

National College Health Assessment Report 2019



Student Wellness Centre

Table of Contents

Table of Contents	2
Introduction.....	3
Demographic Information.....	4
General Health and Student Awareness.....	4
Mental Health	5
Physical Activity and Nutrition.....	8
Sexual Health	9
Substance Use	10
Future Directions	12

Introduction

What is this report?

The following report covers key findings from NCHA that can be used to inform programming, services and information on general McMaster student population health and wellness. The report will also have supplementary information provided by student input, presented in italicised, gray font. This information was collected through an informal survey for the purpose of collecting more student input and give a more nuanced understanding of certain words with space for broad interpretation.

What is NCHA?

The National College Health Assessment (NCHA) is a recognized research survey intended to collect information on student health habits, perceptions and behaviours. Previously, McMaster University has administered this survey in 2013 and 2016. The following report will discuss preliminary findings from the 2019 cohort. The survey ran from January 2019 to mid-February and survey participants were randomly chosen from the McMaster population; a total of 1087 individuals responded, with a response rate of 18.1%.

Uses and Limitations of NCHA Data

The survey data covers several topics and superficially surveys the overall health of an individual in McMaster. As such, many variables representing different information can be compared at the same time, allowing for model building. Given that 2016 NCHA data is available, certain trend analyses can be conducted to assess key differences in the student health status. Finally, the data can suggest new avenues of future research to better capture or improve student health.

However, the data analysis and interpretation are limited by to the survey design, the sample pool and inherent reasons. The survey design introduced limitations to the depth and breadth of information collected on health. For instance, the questions were designed from a heteronormative stance. Despite collecting information on gender identity, the data are split by male, female and unknown, as such, not capturing the full gender spectrum of the population and the impacts of the spectrum on health. As well, terms such as “health behaviours” and “information” were not properly defined, allowing for interpretation; this may have led to differing answers. Certain health sections, such as nutrition and active living, were improperly represented by a lack of questions. As such, information regarding food security, food access or connections between food use and exercise, could not be captured. Information concerning degree or program placements are also not provided, thus reducing the ability to assess health as related to individual paths of study.

Secondly, the data are limited due to its cross-sectional nature. As such, causation analyses cannot be performed and results cannot present causality. Additionally, there is risk of recall bias because recollection of past events may result in answers being over or under estimated. Another potential concern is data analysis which may require changing of variable scales; this may lead to misinterpretation of data after transformation. Finally, the sample may not be fully representative of the student population. With reference to gender, there is an overrepresentation of female-identifying respondents as compared to the normal McMaster population. This may introduce some skew in data, as such, results should be interpreted with caution. Considering the sample represents a small subset of the McMaster population, generalizing results should be approached with caution.

Demographic Information

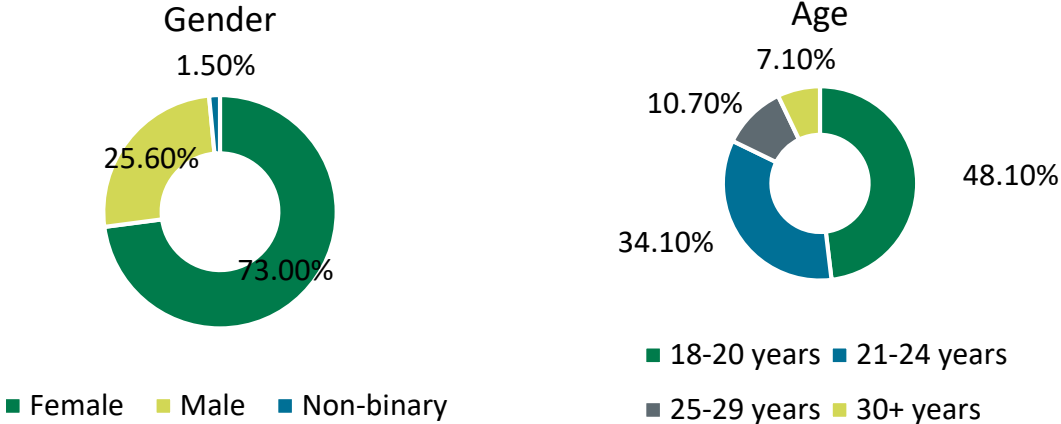
This section covers the general representation of the sample population with regards to age, gender and year of study.

