 months	177	10.9	132	12.3	45	8.1		
		1628	100						
Has a relative, friend, doctor or other health care worker been concerned about your drinking or suggested you cut down?	Yes, in the last 12 months	83	5.0	60	5.5	23	4.0	1.886	p=0.389
	Yes, but not in the last 12 months	73	4.4	989	90.3	523	91.3		
	No	1512	90.6	46	4.2	27	4.7		
		1668	100						
On average during the past 12 months, how many hours of sleep do you get per night?	Less than 6 hours	229	12.7	137	11.5	92	14.9	4.190	p=0.123
	Between 6 and 8 hours	1199	66.3	801	67.3	398	64.3		
	More than 8 hours	381	21.1	252	21.2	129	20.8		
		1809	100						
Behaviours as per the LRADG									
LRADG weekly limits <i>Among drinkers</i>	Within the LRADG weekly limits	1249	90.1	818	88.9	431	92.5	4.441	p=0.035
	Over the LRADG weekly limits	137	9.9	102	11.1	35	7.5		
<i>Among all</i>	Within the LRADG weekly limits	1249	82.0	818	80.9	431	84.0	4.449	p=0.108

		All		English		Other		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
	Over the LRADG weekly limits	137	9.0	102	10.1	35	6.8		
	Alcohol abstainer	138	9.1	91	9.0	47	9.2		
		1524	100						
LRADG daily limits (3/2) <i>Among drinkers</i>	Within the LRADG daily limits	946	68.3	609	66.2	337	72.3	5.350	p=0.021
	Over the LRADG limits	440	31.7	311	33.8	129	27.7		
<i>Among all</i>	Within the LRADG daily limits	946	62.1	609	60.2	337	65.7	5.358	p=0.069
	Over the LRADG limits	440	28.9	311	30.8	129	25.1		
	Alcohol abstainer	138	9.1	91	9.0	47	9.2		
		1524	100						
Binge drinking <i>Among drinkers</i>	Binged less than 1x/month in the past year	907	55.2	594	55.2	313	55.3	0.003	p=0.955
	Binged 1x/month or more in the past year	736	44.8	483	44.8	253	44.7		
<i>Among all</i>	Binged less than 1x/month in the past year	907	50.9	594	50.8	313	51.1	0.026	p=0.987
	Binged 1x/month or more in the past year	736	41.3	483	41.3	253	41.3		
	Alcohol abstainer	139	7.8	92	7.9	47	7.7		
		1782	100						
Total (Weekly, Daily (3/2) or Binge) <i>Among drinkers</i>	Within all of the limits	675	48.7	445	48.4	230	49.4	0.121	p=0.728
	Over at least one of the limits	711	51.3	475	51.6	236	50.6		
<i>Among all</i>	Within all of the limits	675	44.3	445	44.0	230	44.8	0.131	p=0.937
	Over at least one of the limits	711	46.7	475	47.0	236	46.0		
	Alcohol abstainer	138	9.1	91	9.0	47	9.2		
		1524	100						

Table 7: Behaviours by Institution Type

		All		College		University		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
During the past 12 months, have you had a drink of beer, wine, liquor, or any other alcoholic beverage?	Yes	1667	91.9	280	94.0	1387	91.6	1.951	p=0.162
	No	146	8.1	18	6.0	128	8.4		
	1813	100							
During the past 12 months, how often did you drink alcoholic beverages?	Less than once a month	386	23.2	67	23.9	319	23.0	15.077	p=0.010
	Once a month	210	12.6	53	18.9	157	11.3		
	2-3 times a month	484	29.1	79	28.2	405	29.2		
	Once a week	268	16.1	36	12.9	232	16.7		
	2-3 times a week	253	15.2	34	12.1	219	15.8		
	4 times a week or more	65	3.9	11	3.9	54	3.9		
	1666	100							
How many times in the past month has drinking alcohol made you drunk?	Once	398	23.9	81	28.9	317	22.9	6.871	p=0.143
	2-3 times	314	18.8	46	16.4	268	19.3		
	4 or more times	175	10.5	22	7.9	153	11.0		
	I have not been drunk in the past month	620	37.2	104	37.1	516	37.2		
	I did not drink alcohol in the past month	159	9.5	27	9.6	132	9.5		
		1666	100						
How often in the past 12 months have you had 5 or more drinks on one occasion?	Never in the last 12 months	306	18.4	37	13.2	269	19.4	8.829	p=0.032
	Less than once a month	621	37.3	120	42.9	501	36.1		
	About once a month	455	27.3	81	28.9	374	27.0		
	About once a week, or more	284	17.0	42	15.0	242	17.5		
		1666	100						
How often during the last 12 months have you found that you were not able to stop drinking once you had started?	Never in the last 12 months	1327	80.0	213	77.2	1114	80.6	2.075	p=0.557
	Less than once a month	188	11.3	34	12.3	154	11.1		
	About once a month	92	5.5	18	6.5	74	5.4		
	About once a week, or more	51	3.1	11	4.0	40	2.9		
		1658	100						
How often during the last 12	Never in the last 12 months	1199	72.1	Analyses not performed due to					

		All		College		University		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
months have you not done things you were supposed to because of drinking (e.g.: you missed a class)?	Less than once a month	340	20.4	small cell sizes					
	About once a month	86	5.2						
	About once a week, or more	38	2.3					3.895	p=0.143
	1663	100							
	Never in the last 12 months	1199	72.1	213	76.3	986	71.2		
	Less than once a month	340	20.4	45	16.1	295	21.3		
	About once a month, or more	124	7.5	21	7.5	103	7.4		
	1663	100					6.942	p=0.074	
How often during the last 12 months have you had a feeling of guilt or remorse after drinking?	Never in the last 12 months	1058	63.6	196	70.5	862			62.2
	Less than once a month	469	28.2	64	23.0	405	29.2		
	About once a month	97	5.8	13	4.7	84	6.1		
	About once a week, or more	40	2.4	5	1.8	35	2.5		
	1664	100					0.522	p=0.770	
How often in the last 12 months have you been unable to remember what happened the night before because you had been drinking?	Never in the last 12 months	1076	64.7	Analyses not performed due to small cell sizes					
	Less than once a month	444	26.7						
	About once a month	113	6.8						
	About once a week, or more	31	1.9						
	1664	100					7.405	p=0.025	
Have you or someone else been injured as a result of your drinking?	Never in the last 12 months	1076	64.7	186	66.4	890			64.3
	Less than once a month	444	26.7	70	25.0	374	27.0		
	About once a month, or more	144	8.7	24	8.6	120	8.7		
	1664	100							
	Yes, in the last 12 months	181	11.1	27	9.9	154	11.4		
	No	1268	78.1	204	74.7	1064	78.8		
	Yes, but not in the last 12 months	175	10.8	42	15.4	133	9.8		
	1624	100					2.466	p=0.291	
Has a relative, friend, doctor or other health care worker been concerned about your drinking or suggested you cut down?	Yes, in the last 12 months	82	4.9	9	3.2	73			5.3
	Yes, but not in the last 12 months	71	4.3	14	5.0	57	4.1		
	No	1511	90.8	257	91.8	1254	90.6		
	1664	100							

		All		College		University		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
On average during the past 12 months, how many hours of sleep do you get per night?	Less than 6 hours	229	12.7	49	16.6	180	12.0	4.903	p=0.086
	Between 6 and 8 hours	1193	66.2	190	64.2	1003	66.6		
	More than 8 hours	380	21.1	57	19.3	323	21.4		
		1802	100						
Behaviours as per the LRADG									
LRADG weekly limits <i>Among drinkers</i>	Within the LRADG weekly limits	1244	90.3	193	90.2	1051	90.3	0.002	p=0.962
	Over the LRADG weekly limits	134	9.7	21	9.8	113	9.7		
		1378	100						
<i>Among all</i>	Within the LRADG weekly limits	1244	82.1	193	83.2	1051	81.9	0.552	p=0.759
	Over the LRADG weekly limits	134	8.8	21	9.1	113	8.8		
	Alcohol abstainer	137	9.0	18	7.8	119	9.3		
		1515	100						
LRADG daily limits (3/2) <i>Among drinkers</i>	Within the LRADG daily limits	945	68.6	156	72.9	789	67.8	2.194	p=0.139
	Over the LRADG limits	433	31.4	58	27.1	375	32.2		
		1378	100						
<i>Among all</i>	Within the LRADG daily limits	945	62.4	156	67.2	789	61.5	2.768	p=0.251
	Over the LRADG limits	433	28.6	58	25.0	375	29.2		
	Alcohol abstainer	137	9.0	18	7.8	119	9.3		
		1515	100						
Binge drinking <i>Among drinkers</i>	Binged less than 1x/month in the past year	906	55.3	154	56.0	752	55.1	0.070	p=0.792
	Binged 1x/month or more in the past year	733	44.7	121	44.0	612	44.9		
		1639	100						
<i>Among all</i>	Binged less than 1x/month in the past year	906	51.0	154	52.6	752	50.7	1.360	p=0.507
	Binged 1x/month or more in the past year	733	41.2	121	41.3	612	41.2		
	Alcohol abstainer	138	7.8	18	6.1	120	8.1		
		1777	100						
Total (Weekly, Daily (3/2) or Binge) <i>Among drinkers</i>	Within all of the limits	674	48.9	112	52.3	562	48.3	1.189	p=0.275
	Over at least one of the limits	704	51.1	102	47.7	602	51.7		
		1378	100						
<i>Among all</i>									

		All		College		University		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
	Within all of the limits	674	44.5	112	48.3	562	43.8	1.752	p=0.416
	Over at least one of the limits	704	46.5	102	44.0	602	46.9		
	Alcohol abstainer	137	9.0	18	7.8	119	9.3		
		1515	100						

Table 8: Behaviours by Academic Discipline

		All		Humanities & Natural Sciences		Formal, Physical & Life Sciences		Professions & Applied Sciences		Health Sciences		Chi Square Test	
		N	%	N	%	N	%	N	%	N	%	χ ² Value	P Value
During the past 12 months, have you had a drink of beer, wine, liquor, or any other alcoholic beverage?	Yes	1653	91.9	385	93.0	238	89.5	534	91.3	496	92.9	3.758	p=0.289
	No	146	8.1	29	7.0	28	10.5	51	8.7	38	7.1		
During the past 12 months, how often did you drink alcoholic beverages?	Less than once a month	377	22.8	99	25.7	59	24.8	113	21.2	106	21.9	16.693	p=0.338
	Once a month	210	12.7	35	9.1	25	10.5	72	13.5	78	15.6		
	2-3 times a month	480	29.1	112	29.1	67	28.2	150	28.1	151	31.2		
	Once a week	267	16.2	65	16.9	33	13.9	91	17.1	78	15.8		
	2-3 times a week	254	15.4	59	15.3	43	18.1	85	15.9	67	12.4		
	4 times a week or more	64	3.9	15	3.9	11	4.6	22	4.1	16	3.2		
		1652	100										
How many times in the past month has drinking alcohol made you drunk?	Once	396	24.0	95	24.7	54	22.7	123	23.0	124	25.0	16.807	p=0.157
	2-3 times	314	19.0	62	16.1	40	16.8	105	19.7	107	21.6		
	4 or more times	176	10.7	50	13.0	25	10.5	59	11.0	42	8.5		
	I have not been drunk in the past month	611	37.0	144	37.5	100	42.0	202	37.8	165	33.3		
	I did not drink alcohol in the past month	155	9.4	33	8.6	19	8.0	45	8.4	58	11.7		
		1652	100										
How often in the past 12 months have you had 5 or more drinks on one occasion?	Never in the last 12 months	305	18.5	74	19.2	47	19.7	97	18.2	87	17.5	15.201	p=0.086
	Less than once a month	613	37.1	151	39.2	89	37.4	184	34.5	189	38.1		
	About once a month	450	27.2	93	24.2	59	24.8	143	26.8	155	31.2		
	About once a week, or more	284	17.2	67	17.4	43	18.1	109	20.5	65	13.1		
		1652	100										
How often during the last 12 months have you found that you were not able to stop drinking once you had started?	Never in the last 12 months	1313	79.9	306	80.1	199	84.3	412	77.6	396	80.2	8.870	p=0.449
	Less than once a month	188	11.4	46	12.0	21	8.9	67	12.6	54	10.9		
	About once a month	93	5.7	16	4.2	10	4.2	34	6.4	33	6.7		
	About once a week, or more	49	3.0	14	3.7	6	2.5	18	3.4	11	2.2		
		1643	100										
How often during the last 12 months have you not done	Never in the last 12 months	1186	71.9	267	69.4	189	79.4	370	69.7	360	72.7	19.129	p=.024
	Less than once a month	339	20.6	79	20.5	36	15.1	119	22.4	105	21.2		

