



WESTERN UNIVERSITY

*OFFICE OF THE ASSOCIATE VICE PRESIDENT,
STUDENT EXPERIENCE*

National College Health Assessment 2013 & 2016 *Analysis and Recommendations*

Lead Author: Kate Schieman – Project Manager of Research, Assessment, &
Planning, Student Experience
Erin Huner – Director of Research, Assessment & Planning, Student Experience
Sara Wills - Manager, Integrated Learning & Assessment, Student Experience

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Introduction

The National College Health Assessment (NCHA) is a survey organized by the American College Health Association to assist colleges and universities across North America in collecting data about their students' habits, behaviours and perceptions on important health topics. Western University administered this survey in 2013 and 2016. The NCHA survey collects data that can help us to understand our campus health as well as important aspects of our campus culture, such as students' sense of belonging; perceptions of gender-based violence; and access to vital programmes and supports on campus and in the community. Western Student Experience uses the data gathered from the NCHA to create evidence-informed recommendations, health and mental-health policy, and student facing programming across our three pillars. The following report examines data from both the 2013 and 2016 survey and identifies differences between the two survey waves. In particular, this report analyses data from Graduate student participants and Undergraduate student participants and provides a list of recommendations based on our analysis of this data.

Demographics

Participation:

2013:

In 2013 a randomized survey sampling method was used based on total student population.

- n=791 participants (response rate is unknown as historical sample size data is not available, we estimate from the 2016 sample, that the response rate was ~13%)
- n= 160 self-identifying as Graduate students (20.2% of total participants)
- n= 628 self-identifying Undergraduate Students (79.4% of total participants)
- n= 3 self-identifying as Other (0.4% of total participants)

2016:

In 2016 a randomized survey sampling method was used based on total student population.

- n= 1130 participants (18.9 % response rate)
- n= 192 self-identifying Graduate students (16.9% of total participants)
- n= 934 self-identifying Undergraduate students (82.6% of total participants)
- n= 4 self-identifying as “Other” or “Not seeking a degree” (0.5% of total participants)

Gender Identification¹:

2013:

- Undergraduate: Male 23.8%, Female 76% & 0.2% non-binary
- Graduate: Male 32.5%, Female 67.5% & 0% non-binary

2016:

- Undergraduate: Male 20.60%, Female 79.40 & 0% non-binary
- Graduate: Male 37.0%, Female 60.9% & 2.1% non-binary

Median Age:

2013:

- Undergraduate: 21 years old
- Graduate: 24 years old

2016:

- Undergraduate: 21 years old
- Graduate: 26 years old

Domestic and International Status:

In 2013, 9% (n=56) of Undergraduate student participants self-identified as international students, with 91% of Undergraduate students identifying as domestic students. 25.0% (n=40) of Graduate student participants self-identified as international students, with 75.0% of Graduate students identifying as domestic students.

In 2016, 7% (n=62) of Undergraduate students self-identified as international students, with 93% of Undergraduate students identifying as domestic students. 17.4% (n=33) of Graduate students self-identified as international students, with 82.6% of Graduate students identifying as domestic students.

¹ The NCHA defines this category as gender, but in Canada the standard from Statistics Canada is to use Male/Female as categories of Sex, not gender.

General Health Findings

Undergraduate

In 2013, just slightly more than half (57.8%, n=468) of the Undergraduate students surveyed described their health as 'very good' or 'excellent'. However, in 2016, less than half (46.9%, n=535) of Undergraduate students surveyed described their health as 'very good' or 'excellent.' Between 2013 and 2016, the percent of Undergraduate students describing their health as 'fair' or 'poor' increased (9.5% in 2013 and 16.3% in 2016).

Graduate

In 2013, 61.2% of Graduate surveyed described their health as 'very good' or 'excellent'. Similarly, in 2016, just slightly more than half (54.7%) of the Graduate students surveyed described their health as 'very good' or 'excellent'. In both 2013 and 2016, few Graduate students described their health as 'fair' or 'poor' (10.2% in 2013 and 9.9% in 2016).

Sexuality

The 2013 version of the NCHA survey asked students to describe their sexuality using four broad categories. The 2016 version of the survey expanded the four categories used in 2013, to 10 categories, allowing for a more diverse and nuanced expression of sexuality by participants.

Undergraduate

In 2013, 91.3% of Undergraduate students describe themselves as heterosexual with the remaining 8.7% of Undergraduate students describing themselves as either bisexual, homosexual or unsure. Unlike the 2013 results, 2016 results of Undergraduates found 79.8% of Undergraduate students describe themselves as heterosexual, 2.0 % as homosexual and 18.2% identifying as asexual, bisexual, questioning, same-gender loving or another identity.

Graduate

In 2013, 90.6% of Graduate students describe themselves as heterosexual with the remaining 9.4% of students describing themselves as either bisexual, homosexual or unsure. Similar to 2013 results, in 2016 84.9% of Graduate students describe themselves as heterosexual, 4.7 % as homosexual and 10.4% identifying as asexual, bisexual, questioning, or same-gender loving.