Demographics

Comparison with McMaster University Demographics

Characteristic	NCHA population	McMaster general population
Total number of students (graduate and undergraduate)	1073*	29759
Undergraduate	855	24723
Graduate	218	4036
International	106	~3525**

*1087 participants in total but a subset of the respondents were not seeking degree or selected other
 **provided as equivalencies in the McMaster Fact Book 2017-18



Distribution of respondents by year in school

- First year undergraduate:** 20.2%
- Second year undergraduate:** 20.3%
- Third year undergraduate:** 18.9%
- Fourth year undergraduate:** 15.2%
- Fifth year undergraduate:** 4.3%
- Graduate or professional:** 20.1%
- Not seeking a degree:** 0.3%
- Other:** 0.6%

General Health and Student Awareness

This section covers topics of general health status and student awareness on various health topics related to their general wellbeing.

What is health?

When asked to rate their general health, 77.2% of students surveyed that their health was good, very good or excellent.

Being healthy involves physical, mental and emotional health and maintaining them in an equilibrium.

Information

Students were asked to indicate information they received on relevant health topics and their interest in receiving other information.

Topic	Received information (%)	Interested in receiving information (%)
Alcohol and other drug use	58.0	45.4
Depression/Anxiety	63.4	79.3
Grief and loss	14.5	63.9
Eating disorders	17.0	53.2
How to help others in distress	36.5	82.4
Nutrition	37.8	78.8
Physical activity	49.0	74.4
Pregnancy prevention	33.8	51.2
Sexual assault/Relationship violence prevention	60.0	68.1
Relationship difficulties	14.9	57.3
Tobacco use	33.6	38.4
STI/STD prevention	42.8	63.1
Sleep difficulties	13.2	76.0
Stress reduction	70.3	86.8
Suicide prevention	42.4	70.6

Information means anything that is relevant to me after I have identified a need or just that could come to use to support my health. When educating or giving out information on things, make sure that the intended message gets across and is not lost by the marketing. Focus on having multiple ways of sharing information and creating space for conversations.

Mental Health

This section focuses on the prevalence of mental illnesses and certain experiences related to poor mental health. Certain analyses were performed to track changes of mental health statuses over time, from the year 2016 to 2019. As well, analyses allowed for students to be split into year cohorts and compared to reveal differences in mental health statuses. First year undergraduate students were compared against upper year (second year and upwards) undergraduate students, as previous literature has noted differences in psychological health between the two groups¹. Graduate students were compared against undergraduate students, as literature has demonstrated difference in mental health states and needs between the two cohorts².

Mental Illness

This subsection focuses on prevalence of mental illness in the general survey population, in addition to marking prevalence changes over the years and measuring differences between different cohorts.

In the last 12 months,



$\frac{1}{5}$ respondents were diagnosed or treated with **anxiety**

$\frac{1}{6}$ respondents were diagnosed or treated with **depression**

$\frac{1}{12}$ respondents were diagnosed or treated with **panic attacks**

There were no changes in mental health status from 2016 to 2019 or between undergraduates and graduates and first year and upper year undergraduate students. 12.9% of students reported both depression and anxiety.

Mental health experiences

This sub-section looks into certain mental health experiences and different cohorts that experience this issue. Students included in this category are both undergraduate and graduate students.

Feelings related to mental health experienced in the last 12 months	Percentage of students (%)
Hopeless	63.8
Exhaustion not from physical activity	88.4
Very overwhelmed	89.9
Loneliness	71.1
Very sad	75.8
Too depressed to function	50.0
Overwhelming anger	48.6
Overwhelming anxiety	68.7
Seriously considered suicide	15.6
Physically self-harmed	10.5
Attempted suicide	2.7

2016 to 2019

There were no significant differences in mental health experiences through the years.