		All		Humanities & Natural Sciences		Formal, Physical & Life Sciences		Professions & Applied Sciences		Health Sciences		Chi Square Test			
		N	%	N	%	N	%	N	%	N	%	χ ² Value	P Value		
things you were supposed to because of drinking (e.g.: you missed a class)?	About once a month About once a week, or more	87 37 1649	5.3 2.2 100	23 16	6.0 4.2	8 5	3.4 2.1	31 11	5.8 2.1	25 5	5.1 1.0				
How often during the last 12 months have you had a feeling of guilt or remorse after drinking?	Never in the last 12 months Less than once a month About once a month About once a week, or more	1043 468 98 41 1650	63.2 28.4 5.9 2.5 100	Analyses not performed due to small cell sizes											
	Never in the last 12 months Less than once a month About once a month, or more	1043 468 139 1650	63.2 28.4 8.4 100	229 116 39	59.6 30.2 10.2	161 62 14	67.9 26.2 5.9	325 162 46	61.0 30.4 8.6	328 128 40	66.1 25.8 8.1	8.739	p=0.189		
How often in the last 12 months have you been unable to remember what happened the night before because you had been drinking?	Never in the last 12 months Less than once a month About once a month About once a week, or more	1063 442 115 30 1650	64.4 26.8 7.0 1.8 100	Analyses not performed due to small cell sizes											
	Never in the last 12 months Less than once a month About once a month, or more	1063 442 145 1650	64.4 26.8 8.8 100	246 101 38	63.9 26.2 9.9	165 58 15	69.3 24.4 6.3	330 149 53	62.0 28.0 10.0	322 134 39	65.1 27.1 7.9	5.769	p=0.450		
Have you or someone else been injured as a result of your drinking?	Yes, in the last 12 months No Yes, but not in the last 12 months	178 1258 176 1612	11.0 78.0 10.9 100	48 291 33	12.9 78.2 8.9	21 187 25	9.0 80.3 10.7	61 403 61	11.6 76.8 11.6	48 377 57	10.0 78.5 11.8	5.002	p=0.544		
Has a relative, friend, doctor or other health care worker been concerned about your drinking or suggested you cut down?	Yes, in the last 12 months Yes, but not in the last 12 months No	83 73 1494 1650	5.0 4.4 90.5 100	23 19 341	6.0 5.0 89.0	11 6 221	4.6 2.5 92.9	30 30 473	5.6 5.6 88.7	19 18 459	3.8 3.6 92.5	7.901	p=0.245		

		All		Humanities & Natural Sciences		Formal, Physical & Life Sciences		Professions & Applied Sciences		Health Sciences		Chi Square Test	
		N	%	N	%	N	%	N	%	N	%	χ ² Value	P Value
On average during the past 12 months, how many hours of sleep do you get per night?	Less than 6 hours	226	12.6	44	10.7	35	13.3	79	13.6	68	12.8	6.432	p=0.377
	Between 6 and 8 hours	1187	66.4	265	64.5	171	65.0	386	66.3	365	68.5		
	More than 8 hours	375	21.0	101	24.6	57	21.7	117	20.1	100	18.8		
		1788	100										
Behaviours as per the LRADG													
LRADG weekly limits	Within the LRADG weekly limits	1238	90.2	282	89.0	187	91.2	385	87.7	384	93.4	8.777	p=0.032
	Over the LRADG weekly limits	134	9.8	35	11.0	18	8.8	54	12.3	27	6.6		
		1372	100										
LRADG daily limits (3/2)	Within the LRADG daily limits	1238	82.1	282	82.2	187	80.6	385	79.2	384	85.9	12.371	p=0.054
	Over the LRADG daily limits	134	8.9	35	10.3	18	7.8	54	11.1	27	6.0		
	Alcohol abstainer	136	9.0	26	7.6	27	11.6	47	9.7	36	8.1		
	1508	100											
LRADG daily limits (3/2)	Within the LRADG daily limits	937	68.3	208	65.6	140	68.3	298	67.9	291	70.8	2.280	p=0.516
	Over the LRADG limits	435	31.7	109	34.4	65	31.7	141	32.1	120	29.2		
		1372	100										
LRADG weekly limits	Within the LRADG weekly limits	937	62.1	208	60.6	140	60.3	298	61.3	291	65.1	5.873	p=0.438
	Over the LRADG weekly limits	435	28.8	109	31.8	65	28.0	141	29.0	120	26.8		
	Alcohol abstainer	136	9.0	26	7.6	27	11.6	47	9.7	36	8.1		
	1508	100											
Binge drinking	Below the binge drinking cutoff	898	55.2	219	57.9	134	57.0	277	52.7	268	55.0	2.836	p=0.418
	Over the binge drinking cutoff	728	44.8	159	42.1	101	43.0	249	47.3	219	45.0		
		1626	100										
Binge drinking	Binged less than once a month	898	50.9	219	54.2	134	51.1	277	48.3	268	51.2	7.043	p=0.317
	Binge once a month or more	728	41.3	159	39.4	101	38.5	249	43.4	219	41.9		
	Alcohol abstainer	137	7.8	26	6.4	27	10.3	48	8.4	36	6.9		
	1763	100											
Total (Weekly, Daily (3/2) or Binge)	Within the all of the limits	668	48.7	159	50.2	104	50.7	204	46.5	201	48.9	1.490	p=0.685
	Over at least one of the limits	704	51.3	158	49.8	101	49.3	235	53.5	210	51.1		
		1372	100										
	Within the all of the limits	668	44.3	159	46.4	104	44.8	204	42.0	201	45.0	5.042	p=0.538

		All		Humanities & Natural Sciences		Formal, Physical & Life Sciences		Professions & Applied Sciences		Health Sciences		Chi Square Test	
		N	%	N	%	N	%	N	%	N	%	χ^2 Value	P Value
	Over at least one of the limits	704	46.7	158	46.1	101	43.5	235	48.4	210	47.0		
	Alcohol abstainer	136	9.0	26	7.6	27	11.6	47	9.7	36	8.1		
		1508	100										

Table 9: Behaviours by Living Arrangement

		All		In Residence		Off-campus with parent/s or guardian/s		Off Campus Without Parent/s or Guardian/s		Chi Square Test	
		N	%	N	%	N	%	N	%	χ ² Value	P Value
During the past 12 months, have you had a drink of beer, wine, liquor, or any other alcoholic beverage?	Yes	1659	92.0	346	90.6	460	90.2	853	93.6	6.619	p=0.037
	No	144	8.0	36	9.4	50	9.8	58	6.4		
		1803	100								
During the past 12 months, how often did you drink alcoholic beverages?	Less than once a month	384	23.2	Analyses not performed due to small cell sizes							
	Once a month	208	12.5								
2-3 times a month	482	29.1									
Once a week	264	15.9									
2-3 times a week	256	15.4									
4 times a week or more	64	3.9									
	1658	100									
	Once a month or less	592	35.7	106	30.6	194	42.2	292	34.3	20.341	p<0.001
	2-4 times a month	746	45.0	162	46.8	204	44.3	380	44.6		
	Twice a week or more	320	19.3	78	22.5	62	13.5	180	21.1		
		1658	100								
How many times in the past month has drinking alcohol made you drunk?	Once	397	23.9	79	22.8	121	26.4	197	23.1	27.266	p=0.001
	2-3 times	312	18.8	90	26.0	73	15.9	149	17.5		
	4 or more times	177	10.7	48	13.9	46	10.0	83	9.7		
	I have not been drunk in the past month	614	37.0	100	28.9	172	37.5	342	40.1		
	I did not drink alcohol in the past month	158	9.5	29	8.4	47	10.2	82	9.6		
	1658	100									
How often in the past 12 months have you had 5 or more drinks on one occasion?	Never in the last 12 months	304	18.3	70	20.2	76	16.5	158	18.5	15.545	p=0.016
	Less than once a month	617	37.2	111	32.1	187	40.7	319	37.4		
	About once a month	451	27.2	86	24.9	132	28.7	233	27.3		
	About once a week, or more	286	17.2	79	22.8	65	14.1	142	16.7		

		All		In Residence		Off-campus with parent/s or guardian/s		Off Campus Without Parent/s or Guardian/s		Chi Square Test	
		N	%	N	%	N	%	N	%	χ ² Value	P Value
		1658	100								
How often during the last 12 months have you found that you were not able to stop drinking once you had started?	Never in the last 12 months	1318	79.9	272	79.5	364	79.8	682	80.1	7.242	p=0.299
	Less than once a month	188	11.4	36	10.5	57	12.5	95	11.3		
	About once a month	92	5.6	18	5.3	20	4.4	54	6.3		
	About once a week, or more	51	3.1	16	4.7	15	3.3	20	2.3		
		1649	100								
How often during the last 12 months have you not done things you were supposed to because of drinking (e.g.: you missed a class)?	Never in the last 12 months	1192	72.0	225	65.0	350	76.4	617	72.4	16.788	p=0.010
	Less than once a month	339	20.5	85	24.6	85	18.6	169	19.8		
	About once a month	87	5.3	26	7.5	13	2.8	48	5.6		
	About once a week, or more	38	2.3	10	2.9	10	2.2	18	2.1		
		1656	100								
How often during the last 12 months have you had a feeling of guilt or remorse after drinking?	Never in the last 12 months	1053	63.5	202	58.4	302	65.7	549	64.6	10.416	p=0.108
	Less than once a month	466	28.1	107	30.9	117	25.4	242	28.5		
	About once a month	96	5.8	23	6.6	30	6.5	43	5.1		
	About once a week, or more	41	2.5	14	4.0	11	2.4	16	1.9		
		1656	100								
How often in the last 12 months have you been unable to remember what happened the night before because you had been drinking?	Never in the last 12 months	1067	64.4	197	56.9	308	67.2	562	66.0	17.096	p=0.009
	Less than once a month	442	26.7	103	29.8	118	25.8	221	25.9		
	About once a month	115	6.9	34	9.8	24	5.2	57	6.7		
	About once a week, or more	32	1.9	12	3.5	8	1.7	12	1.4		
		1656	100								
Have you or someone else been injured as a result of your drinking?	Yes, in the last 12 months	182	11.3	49	14.7	48	10.8	85	10.2	7.453	p=0.114
	No	1258	77.8	243	72.8	347	78.0	668	79.8		
	Yes, but not in the last 12 months	176	10.9	42	12.6	50	11.2	84	10.0		
		1616	100								

		All		In Residence		Off-campus with parent/s or guardian/s		Off Campus Without Parent/s or Guardian/s		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
Has a relative, friend, doctor or other health care worker been concerned about your drinking or suggested you cut down?	Yes, in the last 12 months	82	5.0	23	6.7	27	5.9	32	3.8	12.515	p=0.014
	Yes, but not in the last 12 months	73	4.4	10	2.9	14	3.1	49	5.8		
	No	1501	90.6	312	90.4	418	91.1	771	90.5		
		1656	100								
On average during the past 12 months, how many hours of sleep do you get per night?	Less than 6 hours	225	12.6	48	12.6	59	11.7	118	13.0	0.828	p=0.935
	Between 6 and 8 hours	1192	66.5	249	65.5	342	67.7	601	66.3		
	More than 8 hours	375	20.9	83	21.8	104	20.6	188	20.7		
		1792	100								
Behaviours as per the LRADG											
LRADG weekly limits <i>Among drinkers</i>	Within the LRADG weekly limits	1242	90.1	250	87.4	364	93.1	628	89.5	6.548	p=0.038
	Over the LRADG weekly limits	137	9.9	36	12.6	27	6.9	74	10.5		
		1379	100								
<i>Among all</i>	Within the LRADG weekly limits	1242	82.0	250	77.6	364	83.1	628	83.3	14.013	p=0.007
	Over the LRADG weekly limits	137	9.0	36	11.2	27	6.2	74	9.8		
	Alcohol abstainer	135	8.9	36	11.2	47	10.7	52	6.9		
		1514	100								
LRADG daily limits (3/2) <i>Among drinkers</i>	Within the LRADG daily limits	942	68.3	177	61.9	298	76.2	467	66.5	17.769	p<0.001
	Over the LRADG limits	437	31.7	109	38.1	93	23.8	235	33.5		
		1379	100								
<i>Among all</i>	Within the LRADG daily limits	942	62.2	177	55.0	298	68.0	467	61.9	25.026	p<0.001
	Over the LRADG limits	437	28.9	109	33.9	93	21.2	235	31.2		
	Alcohol abstainer	135	8.9	36	11.2	47	10.7	52	6.9		
		1514	100								
Binge drinking <i>Among drinkers</i>	Binged less than 1x/month in the past year	900	55.1	180	52.3	262	57.1	458	55.2	1.804	p=0.406
	Binged 1x/month or more in the past year	732	44.9	164	47.7	197	42.9	371	44.8		