Disease and Injury Prevention

Both Undergraduate and Graduate students demonstrated some strong motivation to participate in preventative disease and injury prevention in the 2013 and 2016 NCHA data, which is an encouraging trend.

In 2013, 80.3% and 82.1% in 2016 of Undergraduate students reported having a dental exam and cleaning in the last 12 months. Similarly, the majority of Graduate students (73.1% in 2013 and 72.4% in 2016) reported having a dental exam and cleaning in the last 12 months. These are encouraging statistics demonstrating that the majority of students take advantage of the access to, and are participating in, preventative dental care. Literature demonstrates that general health, particularly mental health and oral health are linked (Treadwell, M. & Formicola, A.J., 2005; Griffiths, J., et al., 2000; Stenberg, P., Håkansson J. & Åkerman, S., 2000). Attitude of self, self-esteem, engagement in self-care and degree of oral health, and access to oral health care services are responsive and declines or improvements in a population's oral health can serve as an indicator of the general health, and motivation to participate in preventative health care, of a population group.

Within the 2013 dataset, only 36.5% of women identifying Undergraduate students and 21.3% of women identifying Graduate students reported having received the Human Papillomavirus (HPV) vaccination. However, in 2016 both rose to 55.3% of women identifying Undergraduates and 41.2% of women identifying Graduate students. This may be a result of Ontario expanding its publicly funded program to help protect more youth from the HPV infection and related cancers in 2016².

Undergraduate students receiving the influenza (flu) vaccination remained low between 2013 and 2016 with 24.4% participating in 2013 and 28.6% in 2016. Amongst Graduate students, the flu vaccination rose from 25% in 2013 to 39.5% in 2016, which is an encouraging trend. Although this is an increase in the rate of vaccinations amongst the student body, according to the Public Health Agency of Canada 34.3% of Canadians were vaccinated in the 2015 flu season. This highlights the need to increase public health information targeted to the Undergraduate population.

In the 2016 NCHA results we found that fewer women identifying Undergraduate students (27.2% & 26.8%) reported performing a self-breast exam within 30 days (30.5% in 2013 to 27.2% in 2016) and of having a routine gynecological exam in the last 12 months (34.2% in 2013 to 26.8% in 2016) than in the 2013 NCHA data. Almost identical findings were found amongst the women identifying Graduate students. In 2013, 24.4% of women identifying Graduate students reported performing a self-breast exam within 30 days and dropped to 18.8% in 2016. Likewise, 38.1% of women identifying Graduate students reported of having a routine gynecological exam in the last 12 months in 2013 to 21.9% in 2016. This decrease most likely reflects the updated 2013 provincial guidelines recommending women age 21 and over should be screened every three years rather than annually starting at the age of 18.

For male preventative self-exams, one fourth of male identifying Undergraduate students in both 2013 (25.6%) and 2016 (27.8%) conducted a self-exam in the last 30 days. Only 8.8% in 2013 and 9.9% in 2016 of Graduate participants responded that they had conducted a testicular self-exam. This is a finding that should be monitored for increases in self-reports as social media has targeted male testicular health and awareness through various campaigns in recent years. Research shows that the public's awareness of health issues, including cancer, comes in part from the mass media (Kelly, B., Hornik, R., Romantan, A., et al., 2010).

The percent of Undergraduate student's reporting receiving vaccinations against HPV, influenza, measles, mumps & rubella, meningitis and chicken pox were higher in 2016 than 2013, which might be a result of increased and consistent public health campaigns about the safety and efficacy of vaccinations. An increase in global coverage of vaccination against many important infectious diseases, the improved education around the importance of vaccinations and positive impacts of vaccination has been enhanced dramatically as countries employ a public health model of immunization (Greenwood, 2014).

Academic Impacts

The NCHA survey examines factors that have impacted an individual's academic performance. Academic performance is defined as: receiving a lower grade on an exam, or important project; receiving a lower grade in a course; receiving an incomplete or dropping a course; or experiencing a significant disruption in thesis, dissertation, research or practicum work.

² The NCHA provides three options to answer the series of questions related to vaccinations: yes, no or don't know. Although this question was asked to both men and women identifying students, only the findings of women identifying students is presented as the response rate was skewed amongst the male identifying respondents and many left the question blank rather than answering "don't know".

Undergraduate

2013

- 1) Cold, Flu or Sore Throat: Across all categories, most commonly (58.4%) Undergraduate students reported having a cold, flu or sore throat to have negatively impacted their academic performance;
- 2) Anxiety: 49.4% of Undergraduate students reported anxiety as negatively impactful to their academic performance;
- 3) Internet use/computer games: 46.5% of Undergraduate students reported internet use or computer games as being negatively impactful to their academic performance;

Additionally, alcohol use (45.4%), participation in extracurricular activities (42.7%), and roommate difficulties (37.7%) were commonly reported to have negatively impacted academic performance for Undergraduate student participants.