First year and upper year undergraduate students

There were no significant differences found in the prevalence of poor mental health experiences.

Undergraduate and graduate students

Undergraduate and graduate students differed in poor mental health experiences and the concerns that were traumatizing or difficult to handle.

Mental health status in the last 30 days	Undergraduate students*	Graduate students*	p-value**
Felt hopeless	62.0%	42.1%	0.000
Felt very overwhelmed	91.2%	81.4%	0.000
Felt exhausted not from physical activity	91.2%	82.7%	0.008
Felt very lonely	54.5%	76.3%	0.000
Felt very sad	60.9%	80.0%	0.000
Felt overwhelming anger	16.0%	40.3%	0.000

*percentages are reported as percentage of the group. E.g. amount of undergraduates with this concern in the undergraduate group.

**Chi-square test of homogeneity and significant p-value as $p < 0.05$

Concerns

This subsection summarizes the results found for the question “Within the last 12 months, has any of the following been traumatic or very difficult for you to handle: ____”.

What did students find traumatic or particularly difficult to handle in the last 12 months?

Academics: 58.8%

Sleep difficulties: 39.2%

Career-related issue: 36.6%

First year to upper year undergraduate students

First year and upper year students were found to have significant differences in the concerns they found traumatizing or stressful. While more first year students dealt with sleep difficulties, a greater number upper year students had concerns about career-related issues.

Concern	First year students*	Upper year students*	p-value**
Sleep difficulties	47.2%	39.1%	0.035
Career-related issue	27.4%	39.4%	0.001

*percentages are reported as percentage of the group. E.g. amount of first years with this concern in the first year group.

**Chi-square test of homogeneity and significant p-value as $p < 0.05$

Undergraduate and graduate students

Concern	Undergraduate students*	Graduate students*	p-value***
Academics	62.3%	45.4%	0.000
Sleep difficulties	41.2%	31.2%	0.007

*percentages are reported as percentage of the group. E.g. amount of undergraduates with this concern in the undergraduate group.

**Chi-square test of homogeneity and significant p-value as $p < 0.05$

Are students being supported?

McMaster University provides resources to be able to support students with their mental health needs. In general, 70.6% of students agreed or strongly agreed that the campus environment support their mental health. Students were also asked to rate their support and awareness of campus supports. 48.6% of students rated that they had a high to very high awareness of mental health resources.

Awareness of how to access mental health supports/services on campus ($p = 0.013$)

First years: 19.6%

Upper years:
31.2%



Awareness is about knowing what is there and who is eligible for these resources. Word-of-mouth and Welcome Week are good ways to promote resources and who is eligible for them. Having accessible resources can promote more learning.

Do students feel safe?

Students were asked to rate how safe they felt on campus.

Feeling very safe	Male (%)	Female (%)
On campus during daytime	91.6	86.9
On campus during nighttime	59.3	24.9
In the community around the school during daytime	59.4	43.1
In the community around the school during nighttime	24.6	8.6

Physical Activity and Nutrition

This section is comprised of questions that looked to survey certain health habits under these categories. Overall, there were no changes in physical activity or vegetable/fruit serving consumption over the years 2016 and 2019 or differences between student cohorts.