		All		In Residence		Off-campus with parent/s or guardian/s		Off Campus Without Parent/s or Guardian/s		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
<i>Among all</i>		1632	100								
	Binged less than 1x/month in the past year	900	50.9	180	47.4	262	51.7	458	52.0	9.693	p=0.046
	Binged 1x/month or more in the past year	732	41.4	164	43.2	197	38.9	371	42.1		
	Alcohol abstainer	136	7.7	36	9.5	48	9.5	52	5.9		
		1768	100								
Total (Weekly, Daily (3/2) or Binge) <i>Among drinkers</i>	Within all of the limits	672	48.7	131	45.8	204	52.2	337	48.1	2.984	p=0.225
	Over at least one of the limits	707	51.3	155	54.2	187	47.8	365	52.0		
			1379	100							
<i>Among all</i>	Within all of the limits	672	44.4	131	40.7	204	46.6	337	44.7	10.520	p=0.033
	Over at least one of the limits	707	46.7	155	48.1	187	42.7	365	48.4		
	Alcohol abstainer	135	8.9	36	11.2	47	10.7	52	6.9		
			1514	100							

Section 3 – Awareness and knowledge surrounding the LRADG

Table 10: Knowledge (Total)

Question	Answer	All	
		N	%
Have you seen or heard about Ontario’s ‘Low-Risk Alcohol Drinking Guidelines’?	Yes	278	15.2
	No ⁱⁱ	1545	84.8
		1823	100
Low-risk does not mean no-risk. The LRADG are meant to help people avoid the health, safety and social problems associated with alcohol use. If the Low-Risk Alcohol Drinking Guidelines indicated that you had to drink less, would you change the amount you drink?	I don’t know	433	23.9
	Yes	507	27.9
	No	668	36.8
	I don’t drink	207	11.4
		1815	100
In general, what is the maximum number of drinks per DAY you think could be considered low-risk for a person of your sex that is of legal drinking age?	0	155	8.7
	1	649	36.4
	2	598	33.5
	3	218	12.2
	4	66	3.7
	5+	98	5.5
		1784	100
How could we BEST get information to you about the LRADG?	I don’t know	85	4.8
	Written material	160	9.0
	Using the media	576	32.3
	In person	181	10.1
	Electronically	567	31.7
	Bottle labelling	217	12.2
		1786	100
Would it help you to follow the LRADG if bottles of alcohol had a label explaining the LRADG and the number of drinks in the bottle? (e.g.: on a	I don’t know	216	11.9
	Yes	1181	65.0

ⁱⁱ Answers ‘I don’t know’ and ‘No’ have been combined to form variable: ‘No’.

Question	Answer	All	
		N	%
750 ml wine bottle, the label would say that a standard size drink is 142ml (or 5oz) and that there are about 5 standard drinks in that bottle	No	419 1816	23.1 100

Table 11: Knowledge by Sex

Question	Answer	All		Males		Females		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
Have you seen or heard about Ontario's 'Low-Risk Alcohol Drinking Guidelines'?	Yes	277	15.3	55	12.0	222	16.3	4.893	p=0.027
	No	1541	84.7	402	88.0	1137	83.7		
		1816	100						
Low-risk does not mean no-risk. The LRADG are meant to help people avoid the health, safety and social problems associated with alcohol use. If the Low-Risk Alcohol Drinking Guidelines indicated that you had to drink less, would you change the amount you drink?	I don't know	432	23.9	95	20.9	337	24.9	23.132	p<0.001
	Yes	505	27.9	99	21.8	406	30.0		
	No	666	36.8	207	45.5	459	33.9		
	I don't drink	205	11.3	54	11.9	151	11.2		
		1808	100						
In general, what is the maximum number of drinks per DAY you think could be considered low-risk for a person of your sex that is of legal drinking age?	0	155	8.7	27	6.1	128	9.6	90.723	p<0.001
	1	646	36.4	101	22.8	545	40.9		
	2	595	33.5	165	37.2	430	32.3		
	3	217	12.2	72	16.3	145	10.9		
	4	65	3.7	32	7.2	33	2.5		
	5+	98	5.5	46	10.4	52	3.9		
		1776	100						
How could we BEST get information to you about the LRADG?	I don't know	85	4.8	30	6.8	55	4.1	20.249	p=0.001
	Written material	160	9.0	32	7.2	128	9.6		
	Using the media	574	32.2	129	29.1	445	33.3		
	In person	181	10.2	49	11.1	132	9.9		
	Electronically	563	31.6	129	29.1	434	32.5		
	Bottle labelling	217	12.2	74	16.7	143	10.7		
		1780	100						

Would it help you to follow the LRADG if bottles of alcohol had a label explaining the LRADG and the number of drinks in the bottle? (e.g.: on a 750 ml wine bottle, the label would say that a standard size drink is 142ml (or 5oz) and that there are about 5 standard drinks in that bottle	I don't know	216	11.9	52	11.4	164	12.1	13.008	p=0.001
	Yes	1176	65.0	270	59.3	906	66.9		
	No	418	23.1	133	29.2	285	21.0		
		1810	100						

Table 12: Knowledge by Age

Question	Answer	All		<19		19-24		>24		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
Have you seen or heard about Ontario's 'Low-Risk Alcohol Drinking Guidelines'?	Yes	275	15.2	33	16.6	168	13.5	74	20.1	9.909	p=0.007
	No	1539	84.8	166	83.4	1078	86.5	295	79.9		
		1814	100								
Low-risk does not mean no-risk. The LRADG are meant to help people avoid the health, safety and social problems associated with alcohol use. If the Low-Risk Alcohol Drinking Guidelines indicated that you had to drink less, would you change the amount you drink?	I don't know	431	23.9	48	24.1	305	24.6	78	21.2	24.371	p<0.001
	Yes	504	27.9	54	27.1	336	27.1	114	31.0		
	No	667	36.9	59	29.6	482	38.9	126	34.2		
	I don't drink	204	11.3	38	19.1	116	9.4	50	13.6		
		1806	100								
In general, what is the maximum number of drinks per DAY you think could be considered low-risk for a person of your sex that is of legal drinking age?	0	152	8.6	18	9.4	95	7.8	39	10.8	14.749	p=0.141
	1	647	36.5	56	29.2	444	36.4	147	40.6		
	2	596	33.6	66	34.4	416	34.1	114	31.5		
	3	216	12.2	29	15.1	151	12.4	36	9.9		
	4	66	3.7	8	4.2	47	3.8	11	3.0		
	5+	98	5.5	15	7.8	68	5.6	15	4.1		
		1775	100								
How could we BEST get information to you about the LRADG?	I don't know	85	4.8	16	8.2	47	3.9	22	6.0	45.706	p<0.001
	Written material	160	9.0	10	5.1	104	8.5	46	12.6		
	Using the media	574	32.3	68	34.9	395	32.4	111	30.5		
	In person	180	10.1	33	16.9	122	10.0	25	6.9		
	Electronically	563	31.7	61	31.3	382	31.4	120	33.0		
	Bottle labelling	215	12.1	7	3.6	168	13.8	40	11.0		

Question	Answer	All		<19		19-24		>24		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
		1777	100								
Would it help you to follow the LRADG if bottles of alcohol had a label explaining the LRADG and the number of drinks in the bottle? (e.g.: on a 750 ml wine bottle, the label would say that a standard size drink is 142ml (or 5oz) and that there are about 5 standard drinks in that bottle	I don't know	214	11.8	33	16.6	134	10.8	47	12.8	9.549	p=0.049
	Yes	1175	65.0	115	57.8	831	67.0	229	62.2		
	No	418	23.1	51	25.6	275	22.2	92	25.0		
		1807	100								

Table 13: Knowledge by Ethnicity

Question	Answer	All		Caucasian		Non-Caucasian		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
Have you seen or heard about Ontario’s ‘Low-Risk Alcohol Drinking Guidelines’?	Yes	274	15.2	221	14.5	53	18.9	3.503	p=0.061
	No	1531	84.8	1303	85.5	228	81.1		
Low-risk does not mean no-risk. The LRADG are meant to help people avoid the health, safety and social problems associated with alcohol use. If the Low-Risk Alcohol Drinking Guidelines indicated that you had to drink less, would you change the amount you drink?	I don’t know	428	23.8	384	25.3	44	15.8	25.560	p<0.001
	Yes	506	28.1	417	27.5	89	31.9		
	No	661	36.8	566	37.3	95	34.1		
	I don’t drink	203	11.3	152	10.0	51	18.3		
		1798	100						
In general, what is the maximum number of drinks per DAY you think could be considered low-risk for a person of your sex that is of legal drinking age?	0	152	8.6	113	7.6	39	14.3	19.819	p<0.001
	1	645	36.5	545	36.4	100	36.8		
	2	592	33.5	512	34.2	80	29.4		
	3	217	12.3	183	12.2	34	12.5		
	4	65	3.7	62	4.1	3	1.1		
	5+	97	5.5	81	5.4	16	5.9		
	1768	100							
How could we BEST get information to you about the LRADG?	I don’t know	83	4.7	69	4.6	14	5.0	6.426	p=0.267
	Written material	160	9.0	125	8.4	35	12.5		
	Using the media	567	32.1	488	32.8	79	28.3		
	In person	181	10.2	155	10.4	26	9.3		
	Electronically	562	31.8	473	31.8	89	31.9		
	Bottle labelling	215	12.2	179	12.0	36	12.9		
	1768	100							
Would it help you to follow the LRADG if bottles of alcohol had a label explaining the LRADG and the number of drinks in the bottle? (e.g.: on a 750 ml wine bottle, the label would say that a standard size drink is 142ml (or 5oz) and that there are about 5 standard drinks in that bottle	I don’t know	213	11.8	172	11.3	41	14.6	2.981	p=0.225
	Yes	1170	65.1	988	65.1	182	64.8		
	No	415	23.1	357	23.5	58	20.6		
		1798	100						

Table 14: Knowledge by Mother Tongue

Question	Answer	All		English		Other		Chi Square Test	
		N	%	N	%	N	%	χ ² Value	P Value
Have you seen or heard about Ontario’s ‘Low-Risk Alcohol Drinking Guidelines’?	Yes	277	15.2	169	14.2	108	17.3	3.207	p=0.073
	No	1540	84.8	1025	85.8	515	82.7		
		1817	100						
Low-risk does not mean no-risk. The LRADG are meant to help people avoid the health, safety and social problems associated with alcohol use. If the Low-Risk Alcohol Drinking Guidelines indicated that you had to drink less, would you change the amount you drink?	I don’t know	432	23.9	281	23.6	151	24.4	3.453	p=0.327
	Yes	506	28.0	323	27.1	183	29.6		
	No	665	36.8	455	38.2	210	33.9		
	I don’t drink	206	11.4	131	11.0	75	12.1		
		1809	100						
In general, what is the maximum number of drinks per DAY you think could be considered low-risk for a person of your sex that is of legal drinking age?	0	154	8.7	87	7.4	67	11.0	13.515	p=0.019
	1	648	36.4	416	35.6	232	38.2		
	2	596	33.5	417	35.6	179	29.4		
	3	218	12.3	148	12.6	70	11.5		
	4	64	3.6	37	3.2	27	4.4		
	5+	98	5.5	65	5.6	33	5.4		
		1778	100						
How could we BEST get information to you about the LRADG?	I don’t know	83	4.7	52	4.4	31	5.1	13.149	p=0.022
	Written material	159	8.9	102	8.7	57	9.3		
	Using the media	576	32.4	381	32.6	195	31.9		
	In person	180	10.1	100	8.6	80	13.1		
	Electronically	566	31.8	395	33.8	171	28.0		
	Bottle labelling	216	12.1	139	11.9	77	12.6		
		1780	100						
Would it help you to follow the LRADG if bottles of alcohol had a label explaining the LRADG and the number of drinks in the bottle? (e.g.: on a 750 ml wine bottle, the label would say that a standard size drink is 142ml (or 5oz) and that there are about 5 standard drinks in that bottle	I don’t know	212	11.7	130	10.9	82	13.2	3.506	p=0.173
	Yes	1179	65.1	792	66.6	387	62.4		
	No	419	23.1	268	22.5	151	24.4		
		1810	100						

Table 15: Knowledge by Institution Type

Question	Answer	All		College		University		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
Have you seen or heard about Ontario's 'Low-Risk Alcohol Drinking Guidelines'?	Yes	275	15.2	51	17.1	224	14.8	1.031	p=0.310
	No	1536	84.8	247	82.9	1289	85.2		
		1811	100						
Low-risk does not mean no-risk. The LRADG are meant to help people avoid the health, safety and social problems associated with alcohol use. If the Low-Risk Alcohol Drinking Guidelines indicated that you had to drink less, would you change the amount you drink?	I don't know	431	23.9	67	22.7	364	24.1	2.917	p=0.405
	Yes	503	27.9	82	27.8	421	27.9		
	No	664	36.8	119	40.3	545	36.1		
	I don't drink	205	11.4	27	9.2	178	11.8		
		1803	100						
In general, what is the maximum number of drinks per DAY you think could be considered low-risk for a person of your sex that is of legal drinking age?	0	152	8.6	23	7.8	129	8.7	3.975	p=0.553
	1	647	36.5	100	34.1	547	37.0		
	2	593	33.5	97	33.1	496	33.5		
	3	217	12.2	38	13.0	179	12.1		
	4	65	3.7	13	4.4	52	3.5		
	5+	98	5.5	22	7.5	76	5.1		
		1772	100						
How could we BEST get information to you about the LRADG?	I don't know	85	4.8	16	5.5	69	4.6	11.312	p=0.046
	Written material	159	9.0	30	10.3	129	8.7		
	Using the media	572	32.2	83	28.5	489	32.9		
	In person	180	10.1	40	13.7	140	9.4		
	Electronically	564	31.8	79	27.1	485	32.7		
	Bottle labelling	216	12.2	43	14.8	173	11.6		
		1776	100						
Would it help you to follow the LRADG if bottles of alcohol had a label explaining the LRADG and the number of drinks in the bottle? (e.g.: on a 750 ml wine	I don't know	214	11.9	37	12.5	177	11.7	7.879	p=0.019
	Yes	1173	65.0	173	58.4	1000	66.3		
	No	417	23.1	86	29.1	331	21.9		
		1804	100						