2016

- 1) Anxiety: in 2016, 62.8% of Undergraduate students reported anxiety most commonly to have negatively impacted their academic performance;
- 2) Cold, Flu or Sore Throat: 54.0% of undergrad students reported having a cold, flu or sore throat as negatively impactful to their academic performance;
- 3) Participation in extracurricular activities: 46.1% of undergrad students reported participation in extracurricular activities as negatively impactful to their academic performance;

Additionally, concern for a troubled friend or family member (43.9%), internet use/computer games (40.68%) and depression (37.5%) were commonly reported to have negatively impacted academic performance for Undergraduate student participants.

The academic impacts most commonly indicated by Undergraduate students are related to independence and transitioning to a post-secondary lifestyle where many responsibilities that were previously monitored or assisted by a guardian or teacher, including time management, work load and day to day responsibilities, are now the onus of the student (Parker, J., Summerfeldt, L., Hogan, M., et al., 2004; Garg, R., Levin, E. and Tremblay, L., 2016).

Graduate

2013

- 1) Stress: Across all categories, most commonly (22.6%) Graduate students reported stress to have negatively impacted their academic performance;
- 2) Anxiety: 20.7% of grad students reported anxiety as negatively impactful to their academic performance;
- 3) Sleep difficulties: 17.6% of Graduate students reported internet use or computer games as being negatively impactful to their academic performance;

Additionally, having a cold, flu or sore throat (11.9%), concern for a troubled friend or family member (10.7%) and depression (10.6%) were commonly reported to have negatively impacted academic performance for Graduate student participants.

2016

- 1) Stress: in 2016, 28.3% of Graduate students reported stress most commonly to have negatively impacted their academic performance;
- 2) Anxiety: 22.9% of grad students reported having anxiety as negatively impactful to their academic performance;

- 3) Depression: 16.4% of grad students reported depression as negatively impactful to their academic performance;

Additionally, sleep difficulties (16.23%), having a cold, flu or sore throat (13.0%) and concern for a troubled friend or family member (12.5%) were the next most commonly reported to have negatively impacted academic performance across Graduate students. It should be noted that the factors impacting Graduate students remain fairly consistent between 2013 and 2016 and the majority of those impacts can be categorized as related to mental health.

Violence, Abusive Relationships & Personal Safety

Western students were asked to report experiences of violence and abusive relationships within the last 12 months.

Undergraduate

Between 2013 and 2016 there was an increase in the number of reported experiences of stalking (4.6% in 2013; 6.6% in 2016) and an emotionally abusive relationship (9.7% in 2013; 12.1% in 2016). An encouraging statistic is the drop in Undergraduate students self-report of a physically abusive intimate partner relationship between the 2013 and 2016 (2.7% in 2013; 2.3% in 2016).

The majority of Undergraduate students felt 'very safe' during the day on campus (92.9% in 2013 and 89.8% in 2016) and the percent feeling 'very safe' at night on-campus remained fairly similar (34.3% in 2013 and 34.4% in 2016). There was a decline in the percentage of Undergraduate students identifying that they felt 'very safe' off campus during the day (61.8% in 2013 to 55.5% in 2016) and at night (16.6% in 2013 to 13.9% in 2016).

Graduate

Between 2013 and 2016 there was an increase in the number of reported experiences of stalking (4.0% in 2013; 5.7% in 2016), and an emotionally abusive relationship (5.6% in 2013; 8.9% in 2016). An alarming increase in experience of a physically abusive intimate partner relationship was reported between the 2013 and 2016 (0% in 2013; 3.1% in 2016), and should be monitored in future waves of data collection.

The majority of Graduate students felt 'very safe' during the day both on (95% in 2013 & 94.2% in 2016) and off-campus (73.6% in 2013; 77.8% in 2016), but dramatically fewer students reported feeling very safe on (39.4% in 2013; 43.7% in 2016) and off (21.9% in 2013; 28.9% in 2016) campus at night. When we analysed the data to look for change between the 2013 and 2016 surveys, we found there was no difference in the reported level of safety Graduate students felt on campus during the day and at night, or in their community surrounding campus during the day or at night, therefore we can conclude that Graduate students' perception of safety on campus has remained stable between 2013 and 2016.

Tobacco, Alcohol, and Marijuana Use

The following compares reported use and perceived use of various substances. Reported use is any personal use within the past 30 days and perceived use is how often students *believe* the typical student on their campus uses substances within the same time period. The analysis below tells us a lot about perceived behaviours and can be useful when we think about social norms and our campus culture.