Nutrition

Percentage of students consuming different servings of fruits and vegetables per day



0 servings: 5.8%



3-4 servings: 29.9%



1-2 servings: 55.8%



5+ servings: 8.4%

Physical Activity

Percentage of students and their corresponding participation in exercise per week (7 days)

Moderate-intensity cardio or aerobic exercise for at least 30 minutes



0 days: 24.6%
1-3 days: 54.5%
5-7 days: 20.9%

Vigorous-intensity cardio or aerobic exercise for at least 20 minutes



0 days: 46.1%
1-3 days: 45.3%
5-7 days: 8.6%

8-10 strength training exercises for 8-12 repetitions each



0 days: 53.0%
1-3 days: 35.3%
5-7 days: 11.7%

Sexual Health

This section presents information related to sexual health and behaviours of respondents. Most questions in the survey targeted use of contraception during sexual intercourse. Amongst the sample, average number partners over the last 12 months amounted to 2.05. When asked if students or their partners used contraception for vaginal intercourse, 47.8% of students or their partner used contraception, while the other 52.2% did not use it, did not know how to use it or this activity was not applicable to them. These statistics only cover the percentage of students who participated in sexual intercourse (n=514). 549 respondents did not participate in any sexual intercourse or did not participate in the last 12 months.

Sexual intercourse

Number of students participating in sexual intercourse*

Activity	Last 30 days	Never	Not in last 30 days
Oral sex	454	389	160
Vaginal intercourse	462	415	134
Anal intercourse	45	507	42

*The individual counts per activity is given, however, this does not constitute individual students. A student may very well participate in all three categories.

Contraception

Use of condom during sexual intercourse in the last 30 days (n = 514)

Activity	Percentage of students who used a condom (%)*
Oral sex	3.0
Vaginal intercourse	49.2
Anal intercourse	32.0

*Note: the percentages do not delineate differences of use such as "used only once" or "every time". It merely summarizes the amount who use it for this particular activity. All sexually inactive students or students who did not perform this activity in the last 30 days were excluded from this analysis.

Most common form of contraception amongst students used in the last 12 months (n = 514)

1. 61.8% students or their partners use male condoms
2. 55.3% students or their partners use birth control pills (monthly or extended cycle)
3. 44.5% students or their partners use male condom and another method (not specified)
4. 29.6% students or their partners use withdrawal
5. 12.3% students or their partners use intrauterine device

Sexually transmitted diseases or infections

Diagnosed with or treated for a sexually transmitted disease/infection in the last 12 months



Genital warts/HPV: 1.0%

Gonorrhea: 0.4%

Genital herpes: 0.7%

Chlamydia: 1.3%

Substance Use

There were many questions provided within the survey to gain an understanding around the thoughts and behaviours of substance use amongst university students. The topics below look at substance use rates, harm reduction behaviors and perceptions around use.

Substance Use

Below, are the most common substances used by McMaster students within the last 30 days.

1. Alcohol 64.5%
2. Marijuana 21.9%
3. E-cigarette 7.2%
4. Cigarettes 6.3%
5. Tobacco through water pipe 2.5%



Harm reduction

Below are the most common harm reduction strategies used by students in the last 12 months after alcohol consumption. These numbers are from the percentage of students who consumed alcohol (n = 693 or 64.5% of students).



1. 89.6% of students stay with same group of friends the entire time drinking
2. 86.5% of students use a designated driver
3. 82.5% of students eat before and/or during drinking
4. 65.8% of students keep track of how many drinks being consumed
5. 46.7% of students stick with only one kind of alcohol when drinking

Perceived and actual use of substances as indicated by students

Through a series of questions, respondents were asked to indicate their perception of substance use in the student community. In general, the perception of substance use is more than the actual amount consumed by students.

Substance used in the last 30 days	Actual Use (% of students)	Perceived Use (% of students)	p-value*
Marijuana	21.9	89.6	0.000
Alcohol	64.5	94.2	0.000
Cigarette	6.3	71.7	0.000
E-cigarette	7.2	80.0	0.000
Tobacco from a water pipe (hookah)	2.5	63.4	0.000

*Chi square test performed to compare proportions and significant p-value as $p < 0.05$

Use of substances over the years

Marijuana, alcohol, cigarettes, E-cigarettes and hookah were all tested to see if there were significant differences in use from 2016 and 2019. National studies have noted increases in the prevalence of use for certain substances, such as E-cigarettes³ and marijuana⁴ for adolescents, thus rationalizing the tests performed. Only E-cigarettes and marijuana showed a statistically significant difference in prevalence of use over the years.