Question	Answer	All		College		University		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
bottle, the label would say that a standard size drink is 142ml (or 5oz) and that there are about 5 standard drinks in that bottle									

Table 16: Knowledge by Academic Discipline

Question	Answer	All		Humanities & Natural Sciences		Formal, Physical & Life Sciences		Professions & Applied Science		Health Sciences		Chi Square Test	
		N	%	N	%	N	%	N	%	N	%	χ ² Value	P Value
Have you seen or heard about Ontario’s ‘Low-Risk Alcohol Drinking Guidelines’?	Yes	272	15.1	69	16.7	30	11.3	76	13.0	97	18.2	9.863	p=0.020
	No	1525	84.9	344	83.3	236	88.7	509	87.0	436	81.8		
Low-risk does not mean no-risk. The LRADG are meant to help people avoid the health, safety and social problems associated with alcohol use. If the Low-Risk Alcohol Drinking Guidelines indicated that you had to drink less, would you change the amount you drink?	I don’t know	428	23.9	103	25.1	59	22.3	122	21.0	144	27.0	13.289	p=0.150
	Yes	501	28.0	120	29.2	65	24.6	177	30.4	139	26.1		
	No	656	36.6	148	36.0	99	37.5	216	37.1	193	36.2		
	I don’t drink	205	11.5	40	9.7	41	15.5	67	11.5	57	10.7		
		1790	100										
In general, what is the maximum number of drinks per DAY you think could be considered low-risk for a person of your sex that is of legal drinking age?	0	155	8.8	34	8.4	31	11.8	51	8.9	39	7.5	18.082	p=0.258
	1	642	36.5	137	33.9	96	36.6	201	35.3	208	39.8		
	2	590	33.5	144	35.6	81	30.9	180	31.6	185	35.4		
	3	213	12.1	52	12.9	27	10.3	78	13.7	56	10.7		
	4	64	3.6	15	3.7	9	3.4	23	4.0	17	3.3		
	5+	95	5.4	22	5.4	18	6.9	37	6.5	18	3.4		
		1759	100										
How could we BEST get information to you about the LRADG?	I don’t know	81	4.6	19	4.7	11	4.3	29	5.1	22	4.2	14.077	p=0.520
	Written material	157	8.9	27	6.6	25	9.8	59	10.4	46	8.7		
	Using the media	570	32.4	136	33.3	79	31.0	165	28.9	190	36.1		
	In person	179	10.2	40	9.8	28	11.0	53	9.3	58	11.0		
	Electronically	559	31.8	138	33.8	83	32.5	191	33.5	147	27.9		
	Bottle labelling	214	12.2	44	11.8	29	11.4	73	12.8	64	12.1		

Question	Answer	All		Humanities & Natural Sciences		Formal, Physical & Life Sciences		Professions & Applied Science		Health Sciences		Chi Square Test	
		N	%	N	%	N	%	N	%	N	%	χ^2 Value	P Value
		1760	100										
Would it help you to follow the LRADG if bottles of alcohol had a label explaining the LRADG and the number of drinks in the bottle? (e.g.: on a 750 ml wine bottle, the label would say that a standard size drink is 142ml (or 5oz) and that there are about 5 standard drinks in that bottle	I don't know	214	12.0	51	12.3	28	10.6	80	13.7	55	10.4	4.125	p=0.660
	Yes	1170	65.4	268	64.9	171	64.8	376	64.6	355	66.9		
	No	406	22.7	94	22.8	65	24.6	126	21.6	121	22.8		
		1790	100										

Table 17: Knowledge by Living Arrangement

Question	Answer	All		In residence		Off campus with parent/s or guardian/s		Off campus without parent/s or guardian/s		Chi Square Test	
		N	%	N	%	N	%	N	%	χ ² Value	P Value
Have you seen or heard about Ontario’s ‘Low-Risk Alcohol Drinking Guidelines’?	Yes	273	15.2	66	17.3	59	11.6	148	16.3	7.363	p=0.025
	No	1528	84.8	315	82.7	451	88.4	762	83.7		
Low-risk does not mean no-risk. The LRADG are meant to help people avoid the health, safety and social problems associated with alcohol use. If the Low-Risk Alcohol Drinking Guidelines indicated that you had to drink less, would you change the amount you drink?	I don’t know	430	24.0	93	24.5	121	23.9	216	23.8	3.217	p=0.781
	Yes	501	27.9	100	26.4	152	30.0	249	27.4		
	No	659	36.7	138	36.4	175	34.6	346	38.1		
	I don’t drink	204	11.4	48	12.7	58	11.5	98	10.8		
		1794	100								
In general, what is the maximum number of drinks per DAY you think could be considered low-risk for a person of your sex that is of legal drinking age?	0	149	8.5	30	8.0	42	8.4	77	8.7	22.899	p=0.011
	1	641	36.4	114	30.5	183	36.7	344	38.7		
	2	593	33.7	121	32.4	176	35.3	296	33.3		
	3	216	12.3	57	15.2	59	11.8	100	11.3		
	4	65	3.7	18	4.8	14	2.8	33	3.7		
	5+	97	5.5	34	9.1	25	5.0	38	4.3		
		1761	100								
How could we BEST get information to you about the LRADG?	I don’t know	81	4.6	18	4.8	23	4.6	40	4.5	16.676	p=0.082
	Written material	159	9.0	32	8.6	38	7.6	89	10.0		
	Using the media	573	32.5	111	29.7	174	34.9	288	32.3		
	In person	180	10.2	57	15.2	45	9.0	78	8.7		
	Electronically	558	31.6	110	29.4	160	32.1	288	32.3		
	Bottle labelling	214	12.1	46	12.3	58	11.6	110	12.3		
		1765	100								
Would it help you to follow the LRADG if bottles of alcohol had a label explaining the LRADG and	I don’t know	210	11.7	51	13.5	60	11.8	99	10.9	6.152	p=0.188
	Yes	1167	65.1	246	65.1	343	67.5	578	63.7		

Question	Answer	All		In residence		Off campus with parent/s or guardian/s		Off campus without parent/s or guardian/s		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
the number of drinks in the bottle? (e.g.: on a 750 ml wine bottle, the label would say that a standard size drink is 142ml (or 5oz) and that there are about 5 standard drinks in that bottle	No	417 1794	23.2 100	81	21.4	105	20.7	231	25.4		

Table 18: Behaviours by Knowledge

Have you seen or heard about Ontario's LRADGs									
	Behaviours	All		Yes		No		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
Drunkenness Frequency <i>Among drinkers</i>	Have not been drunk in the past month	780	46.6	133	52.0	647	45.6	8.234	p=0.016
	Have been drunk 1-3x in the past month	717	42.8	108	42.2	609	42.9		
	Have been drunk 4+ times in the past month	177	10.6	15	5.9	162	11.4		
		1674	100						
Bingeing Frequency <i>Among drinkers</i>	Never binged in the last 12 months	308	18.4	48	18.8	260	18.3	11.144	p=0.011
	Binged less than once a month	623	37.2	109	42.6	514	36.2		
	Binged about once a month	456	27.2	73	28.5	383	27.0		
	Binged about once a week, or more	287	17.1	26	10.2	261	18.4		
	1674	100							
LRADG Weekly Limits <i>Among drinkers</i>	Within LRADG Weekly Limits	1250	90.1	197	94.7	1053	89.3	5.789	p=0.016
	Over LRADG Weekly Limits	137	9.9	11	5.3	126	10.7		
		1387	100						
	<i>Among all</i>	Alcohol abstainer	138	9.0	22	9.6	126		
	Within the LRADG Weekly Limits	1250	82.0	197	85.7	1053	81.3		
	Over the LRADG Weekly Limits	137	9.0	11	4.8	116	9.0		
		1525	100						
LRADG Daily Limits <i>Among drinkers</i>	Within LRADG Daily limits (3/2)	947	68.3	143	68.8	804	68.2	0.025	p=0.874
	Over LRADG Daily limits (3/2)	440	31.7	65	31.2	375	31.8		
		1387	100						
	<i>Among all</i>	Alcohol abstainer	138	9.0	22	9.6	116		
	Within LRADG Daily limits (3/2)	947	62.1	143	62.2	804	62.1		
	Over LRADG Daily limits (3/2)	440	28.9	65	28.3	375	29.0		
		1525	100						
Binge Drinking <i>Among drinkers</i>	Binged less than 1x/month in the past year	910	55.3	151	60.4	759	54.3	3.159	p=0.075
	Binged 1x/month or more in the past year	737	44.7	99	39.6	638	45.7		
		1647	100						
<i>Among all</i>	Alcohol abstainer	139	7.8	22	8.1	117	7.7	3.192	p=0.203

Have you seen or heard about Ontario's LRADGs									
	Behaviours	All		Yes		No		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
	Binged less than 1x/month in the past year	910	51.0	151	55.5	759	50.1		
	Binged 1x/month or more in the past year	737	41.3	99	36.4	638	42.1		
		1786	100						
All LRADG Limits (weekly, daily, binge)	Within all limits	676	48.7	108	51.9	568	48.2	0.993	p=0.319
	Over at least one limit	711	51.3	100	48.1	611	51.8		
<i>Among drinkers</i>		1387	100						
<i>Among all</i>	Alcohol abstainer	138	9.0	22	9.6	116	9.0	1.076	p=0.584
	Within all limits	676	44.3	108	47.0	568	43.9		
	Over at least one limit	711	46.6	100	43.5	611	47.2		
		1525							

Section 4 - Beliefs

Table 19: Beliefs (Total)

Questions	Answers	All		CCS ^{jj}
		N	%	% ^{kk}
Students at my institution admire drinkers	Disagree	306	19.3	46
	Neutral	511	32.3	46
	Agree	766	48.4	8
		1583	100	100
It's important to show how much you can drink and still hold your liquor (i.e. to be able to drink considerable amounts of alcohol with little signs or symptoms of intoxication)	Disagree	971	55.8	59
	Neutral	333	19.1	24
	Agree	436	25.1	17
		1740	100	100
You can't make it socially without drinking	Disagree	1288	71.3	69
	Neutral	230	12.7	15
	Agree	288	15.9	16
		1806	100	100
Drinking is an important part of university/college experience	Disagree	667	37.1	44
	Neutral	444	24.7	22
	Agree	688	38.2	34
		1799	100	100
Rules about drinking are almost never enforced on campus	Disagree	505	40.4	29
	Neutral	288	23.1	52
	Agree	456	36.5	18
		1249	100	99
Alcohol is easily available on campus	Disagree	346	25.7	19
	Neutral	284	21.1	24
	Agree	718	53.3	57

^{jj} Adlaf, E; Demers, A; Gliksman (2005)⁷

^{kk} CCS percentages have been rounded to the nearest unit, and totals may not add up to exactly 100

Questions	Answers	All		CCS ^{ij}
		N	%	% ^{kk}
		1348	100	100
Alcohol use is a problem for students on my campus	Disagree	415	32.2	47
	Neutral	428	33.2	39
	Agree	447	34.7	14
		1290	100	100
The administration at my school should exercise more control over students' alcohol use	Disagree	793	52.6	43
	Neutral	433	28.7	37
	Agree	283	18.8	20
		1509	100	100
There should be more alcohol-free social events or activities on my school campus	Disagree	506	30.7	34
	Neutral	550	33.3	35
	Agree	594	36.0	31
		1650	100	100
Alcohol should be sold at campus sporting events	Disagree	596	33.9	41
	Neutral	438	24.9	31
	Agree	723	41.1	28
		1757	100	100
Increasing the price of alcohol served on campus pubs and at campus activities would decrease its consumption by students	Disagree	1079	61.8	59
	Neutral	161	9.2	14
	Agree	506	29.0	27
		1746	100	100
The Canadian legal drinking age should be increased	Disagree	1410	78.3	70
	Neutral	201	11.2	20
	Agree	189	10.5	11
		1800	100	100
There should be more advertising against drinking on my campus	Disagree	706	41.2	27
	Neutral	612	35.7	43
	Agree	394	23.0	31
		1712	100	101
Universities and colleges should ban advertisements of alcohol availability at campus events and parties	Disagree	1020	58.4	50
	Neutral	409	23.4	34