Highlights from Actual vs. Perceived of Undergraduate Students

- Undergraduate students most commonly indicated (38.5%) that within the last 30 days they perceive that a typical Western student drinks alcohol 10-19 days a month. We analysed the corresponding self-report data and found that most commonly Undergraduate students (23.6%) indicated they drink alcohol 3-5 days a month.
- Undergraduate students most commonly indicated (20.9%) that within the last 30 days they perceive that the typical Western student uses marijuana 10-19 days a month. When we analysed the corresponding self-report data, we found that 57.4% of Undergraduate students have never used marijuana. Only 16.7% of Undergraduate students indicated they have used marijuana more than one day in within 30 days
- Only 39% of Undergraduate students perceive that the typical Western student has never used cocaine in 2013, with 70% of Undergraduates students perceiving the typical Western student has done cocaine at least once in 2016. However, the corresponding self-report data indicated that 96.0% in 2013 and 94.1% in 2016 of Undergraduate students have never used cocaine.

Highlights from Actual vs. Perceived of Graduate Students

- Graduate students most commonly indicated (39.9%) that within the last 30 days they perceive that a typical Western student drinks alcohol 10-19 days a month. We analysed the corresponding self-report data and found that only 8.9% of Graduate students indicated they drink alcohol 10-19 days a month.
- Graduate students most commonly indicated (19.9%) that within the last 30 days they perceive that the typical Western student uses marijuana 10-19 days a month. When we analysed the corresponding self-report data, we found that 65% of Graduate students have never used marijuana and in the last 30 days. In the self-report data, 1-2 days within 30 days was indicated as the highest percent (3.4%) of actual use.
- Graduate students most commonly indicated (14%) that within the last 30 days they perceive that the typical Western student uses cocaine 1-2 days a month. While the corresponding self-report data indicated that 95% of Graduate students have never used cocaine.
- In both 2013 and 2016, zero Graduate students self-reported driving after having 5 or more drinks in the last 30 days.
- In 2013 and 2016, Graduate students most commonly indicated that they perceive the typical Western student to have had 5 drinks the last time they partied or socialized. However, in both 2013 and 2016 Graduate students most commonly indicated that they had 2 drinks the last time they partied or socialized.

Students were asked a series of 9 questions related to whether they drank alcohol and whether they experienced any of them with in the last 12 months related to risky behaviours, mental health and their relationships. The results from both 2013 and 2016 were similar in that Undergraduate students indicated “yes” that alcohol impacted whether they did something and later had regrets (38% in 2013; 38% in 2016); that they forgot where they were or what they did (36% in 2013; 29% in 2016); and the likelihood of having unprotected sex (19% in 2013; 22% in 2016).

The results from Graduate students in both 2013 and 2016 were similar in that 26.5% in 2013 and 25.9% in 2016 indicated “yes” that alcohol impacted whether they did something and later had regrets; 25% in 2013 and 19.7% in 2016 indicated that they forgot where they were or what they did; and 14.7% in 2013 and 21.8% in 2016 indicated that it increased their likelihood of having unprotected sex. Although there are similar relative trends visible between Undergraduate and Graduate students between 2013 and 2016, it should be noted that a higher percentage of Undergraduate students who drank alcohol reported these experiences overall than Graduate students.

Sexual Behaviour.

Undergraduate

Both men and women identifying Undergraduate students reported most commonly in both 2013 and 2016 of having one sexual partner (sexual partner described as oral, vaginal or anal intercourse) within the last 12 months.

Both 2013 and 2016, both women (55% in 2013; 57% in 2016) and men (56% in 2013 & 57% in 2016) identifying Undergraduate students most commonly reported using a method of contraception.

However, the second most common response from both women (40% in 2013; 42.2% in 2016) and men (41% in 2013; 38% in 2016) identifying Undergraduate students was “N/A, have not had vaginal intercourse”. Female identifying Undergraduate students indicating that “they did not use any form birth control” dropped between 2013 (5%) and 2016 (0.8%), whereas more male identifying Undergraduate students indicated “no, did not use any birth control method” from 2013 (3%) to 2016 (5%).

In 2013, Undergraduate male identifying students most commonly used a male condom as their primary form of birth control (66.9% in 2013; 68.6% in 2016). Female identifying students most commonly used a birth control pill as their primary form of birth control (71.0% in 2013; 67.0% in 2016). This demonstrates that Undergraduate students use a contraceptive method that is sex-related (ie. birth control pill used by students who identify their sex as female) and places the majority of the responsibility of proper use on oneself.

Graduate

Both men and women identifying Graduate students reported most commonly in both 2013 and 2016 of having one sexual partner (sexual partner described as oral, vaginal or anal intercourse) within the last 12 months.

2013: Women identifying Graduate students most commonly reported forms of birth control were: birth control pills 60.0%, male condom 57.1%, and the withdrawal method 32.0%. Men identifying Graduate students most commonly reported forms of birth control were: birth control pills 45.8%, male condom 80.0%, and the withdrawal method 20.8%.