Substance used in the last 30 days	2016	2019	P-value*	Crude Prevalence Odds Ratio**
Marijuana	13.8%	21.8%	0.000	3.702
E-cigarettes	2.0%	7.2%	0.000	1.749

*Chi-square test of homogeneity and significant p-value as $p < 0.05$

**The likelihood of an increase or decrease in prevalence of use. No adjustments were made according to potentially confounding factors.

Comparing use of substances between groups

Substance use (marijuana, alcohol, hookah, e-cigarettes and cigarettes) were compared between first years and upper years. No significant differences were found except in the use of alcohol and marijuana.

Substances used in the last 30 days	First years*	Upper years*	P-value**
Alcohol	34.7%	78.7%	0.000
Marijuana	20.2% ^a	33.1% ^a	0.001

*percentages are reported as percentage of the group. E.g. amount of undergraduates with this concern in the undergraduate group.

^a15% of first years and 7% of upper years did not answer the question

^{**}Chi-square test of homogeneity and significant p-value as $p < 0.05$

In particular, amongst first years, there were common drinking behaviours they exhibited while under the influence of alcohol.



32.4% forgot where they were and what they did

19.3% physically injured themselves

17.9% had unprotected sex

Future Directions

This report can be used as a learning opportunity to highlight specific needs or areas of improvement. The findings that could inform future directions were derived from the NCHA dataset as well as the informal survey. First, there is a need to identify gaps in the health information shared and its reception by students. This will help inform future health promotion and equipping students with necessary skills or insight to advocate for their health.

For all students in general, there are few findings that could act as future focal points.

- Breaking down misconceptions about the commonality and frequency of substance use within the student population
- Creating safer spaces to encourage discussion about health
- Looking further into physical health and nutrition (e.g. exploring barriers, needs, gaps in programming or knowledge)

Given certain differences between the years and groups of students, there are specific highlights that have been identified for separate groups.

First years

- Emphasizing educating first years on what supports/resources are available to them and what they are eligible for. In addition, there is a need to target individuals who are off-campus or may not have access to the same rigorous information transfer as residence students.
- Understand whether sleep difficulties is a genuine and prevalent issue

Upper years

- Understand the concern around career difficulties prior to designing certain supports

Graduate students

- Further explore the feelings of loneliness, sadness and anger within this population. Consider community building amongst graduate students and other relevant supports.

While this report covers some information and highlights some health information about students, it is by no means comprehensive or statistically robust and merely offers a snapshot of student health. Further research and student voice input is required to gain a deeper understanding of McMaster students' health.

References

1. Liu X, Ping S, Gao W. Changes in Undergraduate Students' Psychological Well-Being as They Experience University Life. *Int J Environ Res Public Health*. 2019 Aug 10 [cited 2019 Aug 30];16(16). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31405114>
2. Wyatt T, Oswalt SB. Comparing Mental Health Issues Among Undergraduate and Graduate Students. *American Journal of Health Education* [Internet]. 2013 Mar 1 [cited 2019 Aug 30];44(2):96–107. Available from: <https://doi.org/10.1080/19325037.2013.764248>
3. Hammond D, Reid JL, Rynard VL, Fong GT, Cummings KM, McNeill A, et al. Prevalence of vaping and smoking among adolescents in Canada, England, and the United States: repeat national cross sectional surveys. *BMJ* [Internet]. 2019 Jun 20 [cited 2019 Aug 30];365:l2219. Available from: <https://www.bmj.com/content/365/bmj.l2219>
4. Zuckermann AME, Battista K, Groh M de, Jiang Y, Leatherdale ST. Prelegalisation patterns and trends of cannabis use among Canadian youth: results from the COMPASS prospective cohort study. *BMJ Open* [Internet]. 2019 Mar 1 [cited 2019 Aug 30];9(3):e026515. Available from: <https://bmjopen.bmj.com/content/9/3/e026515>