Questions	Answers	All		CCS ^{ij}
		N	%	% ^{kk}
	Agree	317	18.2	16
		1746	100	100
There should be more alcohol education programs on my campus	Disagree	238	14.1	12
	Neutral	647	38.4	51
	Agree	800	47.5	37
		1685	100	100

Table 20: Beliefs by Sex

Questions	Answers	All		Males		Females		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
Students at my institution admire drinkers	Disagree	305	19.3	69	17.0	236	20.1	3.075	p=0.215
	Neutral	509	32.3	143	35.2	366	31.2		
	Agree	764	48.4	194	47.8	570	48.6		
		1578	100						
It's important to show how much you can drink and still hold your liquor (i.e. to be able to drink considerable amounts of alcohol with little signs or symptoms of intoxication)	Disagree	968	55.9	223	50.6	745	57.7	6.718	p=0.035
	Neutral	332	19.2	95	21.5	237	18.3		
	Agree	433	25.0	123	27.9	310	24.0		
		1733	100						
You can't make it socially without drinking	Disagree	1283	71.3	296	65.1	987	73.4	14.419	p=0.001
	Neutral	230	12.8	79	17.4	151	11.2		
	Agree	286	15.9	80	17.6	206	15.3		
		1799	100						
Drinking is an important part of university/college experience	Disagree	662	36.9	158	35.0	504	37.6	7.236	p=0.027
	Neutral	443	24.7	97	21.5	346	25.8		
	Agree	687	38.3	196	43.5	491	36.6		
		1792	100						
Rules about drinking are almost never enforced on campus	Disagree	504	40.5	142	42.6	362	39.7	0.967	p=0.078
	Neutral	286	23.0	72	21.6	214	23.5		
	Agree	455	36.5	119	35.7	336	36.8		
		1245	100						
Alcohol is easily available on campus	Disagree	345	25.7	81	22.0	264	27.0	3.560	p=0.169
	Neutral	284	21.1	82	22.3	202	20.7		
	Agree	715	53.2	205	55.7	510	52.3		
		1344	100						
Alcohol use is a problem for students on my campus	Disagree	415	32.3	133	39.3	282	29.8	10.570	p=0.005
	Neutral	427	33.2	103	30.5	324	34.2		
	Agree	443	34.5	102	30.2	341	36.0		
		1285	100						

Questions	Answers	All		Males		Females		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
The administration at my school should exercise more control over students' alcohol use	Disagree	790	52.6	230	56.8	560	51.0	4.023	p=0.134
	Neutral	431	28.7	104	25.7	327	29.8		
	Agree	281	18.7	71	17.5	210	19.1		
		1502	100						
There should be more alcohol-free social events or activities on my school campus	Disagree	504	30.7	151	35.9	353	28.9	10.706	p=0.005
	Neutral	550	33.5	144	34.2	406	33.2		
	Agree	590	35.9	126	29.9	464	37.9		
		1644	100						
Alcohol should be sold at campus sporting events	Disagree	593	33.9	125	28.0	468	35.9	29.702	p<0.001
	Neutral	435	24.8	88	19.7	347	26.6		
	Agree	723	41.3	233	52.2	490	37.5		
		1751	100						
Increasing the price of alcohol served on campus pubs and at campus activities would decrease its consumption by students	Disagree	1076	61.9	253	57.2	823	63.5	12.027	p=0.002
	Neutral	159	9.1	33	7.5	126	9.7		
	Agree	504	29.0	156	35.3	348	26.8		
		1739	100						
The Canadian legal drinking age should be increased	Disagree	1404	78.3	359	79.8	1045	77.8	1.635	p=0.442
	Neutral	201	11.2	51	11.3	150	11.2		
	Agree	188	10.5	40	8.9	148	11.0		
		1793	100						
There should be more advertising against drinking on my campus	Disagree	702	41.2	222	50.6	480	37.9	23.315	p<0.001
	Neutral	610	35.8	123	28.0	487	38.5		
	Agree	393	23.0	94	21.4	299	23.6		
		1705	100						
Universities and colleges should ban advertisements of alcohol availability at campus events and parties	Disagree	1019	58.6	259	58.2	760	58.7	0.428	p=0.807
	Neutral	405	23.3	101	22.7	304	23.5		
	Agree	315	18.1	85	19.1	230	17.8		
		1739	100						
There should be more alcohol education programs on my campus	Disagree	237	14.1	73	17.0	164	13.1	3.901	p=0.142
	Neutral	645	38.4	161	37.4	484	38.8		

Questions	Answers	All		Males		Females		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
	Agree	796	47.4	196	45.6	600	48.1		
		1678	100						

Table 21: Beliefs by Age

Questions	Answers	All		<19		19-24		>24		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
Students at my institution admire drinkers	Disagree	305	19.3	35	19.2	195	17.2	75	28.4	21.696	p<0.001
	Neutral	508	32.2	65	35.7	357	31.6	86	32.6		
	Agree	764	48.4	82	45.1	579	51.2	103	39.0		
		1577	100								
It's important to show how much you can drink and still hold your liquor (i.e. to be able to drink considerable amounts of alcohol with little signs or symptoms of intoxication)	Disagree	965	55.7	92	47.9	641	53.3	232	68.8	35.018	p<0.001
	Neutral	331	19.1	50	26.0	231	19.2	50	14.8		
	Agree	436	25.2	50	26.0	331	27.5	55	16.3		
		1732	100								
You can't make it socially without drinking	Disagree	1280	71.2	148	74.0	853	69.1	279	76.6	9.499	p=0.050
	Neutral	230	12.8	20	10.0	170	13.8	40	11.0		
	Agree	288	16.0	32	16.0	211	17.1	45	12.4		
		1798	100								
Drinking is an important part of university/college experience	Disagree	662	37.0	78	39.2	420	34.0	164	46.2	21.800	p<0.001
	Neutral	440	24.6	38	19.1	321	26.0	81	22.8		
	Agree	688	38.4	83	41.7	495	40.0	110	31.0		
		1790	100								
Rules about drinking are almost never enforced on campus	Disagree	503	40.5	74	44.8	368	41.4	61	32.1	8.808	p=0.066
	Neutral	284	22.8	39	23.6	192	21.6	53	27.9		
	Agree	456	36.7	52	31.5	328	36.9	76	40.0		
		1243	100								
Alcohol is easily available on campus	Disagree	343	25.6	45	28.0	260	27.0	38	17.5	13.782	p=0.008
	Neutral	280	20.9	41	25.5	184	19.1	55	25.3		
	Agree	718	53.5	75	46.6	519	53.9	124	57.1		
		1341	100								
Alcohol use is a problem for students on my campus	Disagree	413	32.2	61	35.9	300	32.1	52	29.1	2.981	p=0.561
	Neutral	425	33.1	56	32.9	303	32.4	66	36.9		
	Agree	446	34.7	53	31.2	332	35.5	61	34.1		
		1284	100								

Questions	Answers	All		<19		19-24		>24		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
The administration at my school should exercise more control over students' alcohol use	Disagree	788	52.5	95	51.9	582	54.4	111	44.8	9.096	p=0.059
	Neutral	432	28.8	55	30.1	300	28.0	77	31.0		
	Agree	281	18.7	33	18.0	188	17.6	60	24.2		
		1501	100								
There should be more alcohol-free social events or activities on my school campus	Disagree	504	30.7	51	26.8	393	34.1	60	20.1	33.764	p<0.001
	Neutral	545	33.2	60	31.6	388	33.7	97	32.4		
	Agree	592	36.1	79	41.6	371	32.2	142	47.5		
		1641	100								
Alcohol should be sold at campus sporting events	Disagree	589	33.7	78	40.8	364	30.2	147	41.9	34.786	p<0.001
	Neutral	436	24.9	52	27.2	289	24.0	95	27.1		
	Agree	723	41.4	61	31.9	553	45.9	109	31.1		
		1748	100								
Increasing the price of alcohol served on campus pubs and at campus activities would decrease its consumption by students	Disagree	1072	61.7	110	58.8	742	61.3	220	64.7	2.050	p=0.727
	Neutral	160	9.2	19	10.2	112	9.3	29	8.5		
	Agree	505	29.1	58	31.0	356	29.4	91	26.8		
		1737	100								
The Canadian legal drinking age should be increased	Disagree	1405	78.4	163	82.7	1002	81.3	240	66.5	54.714	p<0.001
	Neutral	198	11.1	25	12.7	125	10.1	48	13.3		
	Agree	188	10.5	9	4.6	106	8.6	73	20.2		
		1791	100								
There should be more advertising against drinking on my campus	Disagree	705	41.4	78	40.2	533	44.9	94	29.0	41.155	p<0.001
	Neutral	608	35.7	74	38.1	417	35.2	117	36.1		
	Agree	391	22.9	42	21.6	236	19.9	113	34.9		
		1704	100								
Universities and colleges should ban advertisements of alcohol availability at campus events and parties	Disagree	1017	58.5	114	60.0	764	63.6	139	40.2	98.922	p<0.001
	Neutral	406	23.4	47	24.7	275	22.9	84	24.3		
	Agree	314	18.1	29	15.3	162	13.5	123	35.5		
		1737									
There should be more alcohol education programs on my campus	Disagree	237	14.1	42	22.3	168	14.3	27	8.5	67.546	p<0.001
	Neutral	643	38.3	87	46.3	474	40.5	82	25.8		

Questions	Answers	All		<19		19-24		>24		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
	Agree	797	47.5	59	31.4	529	45.2	209	65.7		
		1677	100								

Table 22: Beliefs by Ethnicity

Questions	Answers	All		Caucasian		Non-Caucasian		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
Students at my institution admire drinkers	Disagree	301	19.2	242	18.2	59	25.0	6.565	p=0.038
	Neutral	506	32.2	439	33.0	66	28.0		
	Agree	762	48.6	651	48.9	111	47.0		
		1568	100						
It's important to show how much you can drink and still hold your liquor (i.e. to be able to drink considerable amounts of alcohol with little signs or symptoms of intoxication)	Disagree	963	55.9	792	54.2	171	64.8	11.065	p=0.004
	Neutral	327	19.0	292	20.0	35	13.3		
	Agree	434	25.2	376	25.8	58	22.0		
		1724	100						
You can't make it socially without drinking	Disagree	1279	71.5	1079	71.4	200	71.7	1.018	p=0.601
	Neutral	227	12.7	196	13.0	31	11.1		
	Agree	284	15.9	236	15.6	48	17.2		
		1790	100						
Drinking is an important part of university/college experience	Disagree	655	36.8	523	34.8	132	47.7	16.883	p<0.001
	Neutral	442	24.8	383	25.4	59	21.3		
	Agree	686	38.4	599	39.8	86	31.0		
		1782	100						
Rules about drinking are almost never enforced on campus	Disagree	500	40.4	426	41.0	74	37.4	1.905	p=0.386
	Neutral	285	23.0	242	23.3	43	21.7		
	Agree	453	36.6	372	35.8	81	40.9		
		1238	100						
Alcohol is easily available on campus	Disagree	341	25.5	286	25.7	55	25.7	0.43	p=0.979
	Neutral	282	21.1	238	20.6	44	20.6		
	Agree	714	53.4	599	53.7	115	53.7		
		1337	100						
Alcohol use is a problem for students on my campus	Disagree	412	32.3	353	32.3	59	32.1	4.591	p=0.101
	Neutral	422	33.1	372	34.1	50	27.2		
	Agree	442	34.6	367	33.6	75	40.8		

Questions	Answers	All		Caucasian		Non-Caucasian		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
		1276	100						
The administration at my school should exercise more control over students' alcohol use	Disagree Neutral Agree	788 430 279 1497	52.6 28.7 18.6 100	689 368 202	54.7 29.2 16.0	99 62 77	41.6 26.1 32.4	35.823	p<0.001
There should be more alcohol-free social events or activities on my school campus	Disagree Neutral Agree	504 546 586 1636	30.8 33.4 35.8 100	440 463 477	31.9 33.6 34.6	64 83 109	25.0 32.4 42.6	7.275	p=0.026
Alcohol should be sold at campus sporting events	Disagree Neutral Agree	589 434 716 1739	33.9 25.0 41.2 100	454 373 630	31.6 25.4 42.9	125 61 86	46.0 22.4 31.6	21.883	p<0.001
Increasing the price of alcohol served on campus pubs and at campus activities would decrease its consumption by students	Disagree Neutral Agree	1071 160 502 1733	61.8 9.2 29.0 100	927 128 409	63.3 8.7 27.9	144 32 93	53.5 11.9 34.6	9.423	p=0.009
The Canadian legal drinking age should be increased	Disagree Neutral Agree	1398 199 186 1783	78.4 11.2 10.4 100	1237 151 123	81.9 10.0 8.1	161 48 63	59.2 17.6 23.2	77.073	p<0.001
There should be more advertising against drinking on my campus	Disagree Neutral Agree	702 604 390 1696	41.4 35.6 23.0 100	614 528 288	42.9 36.9 20.1	88 76 102	33.1 28.6 38.3	41.983	p<0.001
Universities and colleges should ban advertisements of alcohol availability at campus events and parties	Disagree Neutral Agree	1013 405 314 1732	58.5 23.4 18.1 100	878 344 240	60.1 23.5 16.4	135 61 74	50.0 22.6 27.4	19.213	p<0.001