Women identifying participant self-reported use of contraception: 85.6% in 2013 and 78.7% in 2016.
Men identifying participant self-reported use of contraception: 63.9% in 2013 & 67.3% in 2016

2016: Women identifying Graduate students most commonly self-reported forms of birth control were: birth control pills 62.9%, male condom 48.6%, and the withdrawal method 18.3%. Men identifying Graduate students most commonly self-reported forms of birth control were: birth control pills 62.5%, male condom 58.5%, and the withdrawal method 25.0%. There was a 36.5% increase, between 2013 and 2016, of men identifying Graduate students self-reporting use of birth control pill as a primary form of contraception. This is an encouraging statistic, as this increase might mean that more men identifying students in 2016 are having informed conversations with a sexual partner about birth control use, as birth control pills can only be taken by participants that identify as being sexed female. The literature supports this conclusion, as studies have shown a positive correlation between young men being involved in conversations about their partner’s contraceptive use. Positive outcomes from this involvement includes improved consistency of contraceptive use, and decreased unwanted pregnancy; improved STI prevention, and improved communication and regard for women involved (Dehlendorf, C., Krajewski, C., Borrero, S., 2014; Masters, N.T., Morrison, D., Querna, K., Casey, E.A., Beadnell, B., 2017).

Nutrition and Exercise

Undergraduate

The table below summarizes Undergraduate student self-report data about both their vegetable and fruit consumption, as well as their physical activity.

Fruit & Vegetable Daily Consumption			Physical Activity				
Percent %	2013	2016	Percent %	MPA		VPA	
0 servings	3.0	4.0		2013	2016	2013	2016
1-2 per day	42.0	43.0	0 Days	21.0	26.0	33.0	43.0
3-4 per day	39.0	37.0	1-4 days	57.0	58.0	32.0	33.0
5 or more per day	15.0	16.0	5-7 days	22.0	16.0	35.0	24.0

Table 1 Undergraduate nutrition and exercise findings

With respect to vegetable and fruit consumption, the number of servings reported between the 2013 and 2016 self-report data remained fairly consistent. That being said, in both data-sets the majority of Undergraduate students were still self-reporting that they were consuming less than the Canada Food Guide's daily vegetable and fruit recommendations (7-10 servings).

With respect to physical activity, there is a drop in Undergraduate student self-reported 5-7 days of moderate and a significant decline in 3-7 days of vigorous physical activity. Of note, physical activity increased across both measures in respect to engagement 1-4 days of moderate and 1-2 days of vigorous physical activity. However, there is a more substantial increase of no activity self-reported between 2013 and 2016.

Graduate

The table below summarizes Graduate student self-report data about both their vegetable and fruit consumption, as well as their physical activity.

Fruit & Vegetable Daily Consumption			Physical Activity				
Percent %	2013	2016	Percent %	MPA		VPA	
0 servings	3.1	4.2		2013	2016	2013	2016
1-2 per day	35.0	41.1	0 Days	20.0	26.6	41.9	54.4
3-4 per day	42.5	38.0	1-4 days	60.0	58.9	34.2	25.5
5 or more per day	19.4	16.7	5-7 days	20.0	14.6	23.9	20.2

Table 2 Graduate nutrition and exercise findings

With respect to vegetable and fruit consumption, there was a trend for increased vegetable and fruit consumption between the 2013 and 2016 self-report data. That being said, in both data-sets Graduate students were still self-reporting that they were consuming less than the Canada Food Guide's daily vegetable and fruit recommendations (7-10 servings).

With respect to physical activity, can see that there is an overall drop in Graduate student self-reported daily physical activity. Of note, moderate physical activity decreased across both measures, while no activity increased. For vigorous physical activity there was a more substantial decrease across both measures, with a more substantial increase of no activity self-reported between 2013 and 2016.

Mental Health

Students reported on a variety of feelings over the last 12 months including disclosure of intentional self-harm and suicide. The exact numbers of students who reported experiencing these feelings ‘within the last 2 weeks’ or the ‘last 30 days’ cannot be reported on for either Undergraduate or Graduate students because the data does not meet the threshold for maintaining anonymity of respondents³. To allow for benchmarking, the 2013 and 2016 data was amalgamated to include ‘within the last 2 weeks’, ‘in the last 30 days’ and ‘the last 12 months’.

Undergraduate

The NCHA asks undergraduate students about whether or not they have been diagnosed or being treated for a number of listed mental health concerns within the last 12 months. Across the following 5 categories, there was a reported increase for anxiety, panic attacks, and other mental health disorders not specified; with Depression slightly decreasing and insomnia remaining relatively stable:

Mental Health Concern	2013	2016
Anxiety	11.9%	12.0%
Depression	10.8%	8.3%
Insomnia	4.4%	4.2%
Panic Attacks	6.2%	7.8%
Other mental health concern	1.2%	3.1%

In the 2013 dataset, 9.7% of Undergraduate students reported having intentionally injured themselves or self-harmed. In 2016, 11.2% of students reported having intentionally injured or self-harmed themselves.