Questions	Answers	All		Caucasian		Non-Caucasian		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
There should be more alcohol education programs on my campus	Disagree	237	14.2	196	14.0	41	15.6	11.205	p=0.004
	Neutral	641	38.4	564	40.1	77	29.3		
	Agree	790	47.4	645	45.9	145	55.1		
		1668	100						

Table 23: Beliefs by Mother Tongue

Questions	Answers	All		English		Other		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
Students at my institution admire drinkers	Disagree	303	19.2	186	17.8	117	22.0	6.758	p=0.034
	Neutral	509	32.3	329	31.5	180	33.8		
	Agree	766	48.5	530	50.7	236	44.3		
		1578	100						
It's important to show how much you can drink and still hold your liquor (i.e. to be able to drink considerable amounts of alcohol with little signs or symptoms of intoxication)	Disagree	970	55.9	646	56.4	324	54.9	0.424	p=0.809
	Neutral	331	19.1	218	19.0	113	19.2		
	Agree	435	25.1	282	24.6	153	25.9		
		1736	100						
You can't make it socially without drinking	Disagree	1285	71.4	842	70.8	443	72.5	0.665	p=0.717
	Neutral	229	12.7	156	13.1	73	11.9		
	Agree	286	15.9	191	16.1	95	15.5		
		1800	100						
Drinking is an important part of university/college experience	Disagree	664	37.0	427	36.2	237	38.5	2.452	p=0.293
	Neutral	443	24.7	285	24.2	158	25.7		
	Agree	686	38.3	466	39.6	220	35.8		
		1793	100						
Rules about drinking are almost never enforced on campus	Disagree	504	40.4	343	40.9	161	39.6	7.239	p=0.027
	Neutral	288	23.1	176	21.0	112	27.5		
	Agree	454	36.4	320	38.1	134	32.9		
		1246	100						
Alcohol is easily available on campus	Disagree	344	25.6	228	24.9	116	27.0	5.027	p=0.081
	Neutral	284	21.1	181	19.8	103	24.0		
	Agree	717	53.3	506	55.3	211	49.1		
		1345	100						
Alcohol use is a problem for students on my campus	Disagree	413	32.1	283	32.5	130	31.2	6.307	p=0.043
	Neutral	428	33.2	271	31.1	157	37.7		
	Agree	447	34.7	318	36.5	129	31.0		
		1288	100						

Questions	Answers	All		English		Other		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
The administration at my school should exercise more control over students' alcohol use	Disagree	791	52.6	553	55.0	238	47.6	8.637	p=0.013
	Neutral	433	28.8	281	28.0	152	30.4		
	Agree	281	18.7	171	17.0	110	22.0		
		1505	100						
There should be more alcohol-free social events or activities on my school campus	Disagree	504	30.6	333	30.8	171	30.3	0.099	p=0.952
	Neutral	550	33.4	362	33.5	188	33.3		
	Agree	592	36.0	386	35.7	206	36.5		
		1646	100						
Alcohol should be sold at campus sporting events	Disagree	594	33.9	370	32.1	224	37.3	8.167	p=0.017
	Neutral	437	24.9	280	24.3	157	26.1		
	Agree	721	41.2	501	43.5	220	36.6		
		1752	100						
Increasing the price of alcohol served on campus pubs and at campus activities would decrease its consumption by students	Disagree	1077	61.9	705	61.3	372	63.1	p=0.696	p=0.706
	Neutral	159	9.1	109	9.5	50	8.5		
	Agree	504	29.0	336	29.2	168	28.5		
		1740	100						
The Canadian legal drinking age should be increased	Disagree	1407	78.4	923	78.4	484	78.6	0.391	p=0.822
	Neutral	199	11.1	134	11.4	65	10.6		
	Agree	188	10.5	121	10.3	67	10.9		
		1794	100						
There should be more advertising against drinking on my campus	Disagree	704	41.3	473	42.1	231	39.6	0.989	p=0.610
	Neutral	610	35.8	396	35.3	214	36.7		
	Agree	392	23.0	254	22.6	138	23.7		
		1706	100						
Universities and colleges should ban advertisements of alcohol availability at campus events and parties	Disagree	1016	58.4	697	60.7	319	53.9	7.499	p=0.024
	Neutral	409	23.5	255	22.2	154	26.0		
	Agree	315	18.1	196	17.1	119	20.1		
		1740	100						
There should be more alcohol education programs on my campus	Disagree	236	14.1	153	13.9	83	14.4	0.457	p=0.796
	Neutral	646	38.5	430	39.1	216	37.4		

Questions	Answers	All		English		Other		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
	Agree	797	47.5	518	47.0	279	48.3		
		1679	100						

Table 24: Beliefs by Institution Type

Questions	Answers	All		College		University		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
Students at my institution admire drinkers	Disagree	304	19.3	48	18.7	256	19.4	0.331	p=0.847
	Neutral	509	32.3	87	33.9	422	32.0		
	Agree	761	48.3	122	47.5	639	48.5		
		1574	100						
It's important to show how much you can drink and still hold your liquor (i.e. to be able to drink considerable amounts of alcohol with little signs or symptoms of intoxication)	Disagree	963	55.7	163	57.6	800	55.4	1.077	p=0.584
	Neutral	331	19.2	48	17.0	283	19.6		
	Agree	434	25.1	72	25.4	362	25.1		
		1728	100						
You can't make it socially without drinking	Disagree	1281	71.4	225	76.8	1056	70.4	5.577	p=0.062
	Neutral	228	12.7	27	9.2	201	13.4		
	Agree	285	15.9	41	14.0	244	16.3		
		1794	100						
Drinking is an important part of university/college experience	Disagree	665	37.2	123	41.7	542	36.3	4.146	p=0.126
	Neutral	441	24.7	74	25.1	367	24.6		
	Agree	681	38.1	98	33.2	583	39.1		
		1787	100						
Rules about drinking are almost never enforced on campus	Disagree	501	40.5	93	45.4	408	39.5	3.009	p=0.222
	Neutral	285	23.0	47	22.9	238	23.0		
	Agree	452	36.5	65	31.7	387	37.5		
		1238	100						
Alcohol is easily available on campus	Disagree	344	25.7	42	17.8	302	27.4	12.875	p=0.002

Questions	Answers	All		College		University		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
	Neutral	283	21.1	45	19.1	238	21.6		
	Agree	712	53.2	149	63.1	563	51.0		
		1339	100						
Alcohol use is a problem for students on my campus	Disagree	412	32.2	59	28.2	353	32.9	3.210	p=0.201
	Neutral	426	33.3	67	32.1	359	33.5		
	Agree	443	34.6	83	39.7	360	33.6		
		1281	100						
The administration at my school should exercise more control over students' alcohol use	Disagree	787	52.5	114	45.4	673	53.9	6.246	p=0.044
	Neutral	431	28.8	85	33.9	346	27.7		
	Agree	281	18.7	52	20.7	229	18.3		
		1499	100						
There should be more alcohol-free social events or activities on my school campus	Disagree	503	30.7	84	31.3	419	30.6	0.601	p=0.740
	Neutral	546	33.3	93	34.7	453	33.0		
	Agree	590	36.0	91	34.0	499	36.4		
		1639	100						
Alcohol should be sold at campus sporting events	Disagree	593	34.0	108	37.8	485	33.2	6.696	p=0.035
	Neutral	434	24.9	80	28.0	354	24.3		
	Agree	718	41.1	98	34.3	620	42.5		
		1745	100						
Increasing the price of alcohol served on campus pubs and at campus activities would decrease its consumption by students	Disagree	1072	61.8	172	59.7	900	62.2	0.860	p=0.651
	Neutral	160	9.2	26	9.0	134	9.3		
	Agree	503	29.0	90	31.3	413	28.5		
		1735	100						
The Canadian legal drinking age should be increased	Disagree	1400	78.3	228	77.6	1172	78.4	0.223	p=0.895
	Neutral	201	11.2	33	11.2	168	11.2		
	Agree	187	10.5	33	11.2	154	10.3		
		1788	100						

Questions	Answers	All		College		University		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
There should be more advertising against drinking on my campus	Disagree	700	41.2	106	37.6	594	41.9	4.012	p=0.135
	Neutral	611	35.9	99	35.1	512	36.1		
	Agree	389	22.9	77	27.3	312	22.0		
		1700	100						
Universities and colleges should ban advertisements of alcohol availability at campus events and parties	Disagree	1011	58.3	158	57.2	853	58.5	0.154	p=0.926
	Neutral	409	23.6	67	24.3	342	23.5		
	Agree	314	18.1	51	18.5	263	18.0		
		1734	100						
There should be more alcohol education programs on my campus	Disagree	237	14.2	56	20.4	181	12.9	10.775	p=0.005
	Neutral	645	38.6	95	34.7	550	39.3		
	Agree	791	47.3	123	44.9	668	47.7		
		1673							

Table 25: Beliefs by Academic Discipline

Questions	Answers	All		Humanities & Natural Sciences		Formal, Physical & Life Sciences		Professions & Applied Science		Health Sciences		Chi Square Test	
		N	%	N	%	N	%	N	%	N	%	χ^2 Value	P Value
Students at my institution admire drinkers	Disagree	302	19.3	54	15.6	44	19.0	100	19.8	104	21.8	8.704	p=0.191
	Neutral	502	32.2	111	32.0	86	37.1	162	32.0	143	30.0		
	Agree	757	48.5	182	52.4	12	44.0	244	48.2	229	48.1		
		1561	100										
It's important to show how much you can drink and still hold your liquor (i.e. to be able to drink considerable amounts of alcohol with little signs or symptoms of intoxication)	Disagree	955	55.7	218	55.6	156	61.4	291	52.5	290	56.3	7.807	p=0.253
	Neutral	331	19.3	71	18.1	49	19.3	112	20.2	99	19.2		
	Agree	429	25.0	103	26.3	49	19.3	151	27.3	126	24.5		
		1715	100										

Questions	Answers	All		Humanities & Natural Sciences		Formal, Physical & Life Sciences		Professions & Applied Science		Health Sciences		Chi Square Test	
		N	%	N	%	N	%	N	%	N	%	χ^2 Value	P Value
You can't make it socially without drinking	Disagree	1267	71.1	288	70.2	190	72.2	402	69.5	387	73.0	2.610	p=0.856
	Neutral	227	12.7	56	13.7	30	11.4	80	13.8	61	11.5		
	Agree	287	16.1	66	16.1	43	16.3	96	16.6	82	15.5		
		1781	100										
Drinking is an important part of university/college experience	Disagree	655	36.9	168	41.2	100	37.9	206	35.9	181	34.3	8.466	p=0.206
	Neutral	434	24.5	95	23.3	64	24.2	130	22.6	145	27.5		
	Agree	684	38.6	145	35.5	100	37.9	238	41.5	201	38.1		
		1773	100										
Rules about drinking are almost never enforced on campus	Disagree	496	40.3	107	37.8	75	41.9	162	40.5	152	41.1	4.098	p=0.663
	Neutral	285	23.1	60	21.2	46	25.7	92	23.0	87	23.5		
	Agree	451	36.6	116	41.0	58	32.4	146	36.5	131	35.4		
		1232	100										
Alcohol is easily available on campus	Disagree	343	25.9	82	26.8	52	25.9	110	25.2	99	25.9	6.996	p=0.321
	Neutral	280	21.1	57	18.6	44	21.9	83	19.0	96	25.1		
	Agree	703	53.0	167	54.6	105	52.2	244	55.8	187	49.0		
		1326	100										
Alcohol use is a problem for students on my campus	Disagree	411	32.3	84	30.3	69	34.3	150	36.9	108	27.9	9.110	p=0.167
	Neutral	421	33.1	98	35.4	63	31.3	129	31.7	131	33.9		
	Agree	440	34.6	95	34.3	69	34.3	128	31.4	148	38.2		
		1272	100										
The administration at my school should exercise more control over students' alcohol use	Disagree	782	52.6	185	53.8	129	57.6	259	54.3	209	47.3	11.626	p=0.071
	Neutral	426	28.6	94	27.3	66	29.5	126	26.4	140	31.7		
	Agree	279	18.8	65	18.9	29	12.9	92	19.3	93	21.0		
		1487	100										
There should be more alcohol-free social events or activities on my school campus	Disagree	500	30.7	105	28.2	84	34.1	168	32.4	143	29.1	4.441	p=0.617
	Neutral	541	33.2	129	34.6	80	32.5	162	31.3	170	34.6		
	Agree	587	36.1	139	37.3	82	33.3	188	36.3	178	36.3		
		1628	100										

Questions	Answers	All		Humanities & Natural Sciences		Formal, Physical & Life Sciences		Professions & Applied Science		Health Sciences		Chi Square Test	
		N	%	N	%	N	%	N	%	N	%	χ ² Value	P Value
Alcohol should be sold at campus sporting events	Disagree	585	33.8	137	35.3	84	31.8	192	33.9	172	33.5	4.917	p=0.554
	Neutral	434	25.0	88	22.7	67	25.4	135	23.8	144	28.0		
	Agree	714	41.2	163	42.0	113	42.8	240	42.3	198	38.5		
		1733	100										
Increasing the price of alcohol served on campus pubs and at campus activities would decrease its consumption by students	Disagree	1062	61.6	247	62.2	169	65.3	329	59.0	317	62.3	8.588	p=0.198
	Neutral	159	9.2	34	8.6	15	5.8	54	9.7	56	11.0		
	Agree	502	29.1	116	29.2	75	29.0	175	31.4	136	26.7		
		1723	100										
The Canadian legal drinking age should be increased	Disagree	1390	78.3	329	80.6	218	83.2	430	74.9	413	77.8	17.921	p=0.006
	Neutral	199	11.2	37	9.1	28	10.7	64	11.1	70	13.2		
	Agree	186	10.5	42	10.3	16	6.1	80	13.9	48	9.0		
		1775	100										
There should be more advertising against drinking on my campus	Disagree	700	41.4	154	40.1	119	46.9	230	42.0	197	39.1	8.641	p=0.195
	Neutral	602	35.6	139	36.2	92	36.2	183	33.5	188	37.3		
	Agree	387	22.9	91	23.7	43	16.9	134	24.5	119	23.6		
		1689	100										
Universities and colleges should ban advertisements of alcohol availability at campus events and parties	Disagree	1009	58.6	226	57.7	153	58.8	340	60.8	290	56.8	3.186	p=0.785
	Neutral	399	23.2	92	23.5	65	25.0	120	21.5	122	23.9		
	Agree	314	18.2	74	18.9	42	16.2	99	17.7	99	19.4		
		1722	100										
There should be more alcohol education programs on my campus	Disagree	234	14.1	36	9.3	39	15.7	83	15.7	76	15.3	20.006	p=0.003
	Neutral	637	38.3	148	38.2	115	46.2	189	35.7	185	37.1		
	Agree	792	47.6	203	52.5	95	38.2	257	48.6	237	47.6		
		1663	100										

Table 26: Beliefs by Living Arrangement

Questions	Answers	All		In Residence		Off Campus W/ Parent/s or Guardian/s		Off Campus W/Out Parent/s or Guardian/s		Chi Square Test	
		N	%	N	%	N	%	N	%	χ ² Value	P Value
Students at my institution admire drinkers	Disagree	302	19.3	63	17.5	91	19.9	148	19.8	1.441	p=0.837
	Neutral	505	32.2	117	32.5	142	31.1	246	32.8		
	Agree	759	48.5	180	50.0	224	49.0	355	47.4		
		1566	100								
It's important to show how much you can drink and still hold your liquor (i.e. to be able to drink considerable amounts of alcohol with little signs or symptoms of intoxication)	Disagree	956	55.6	185	50.7	262	53.1	509	59.2	10.960	p=0.027
	Neutral	330	19.2	81	22.2	92	18.7	157	18.3		
	Agree	432	25.1	99	27.1	139	28.2	194	22.6		
		1718	100								
You can't make it socially without drinking	Disagree	1272	71.3	258	68.1	361	71.6	653	72.5	3.243	p=0.518
	Neutral	229	12.8	52	13.7	68	13.5	109	12.1		
	Agree	283	15.9	69	18.2	75	14.9	139	15.4		
		1784	100								
Drinking is an important part of university/college experience	Disagree	659	37.1	120	31.6	202	40.1	337	37.7	8.735	p=0.068
	Neutral	441	24.8	94	24.7	124	24.6	223	25.0		
	Agree	677	38.1	166	43.7	178	35.3	333	37.3		
		1777	100								
Rules about drinking are almost never enforced on campus	Disagree	499	40.5	176	49.0	102	34.9	221	38.0	16.524	p=0.002
	Neutral	284	23.0	69	19.2	77	26.4	138	23.7		
	Agree	450	36.5	114	31.8	113	38.7	223	38.3		
		1233	100								
Alcohol is easily available on campus	Disagree	343	25.8	115	32.6	77	22.6	151	23.7	16.095	p=0.003
	Neutral	278	20.9	78	22.1	64	18.8	136	21.4		
	Agree	709	53.3	160	45.3	200	58.7	349	54.9		
		1330	100								
Alcohol use is a problem for students on my campus	Disagree	414	32.4	133	38.0	111	32.1	170	29.3	13.503	p=0.009

Questions	Answers	All		In Residence		Off Campus W/ Parent/s or Guardian/s		Off Campus W/Out Parent/s or Guardian/s		Chi Square Test	
		N	%	N	%	N	%	N	%	χ ² Value	P Value
	Neutral	422	33.0	91	26.0	125	36.1	206	35.5		
	Agree	441	34.5	126	36.0	110	31.8	205	35.3		
		1277	100								
The administration at my school should exercise more control over students' alcohol use	Disagree	788	52.8	208	57.5	219	52.8	361	50.5	6.308	p=0.177
	Neutral	426	28.6	91	25.1	126	30.4	209	29.2		
	Agree	278	18.6	63	17.4	70	16.9	145	20.3		
		1492	100								
There should be more alcohol-free social events or activities on my school campus	Disagree	502	30.8	122	32.6	135	28.9	245	31.0	2.158	p=0.707
	Neutral	545	33.4	124	33.2	165	35.3	256	32.4		
	Agree	585	35.8	128	34.2	167	35.8	290	36.7		
		1632	100								
Alcohol should be sold at campus sporting events	Disagree	587	33.8	127	34.0	161	32.9	299	34.2	0.507	p=0.973
	Neutral	432	24.9	92	24.7	127	26.0	213	24.3		
	Agree	718	41.3	154	41.3	201	41.1	363	41.5		
		1737	100								
Increasing the price of alcohol served on campus pubs and at campus activities would decrease its consumption by students	Disagree	1066	61.8	218	60.7	293	59.4	555	63.6	6.213	p=0.184
	Neutral	155	9.0	41	11.4	41	8.3	73	8.4		
	Agree	503	29.2	100	27.9	159	32.3	244	28.0		
		1724	100								
The Canadian legal drinking age should be increased	Disagree	1398	78.6	302	80.1	411	81.7	685	76.3	9.052	p=0.060
	Neutral	200	11.2	43	11.4	53	10.5	104	11.6		
	Agree	180	10.1	32	8.5	39	7.8	109	12.1		
		1778	100								
There should be more advertising against drinking on my campus	Disagree	701	41.5	176	47.1	193	40.3	332	39.6	6.516	p=0.164
	Neutral	604	35.7	123	32.9	176	36.7	305	36.4		
	Agree	386	22.8	75	20.1	110	23.0	201	24.0		
		1691	100								

Questions	Answers	All		In Residence		Off Campus W/ Parent/s or Guardian/s		Off Campus W/Out Parent/s or Guardian/s		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
Universities and colleges should ban advertisements of alcohol availability at campus events and parties	Disagree	1012	58.7	227	61.4	299	61.5	486	56.0	12.343	p=0.015
	Neutral	403	23.4	86	23.2	118	24.3	199	22.9		
	Agree	309	17.9	57	15.4	69	14.2	183	21.1		
		1724	100								
There should be more alcohol education programs on my campus	Disagree	238	14.3	63	16.9	75	16.0	100	12.1	13.580	p=0.009
	Neutral	641	38.5	149	40.1	192	40.9	300	36.4		
	Agree	786	47.2	160	43.0	202	43.1	424	51.5		
		1665	100								

Table 27: Beliefs by Levels of Alcohol Consumption

Questions	Answers	All		Within LRADG Limits		Over LRADG Limits		Alcohol abstainer		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
Students at my institution admire drinkers	Disagree	246	18.5	135	23.3	94	14.9	17	14.4	18.924	p=0.001
	Neutral	424	31.9	172	29.7	220	34.9	32	27.1		
	Agree	658	49.5	272	47.0	317	50.2	69	58.5		
		1328	100								
It's important to show how much you can drink and still hold your liquor (i.e. to be able to drink considerable amounts of alcohol with little signs or symptoms of intoxication)	Disagree	825	56.5	415	63.8	337	48.4	73	63.5	35.290	p<0.001
	Neutral	277	19.0	101	15.5	159	22.8	17	14.8		
	Agree	359	24.6	134	20.6	200	28.7	25	21.7		
		1461	100								
You can't make it socially without drinking	Disagree	1078	71.2	506	75.5	473	66.7	99	73.9	21.953	p<0.001
	Neutral	197	13.0	69	10.3	119	16.8	9	6.7		
	Agree	238	15.7	95	14.2	117	16.5	26	19.4		
		1513	100								
Drinking is an important part of university/college experience	Disagree	567	37.7	330	49.3	137	19.5	100	76.9	254.502	p<0.001
	Neutral	373	24.8	175	26.1	185	26.3	13	10.0		
	Agree	564	37.5	165	24.6	382	54.3	17	13.1		
		1504	100								
Rules about drinking are almost never enforced on campus	Disagree	411	39.0	153	34.3	240	46.8	18	19.1	37.230	p<0.001
	Neutral	243	23.1	102	22.9	116	22.6	25	26.6		
	Agree	399	37.9	191	42.8	157	30.6	51	54.3		
		1053	100								
Alcohol is easily available on campus	Disagree	291	25.7	119	24.7	159	29.0	13	12.9	14.212	p=0.001
	Neutral	231	20.4	105	21.8	107	19.5	19	18.8		
	Agree	609	53.8	257	53.4	283	51.5	69	68.3		
		1131	100								
Alcohol use is a problem for students on my campus	Disagree	347	31.8	109	23.8	223	41.9	15	14.9	89.788	p<0.001
	Neutral	355	32.5	139	30.3	188	35.3	28	27.7		

Questions	Answers	All		Within LRADG Limits		Over LRADG Limits		Alcohol abstainer		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
	Agree	389	35.7	210	45.9	121	22.7	58	57.4		
		1091	100								
The administration at my school should exercise more control over students' alcohol use	Disagree	663	52.2	225	41.3	414	68.2	24	20.3	166.977	p<0.001
	Neutral	363	28.6	189	34.7	136	22.4	38	32.2		
	Agree	244	19.2	131	24.0	57	9.4	56	47.5		
		1270	100								
There should be more alcohol-free social events or activities on my school campus	Disagree	420	30.3	119	19.5	292	45.1	9	7.0	177.195	p<0.001
	Neutral	469	33.9	213	35.0	219	33.8	37	28.9		
	Agree	496	35.8	277	45.5	137	21.1	82	64.1		
		1385	100								
Alcohol should be sold at campus sporting events	Disagree	494	33.6	280	43.3	127	18.4	87	65.4	269.658	p<0.001
	Neutral	371	25.2	197	30.4	136	19.7	38	28.6		
	Agree	607	41.2	170	26.3	429	62.0	8	6.0		
		1472	100								
Increasing the price of alcohol served on campus pubs and at campus activities would decrease its consumption by students	Disagree	905	61.7	406	62.4	449	65.2	50	39.4	34.408	p<0.001
	Neutral	135	9.2	64	9.8	58	8.4	13	10.2		
	Agree	427	29.1	181	27.8	182	26.4	64	50.4		
		1467	100								
The Canadian legal drinking age should be increased	Disagree	1183	78.4	502	75.1	629	88.6	52	40.0	177.993	p<0.001
	Neutral	172	11.4	95	14.2	46	6.5	31	23.8		
	Agree	153	10.1	71	10.6	35	4.9	47	36.2		
		1508	100								
There should be more advertising against drinking on my campus	Disagree	593	41.3	216	34.1	353	52.7	24	18.2	141.246	p<0.001
	Neutral	513	35.7	240	37.9	235	35.1	38	28.8		
	Agree	329	22.9	177	28.0	82	12.2	70	53.0		
		1435	100								
Universities and colleges should ban advertisements of alcohol availability at campus events and parties	Disagree	865	59.1	324	50.3	507	73.4	34	26.4	157.665	p<0.001
	Neutral	333	22.7	181	28.1	115	16.6	37	28.7		

Questions	Answers	All		Within LRADG Limits		Over LRADG Limits		Alcohol abstainer		Chi Square Test	
		N	%	N	%	N	%	N	%	χ^2 Value	P Value
	Agree	266	18.2	139	21.6	69	10.0	58	45.0		
		1464	100								
There should be more alcohol education programs on my campus	Disagree	194	13.7	69	11.1	115	17.2	10	7.9	40.112	p<0.001
	Neutral	552	38.9	230	37.0	288	43.0	34	26.8		
	Agree	672	47.4	323	51.9	266	39.8	83	65.4		
		1418	100								