With respect to suicidal ideation, in 2013 12.9% of Undergraduate students reported having experienced suicidal ideations, and in 2016, this percentage increased to 16.5%. In 2013, 2.7% of students reported having attempted suicide, with 3.4% of respondents reporting having attempted suicide in 2016.

Between 2013 and 2016, there was an increase in the percentage of Undergraduate students that intentionally injured themselves (from 9.7% to 11.2%), seriously considered suicide (from 12.9% to 16.5%), attempted suicide (from 2.7% to 3.4%). Across all questions related to serious self-harm, Western students reported an increase over the two waves of data collection.

Graduate Students

The NCHA asks graduate students about whether or not they have been diagnosed or being treated for a number of listed mental health concerns within the last 12 months. Alarmingly, across the following 5 categories, there was a reported increase for anxiety, panic attacks, and other mental health disorders, as well as for depression and insomnia:

Mental Health Concern	2013	2016
Anxiety	13.9%	22.11%
Depression	13.58%	16.85%
Insomnia	3.34%	7.08%
Panic Attacks	6.39%	11.05%
Other mental health concern	3.04%	5.47%

It should be noted that the majority of Graduate students in 2013 (83.2%) and 2016 (78.7%) reported experiencing ‘average’ to ‘slightly more than average’ stress in the last 12 months. In both 2013 and 2016

³ Our portfolio does not disclose any statistics that are below a threshold of >15. This threshold is set to ensure the anonymity of student participants.

around half of Graduate students (52.8% in 2013; 49.2% in 2016) reported experiencing academics as their main source of stress. As an institution we can play a pivotal role in helping to offload the stress Graduate students experience throughout their academics careers through the provision of well-designed services and supports. With almost half of graduate students in both 2013 and 2016 reporting that academics was their main sources of stress, we need to focus on offering maintained supports and suggest creating nuanced services that continue to support Graduate students throughout their studies - in order to maintain a consistent decline in stress levels over the next 5 years.

In 2013, 3.8% of Graduate students intentionally injured themselves or self-harmed; in 2016, 3.7% of graduate students reported engaging in self-harm behaviours.

With respect to suicide, 5.6% of Graduate students reported experiencing serious suicidal ideation in 2013, with this number increasing to 6.8% in 2016. In 2013, 0% of Graduate students reported having attempted suicide, with 1.1% of Graduate students reporting attempting suicide in 2016.

Sleep

Undergraduate

In both 2013 and 2016, Undergraduate students most commonly (46.7% in 2013; 38.5% in 2016) indicated that they had 'a little problem' regarding their sleep hygiene. Between 2013 and 2016, there was a decline in the percentage (16.7% in 2013, 6.5% in 2016) of Undergraduate students that indicated 'no problem at all' in regards to sleepiness. Correspondingly, between 2013 and 2016 there was a 4.96% increase in the number of students reporting sleep as a 'big problem'. Most commonly Undergraduate students reported feeling tired, dragged out, or sleepy 3 to 5 times in the last week in both 2013 (44%) and 2016 (45%). Sleep hygiene difficulties persisted across the two waves of data collection. In 2016, 50% more Undergraduate students indicated they felt tired, dragged out, or sleepy during the day than in 2013. Our analysis revealed that there was a drop in self-reported restful sleep between 2013 and 2016, with only 17% of Undergraduate students in 2013, and 10% of Undergraduate students in 2016 getting enough sleep more than 6 days a week to wake up feeling rested.

Graduate

In both 2013 and 2016, the majority of Graduate students (50.0% in 2013; 45.3% in 2016) indicated that they had 'a little problem' regarding their sleep hygiene. However, between 2013 and 2016 there was a 2.3% increase in the number of students reporting sleep as a 'big problem'. The majority of Graduate students reported feeling tired, dragged out, or sleepy 3 to 5 times in the last week in both 2013 (37.1%) and 2016 (45.9%). Sleep hygiene difficulties persisted across the two waves of data collection. Our analysis revealed that there was a drop in self-reported restful sleep between 2013 and 2016, with only 20.6% of Graduate students in 2013, and 16.2% of Graduate students in 2016 getting enough sleep more than 6 days a week to wake up feeling rested.

Recommendations

The NCHA provides valuable insight into our student population and highlights both the areas of strength but also the areas of struggle that our Western student community faces. With consideration for the findings, the following recommendations can be made:

- First, we must understand the needs and challenges of the Undergraduate and Graduate populations to be exclusive of one another. Although these populations are similar in the simple fact that they are students, our findings clearly demonstrate that there are more differences than similarities between them. As we seek to enrich a student's experience on campus and help guide them to a place of thriving in their academic and personal life, we must acknowledge their distinctiveness, and the types of supports and resources these unique strengths and challenges require.
- Undergraduate students are emerging adults and need a stronger co-curricular experience to teach self-efficacy in their health and academic decision-making. As noted in the literature, co-curricular experiences, incorporating learning outcomes, structured reflection, and self-assessment, gauges student learning and development and offers structured learning experiences to guide student development in self-efficacy and life skills (Bresciani, 2005; Kuh et al, 1994). In particular, when intentionally designed, these structured experiences empower students in making informed choices, improve their skill development, and support with academic and employment goals (Storey, 2011). As our findings demonstrate, many Undergraduate students struggle with balance; whether this is participation in extracurricular activities impacting their academics, poor sleep hygiene, or alcohol consumption increasing their engagement in risky behaviours. Therefore, it is recommended that existing co-curricular programmes related to well-being be reviewed and updated to provide students with strategies and tools improve their overall well-being and decision-making. Furthermore, learning outcomes related to self-efficacy in wholistic well-being should be developed and integrated into transitional and early intervention programming, recognizing the role well-being plays on students' overall success at university and beyond.
- Our analysis supports that Graduate students need more services available that can be fit into their complex lives. The median age of Western Graduate students is 24 to 26 years of age with some students between 58 in 2013 to 63 years old in 2016. There has been a more nontraditional shift in characterizing Graduate school and more often students are integrating their education as one part of their multifaceted life (Brus, 2006). We see this demonstrated in the differences between academic impacts between Undergraduate and Graduate respondents. Between 2013 and 2016, Graduate students consistently indicated factors such as stress, anxiety and depression to have had the greatest impact on their individual academic performance. Comparatively, Undergraduate students indicated factors that were more easily in their control to positively change through better self-efficacy to have negatively impacted their academic performance. Undergraduate students indicated factors such as internet use and computer games, participation in extracurricular activities or a cold, flu or sore throat. This difference between seeking "*guidance in their lives*" as an Undergraduate to "*support of their lives*" as a Graduate student is consistently demonstrated in the 2013 and 2016 findings. Graduate students are more likely to be engaging in conversations with their partners about contraceptive methods, have more accurate perceptions about the activities their peers are engaging in, and participate in more self-care habits such as proper sleep hygiene. The NCHA data reveals that for Graduate students, the greatest misalignment they experience is sufficient integration of services to their lives, or simply put: access. This is demonstrated in the 2013 & 2016 where Graduate students reported lower rates of

receiving proper vaccinations, frequency of doctor examinations, or access to mental health services when compared to Undergraduate data.

- As noted in the results, Undergraduate students are increasingly seeking professional help for mental health concerns, with 50% self-reporting that they are experiencing more stress than they did within the last 12 months. In particular, anxiety was reported in 2016 as the most common factor impacting Undergraduate students' academic performance. Collectively, this data suggests that early intervention is needed to service the increase in anxiety experienced by Undergraduate students and decrease reported overall mental health. The Centre for Addiction and Mental Health (2016) states the importance of taking an upstream approach to student well-being through a number of campus-based intervention programmes to improve student coping abilities, reduce stress and depression, and foster self-esteem. These recommendations are also well aligned with first year experience literature, which explores common themes related to new Undergraduate stress and personal challenges: adjusting to academic expectations in university; feeling a sense of belonging; establishing meaningful support networks; maintaining psychological well-being; acquiring confidence in life skills; and finding a sense of place on campus.⁴ Thus it is recommended that an intentional first year transition framework be developed and used as an early intervention programme to set new Western students up for success, providing skill building initiatives, identity exploration experiences, and social networking opportunities to connect students with supports early on in their academic journey, and increase their confidence, self-efficacy, mindfulness and self-esteem.
- A common theme in both 2013 and 2016 was the discrepancy of actual and perceived behaviours. Students answered questions about their actual engagement in risky behaviours, including drinking, drug use, sexual activity and their perception of what their peers are engaging in. Within both the Undergraduate and Graduate populations, students indicated that they believed their peers were engaging in more-risky behaviour than they actually are as a collective whole. There is less of a discrepancy in the actual and perceived behaviours of Graduate students compared to that of Undergraduate students. For example, Undergraduate students perceive their peers to be using more illicit drugs and engaging in more sexual relationships with multiple partners than they actually are when compared to their Graduate counterparts. This discrepancy highlights a specific challenge because literature states that adolescents' perceptions of their friends' behavior strongly predict adolescents' own behavior, however, these perceptions often are erroneous (Prinstein, M. and Wang, S., 2005). This false belief of one's peer's behaviours ultimately feeds back into itself, negatively impacting personal behavior through peer effect, resulting in more students participating in these negative behaviours. Students who believe that respected members of their peer group engage in and value a specific behavior will feel pressured towards behavioral conformity. This exact phenomenon can be seen at multiple times during the school year, particularly during the unsanctioned street party on Broughdale avenue.
- Literature indicates a direct relationship between physical activity and mental health (Chekroud, S.R., Gueorguieva, R et al, 2018; Stubbs, B., Vancampfort, D., Smith, L., Rosenbaum, S., Schunch, F, Firth, J., 2018). Between 2013 and 2016 data there was an increase in students indicating higher levels of stress, loneliness, exhaustion, and experiencing a variety of mental health issues including anxiety, depression and considered or attempted suicide. Likewise,