Section 5 - Health Information Preferences

Table 28: Health Information Preferences (Total)

Questions	Answers	All	
		N	%
Thinking about your own health, how much would you like to receive health-related information or advice?	Not at all	325	18.1
	A little	664	37.0
	Some	603	33.6
	A lot	202	11.3
		1794	100
By which means would you like to receive general information and advice?	I don't know	107	6.1
	By written material	240	13.7
	Using the media	365	20.8
	In person	297	16.9
	Electronically	616	35.0
	Through bottle labeling	133	7.6
	1758	100	
Still thinking specifically about your own health, about how often do you look for health-related information from any source?	Once a week	566	31.5
	Once a month	510	28.3
	Every few months	400	22.2
	Twice a year or less	196	10.9
	Never	127	7.1
	1799	100	

Table 29: Health Information Preferences by Sex

Questions	Answers	All		Males		Females		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
Thinking about your own health, how much would you like to receive health-related information or advice?	Not at all	325	18.2	113	24.9	212	15.9	28.367	p<0.001
	A little	662	37.0	179	39.5	483	36.2		
	Some	599	33.5	124	27.4	475	35.6		
	A lot	202	11.3	37	8.2	165	12.4		
		1788	100						
By which means would you like to receive general information and advice?	I don't know	107	6.1	35	8.1	72	5.5	17.711	p=0.003
	By written material	239	13.6	56	13.0	183	13.9		
	Using the media	363	20.8	76	17.6	288	21.8		
	In person	296	16.9	80	18.5	216	16.4		
	Electronically	614	35.0	138	31.9	476	36.1		
	Through bottle labelling	132	7.5	47	10.9	85	6.4		
	1752	100							
Still thinking specifically about your own health, about how often do you look for health-related information from any source?	Once a week	565	31.5	124	27.3	441	32.9	16.223	p=0.003
	Once a month	507	28.3	121	26.6	386	28.8		
	Every few months	400	22.3	103	22.6	297	22.2		
	Twice a year or less	195	10.9	60	13.2	135	10.1		
	Never	127	7.1	47	10.3	80	6.0		
	1794	100							

Table 30: Health Information Preferences by Age

Questions	Answers	All		<19		19-24		>24		Chi Square Test	
		N	%	N	%	N	%	N	%	χ ² Value	P Value
Thinking about your own health, how much would you like to receive health-related information or advice?	Not at all	324	18.2	30	15.2	230	18.8	64	17.6	2.050	p=0.915
	A little	661	37.0	76	38.6	453	37.0	132	36.4		
	Some	598	33.5	66	33.5	408	33.3	124	34.2		
	A lot	202	11.3	25	12.7	134	10.9	43	11.8		
	1785	100									
By which means would you like to receive general information and advice?	I don't know	107	6.1	20	10.3	68	5.7	19	5.3	35.612	p<0.001
	By written material	238	13.6	21	10.8	167	13.9	50	14.0		
	Using the media	364	20.8	43	22.1	262	21.9	59	16.6		
	In person	294	16.8	40	20.5	203	16.9	51	14.3		
	Electronically	613	35.0	60	30.8	392	32.7	161	45.2		
	Through bottle labelling	133	7.6	11	5.6	106	8.8	16	4.5		
1749	100										
Still thinking specifically about your own health, about how often do you look for health-related information from any source?	Once a week	566	31.6	52	26.5	382	31.1	132	36.0	23.162	p=0.003
	Once a month	506	28.3	48	24.5	349	28.4	109	29.7		
	Every few months	396	22.1	43	21.9	280	22.8	73	19.9		
	Twice a year or less	195	10.9	27	13.8	130	10.6	38	10.4		
	Never	127	7.1	26	13.3	86	7.0	15	4.1		
1790	100										

Table 31: Health Information Preferences by Ethnicity

Questions	Answers	All		Caucasian		Non-Caucasian		Chi Square Test	
		N	%	N	%	N	%	χ^2 Value	P Value
Thinking about your own health, how much would you like to receive health-related information or advice?	Not at all	322	18.1	275	18.4	47	16.8	13.918	p=0.003
	A little	662	37.3	572	38.2	90	32.1		
	Some	592	33.3	498	33.3	94	33.6		
	A lot	201	11.3	152	10.2	49	17.5		
		1777	100						
By which means would you like to receive general information and advice?	I don't know	107	6.1	94	6.4	13	4.9	10.156	p=0.071
	By written material	239	13.7	198	13.4	41	15.3		
	Using the media	359	20.6	311	21.1	48	17.9		
	In person	296	17.0	259	17.6	37	13.8		
	Electronically	609	35.0	496	33.7	113	42.2		
	Through bottle labelling	131	7.5	115	7.8	16	6.0		
	1741	100							
Still thinking specifically about your own health, about how often do you look for health-related information from any source?	Once a week	560	31.4	469	31.2	91	32.5	6.660	p=0.155
	Once a month	508	28.5	420	27.9	88	31.4		
	Every few months	396	22.2	347	23.1	49	17.5		
	Twice a year or less	194	10.9	167	11.1	27	9.6		
	Never	125	7.0	100	6.7	25	8.9		
		1783	100						

Table 32: Health Information Preferences by Mother Tongue

Questions	Answers	All		English		Other		Chi Square Test	
		N	%	N	%	N	%	χ ² Value	P Value
Thinking about your own health, how much would you like to receive health-related information or advice?	Not at all	323	18.1	212	18.0	111	18.1	2.269	p=0.518
	A little	662	37.0	449	38.2	213	34.8		
	Some	601	33.6	387	32.9	214	35.0		
	A lot	202	11.3	128	10.9	74	12.1		
		1788	100						
By which means would you like to receive general information and advice?	I don't know	106	6.0	57	5.0	49	8.1	8.829	p=0.116
	By written material	239	13.6	158	13.7	81	13.4		
	Using the media	365	20.8	241	21.0	124	20.6		
	In person	296	16.9	199	17.3	97	16.1		
	Electronically	615	35.1	414	36.0	201	33.3		
	Through bottle labelling	132	7.5	81	7.0	51	8.5		
	1753	100							
Still thinking specifically about your own health, about how often do you look for health-related information from any source?	Once a week	566	31.5	375	31.7	191	31.3	11.749	p=0.019
	Once a month	509	28.4	355	30.0	154	25.2		
	Every few months	399	22.2	261	22.1	138	22.6		
	Twice a year or less	194	10.8	124	10.5	70	11.5		
	Never	126	7.0	68	5.7	58	9.5		
	1794	100							

Table 33: Health Information Preferences by Institution Type

Questions	Answers	All		College		University		Chi Square Test	
		N	%	N	%	N	%	χ ² Value	P Value
Thinking about your own health, how much would you like to receive health-related information or advice?	Not at all	323	18.1	61	21.0	262	17.6	3.016	p=0.389
	A little	658	36.9	103	35.5	555	37.2		
	Some	600	33.7	99	34.1	501	33.6		
	A lot	201	11.3	27	9.3	174	11.7		
		1782	100						
By which means would you like to receive general information and advice?	I don't know	107	6.1	15	5.3	92	6.3	1.899	p=0.863
	By written material	237	13.6	40	14.0	197	13.5		
	Using the media	362	20.7	61	21.4	301	20.6		
	In person	295	16.9	42	14.7	253	17.3		
	Electronically	615	35.2	103	36.1	512	35.0		
	Through bottle labelling	132	7.6	24	8.4	108	7.4		
	1748	100							
Still thinking specifically about your own health, about how often do you look for health-related information from any source?	Once a week	563	31.5	68	23.4	495	33.1	28.404	p<0.001
	Once a month	506	28.3	71	24.4	435	29.1		
	Every few months	397	22.2	72	24.7	325	21.7		
	Twice a year or less	195	10.9	46	15.8	149	10.0		
	Never	126	7.1	34	11.7	92	6.1		
		1787	100						

Table 34: Health Information Preferences by Academic Discipline

Questions	Answers	All		Humanities & Natural Sciences		Formal, Physical & Life Sciences		Professions & Applied Science		Health Sciences		Chi Square Test	
		N	%	N	%	N	%	N	%	N	%	χ ² Value	P Value
Thinking about your own health, how much would you like to receive health-related information or advice?	Not at all	318	18.0	74	18.0	54	20.5	106	18.5	84	16.1	12.680	p=0.178
	A little	655	37.0	136	33.2	110	41.8	210	36.6	199	38.1		
	Some	597	33.8	156	38.0	77	29.3	192	33.5	172	33.0		
	A lot	198	11.2	44	10.7	22	8.4	65	11.3	67	12.8		
	1768	100											
By which means would you like to receive general information and advice?	I don't know	104	6.0	26	6.4	14	5.6	31	5.5	33	6.4	12.999	p=0.602
	By written material	235	13.6	54	13.4	33	13.1	87	15.5	61	11.8		
	Using the media	361	20.8	83	20.5	54	21.4	99	17.7	125	24.1		
	In person	295	17.0	64	15.8	50	19.8	97	17.3	84	16.2		
	Electronically	607	35.0	149	36.9	79	31.3	202	36.1	177	34.2		
	Through bottle labelling	132	7.6	28	6.9	22	8.7	44	7.9	38	7.3		
1734	100												
Still thinking specifically about your own health, about how often do you look for health-related information from any source?	Once a week	563	31.8	114	27.8	79	30.2	155	26.8	215	41.1	42.995	p<0.001
	Once a month	508	28.7	120	29.3	74	28.2	179	31.0	135	25.8		
	Every few months	393	22.2	103	25.1	66	25.2	123	21.3	101	19.3		
	Twice a year or less	189	10.7	51	12.4	26	9.9	65	11.2	47	9.0		
	Never	120	6.8	22	5.4	17	6.5	56	9.7	25	4.8		
	1773	100											

Table 35: Health Information Preferences by Living Arrangement

Questions	Answers	All		In Residence		Off campus with parent/s or guardian/s		Off campus without parent/s or guardians		Chi Square Test	
		N	%	N	%	N	%	N	%	χ ² Value	P Value
Thinking about your own health, how much would you like to receive health-related information or advice?	Not at all	321	18.1	60	16.0	99	19.9	162	18.0	6.837	p=0.336
	A little	657	37.1	156	41.6	177	35.5	324	36.0		
	Some	596	33.6	113	30.1	168	33.7	315	35.0		
	A lot	198	11.2	46	12.3	54	10.8	98	10.9		
		1772	100								
By which means would you like to receive general information and advice?	I don't know	105	6.0	27	7.3	36	7.3	42	4.8	16.476	p=0.087
	By written material	235	13.5	45	12.2	72	14.7	118	13.4		
	Using the media	362	20.8	69	18.8	116	23.6	177	20.2		
	In person	296	17.0	76	20.7	72	14.7	148	16.9		
	Electronically	609	35.1	120	32.6	165	33.6	324	36.9		
	Through bottle labelling	130	7.5	31	8.4	30	6.1	69	7.9		
	1737	100									
Still thinking specifically about your own health, about how often do you look for health-related information from any source?	Once a week	560	31.5	102	27.3	158	31.4	300	33.3	10.203	p=0.251
	Once a month	504	28.3	98	26.3	147	29.2	259	28.7		
	Every few months	396	22.3	96	25.7	107	21.3	193	21.4		
	Twice a year or less	193	10.9	43	11.5	54	10.7	96	10.6		
	Never	125	7.0	34	9.1	37	7.4	54	6.0		
	1778	100									

Section 6 – Comparison Table

Table 36: Comparison of Local and Provincial Rates of Alcohol Overconsumption

Over the weekly guidelines			
	Sudbury post-sec schools	SDHU ⁹	Ontario ⁹
All	9.0%	8.5%	6.6%
Males	13.3%	10.9%	8.4%
Females	7.5%	6.1%	4.9%
19 to 24	10%	-	9.2%
Over the daily guidelines			
All	28.8	23.7	17.4
Males	33.8	31.7	20.8
Females	27.1	15.8	14.0
19 to 24	30.8%	27.5%	29.9%
Binge drinking ¹¹			
All	41.3	23.6%	18.2%
Males	50.7	37.0%	26.1%
Females	38.1	10.5%	10.5%
19 to 24	46.8	33.7%	39.1%
All			
All	46.6	32.8	25.0
Males	54.9	47.5	31.5
Females	43.8	18.4	18.5
19 to 24	50.7	40.7	47.1
To interpret with caution - coefficient of variation between 16.66-33.33			

¹¹ Once a month or more, in the past 12 months

Disclaimer

Information contained in this material is research gathered from the Collège Boréal, Cambrian College and Laurentian University populations and presented by the authors of this report. The Administration of each of these schools had no role in the design and conduct of the study; management, analyses, or interpretation of the data; preparation, review, or approval of the report.

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