⁴ As reported in 'An Analysis of Literature in the Field of Student Transition from High School to University' (2019) created by the Research, Assessment and Planning Office within the Office of Associate Vice-President, Student Experience.

between 2013 and 2016 fewer students were engaging in moderate and vigorous physical activity, and for fewer days per week. In 2016, both the Undergraduate and Graduate student populations, more than one fourth indicated zero days of moderate physical activity and increased to more than half indicating zero days of vigorous physical activity. Multiple studies show that exercise is significantly and meaningfully associated with self-reported mental health burden in individuals (Chekroud, S.R., Gueorguieva, R et al, 2018). We recommend using these two sections of data collection, a) mental health and b) exercise, as proxy measures to student health and as predictive to changes in student health. A change in the level of engagement of physical activity, either an increase or decrease, might be predictive to the mental health of our students. Research indicates that incorporating as little as 45 minutes of moderate physical activity (i.e. a walk) for 3 to 5 days a week will increase positive impacts in well-being, including reduced anxiety and stress management (Biddle, S., 2016; Chekroud, S.R., Gueorguieva, R et al, 2018). We acknowledge that mental health issues on our campus cannot be simply “solved” by encouraging students to get active, however our data indicates a link and research supports that there can be positive improvements to mental health through engaging in movement. Thus, we recommend the incorporation of social prescriptions for health as a means of addressing the trend of decreased physical activity on our campus. Social prescriptions for health should be a robust research and practice mode supported by the Sports and Recreation Pillar and the Health and Wellness Pillar.

- The 2013 and 2016 data showed encouraging statistics in the number of students that engage preventative healthcare, like routine dental exams or physical check-ups. Literature states that general health, particularly mental health, and oral health are linked (Treadwell, M. & Formicola, A.J., 2005; Griffiths, J., et al., 2000; Stenberg, P., Håkansson J. & Åkerman, S., 2000). Attitude of self, self-esteem, engagement in self-care and degree of oral health and access to oral health care services are responsive and declines or improvements in a population’s oral health can serve as an indicator of the general health of a population group. Therefore, it is important to think about ways to intentionally promote preventative healthcare to students through our well-being programming, and to identify opportunities to integrate it into our new student transition framework.
- There has been a great deal of literature in higher education advocating for extra-curricular activities due to their positive impact on interpersonal development, educational attainment, development of social self-concept, and career clarity (Foubert & Grainger, 2006; Hunt & Rentz, 1994; Williams & Winston, 1985; Evans, Forney, & DiBrito, 1998; Pascarella & Terenzi, 1991; Schein & Laff, 1997) With this in mind, institutions have placed significant emphasis on developing and promoting involvement opportunities on their campuses. Unfortunately, as the number of opportunities and programmes increase, so too does the pressure that students are facing to be more involved, resulting in students overcommitting to outside-the-class opportunities, becoming overwhelmed, and ultimately compromising their academic success (Andring, 2002). As noted in the results, Western Undergraduate students experience these feelings and concerns as well, as it was increasingly self-reported between 2013 and 2016 that participation in extracurricular activities negatively impacted their academic performance.

In response, institutions should consider helping students make meaningful and intentional choices about the number and type of co-curricular activities students engage. Prior research on breadth of adolescent extracurricular participation (Marsh & Kleitman, 2002; Fredericks & Eccles, 2010; Knifsend & Graham; 2012) suggests that as levels of involvement increase, student well-being and academic success decrease, and therefore, focusing on two activity domains (i.e. academic/leadership groups, arts, clubs, and sports) may be most optimal for promoting a

student's positive school-related affect and greater academic performance. Furthermore, using tools that already exist for students to find and track involvement opportunities, such as the co-curricular record or badge system, may help move students away from participating in an abundance of activities toward intentionally selecting a moderate number of activities that directly reflect the competencies and skill development they are looking for (Elias & Drea, 2013; Stirling & Kerr, 2015; Diaz, Finkelstein & Manning, 2015). Western may seek to include co-curricular advising as part of a student's first year experience so that Undergraduate students are guided to make intentional, realistic and balanced decisions about the types and quantity of co-curricular activities that will enhance their social connectedness as well as their academic determination throughout their academic journey.

Moving forward, our approach to data analysis shows that a benchmarking study such as the NCHA has the potential to be utilized on campuses nationwide as a predictor of student health and well-being. As well, our analysis demonstrates that large benchmarking studies such as the NCHA have the capacity to be used to find innovative proxy measures (within the questionnaire panels) that allow institutions to indirectly track changes in the health and mental health of student populations. This case study demonstrates the value of relating quantitative data analysis with trends and best practices to advocate for wholistic student success and programme development to best meet the needs of changing student populations.

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