

COMPASS Survey Results  
2012/13-2016/17



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**Northwestern  
Health Unit**

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Northwestern Health Unit  
COMPASS Survey Results 2012/13-2016/17

March 2018

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## EXECUTIVE SUMMARY

For the past five years, the Northwestern Health Unit (NWHU) in collaboration with the COMPASS team, participated in the COMPASS survey in six high schools throughout the NWHU catchment area. The COMPASS survey is a longitudinal study which is designed to measure health status information on tobacco use, alcohol and marijuana use, physical activity, nutrition, obesity, sedentary behaviours and school experience amongst students in grades 9-12.

- In 2016/17, 50% of students met the recommended amount of daily activity of 60 minutes of physical activity every day. More males (56%) met the recommended amount of daily activity than females (44%). There were no notable differences in levels of reported activity when comparing grades or over time.
- In 2016/17, based on body mass index (BMI) calculation, 65% of students fell into the “healthy weight” category. Thirteen percent of students were obese in 2016/17, this represents an increase from 10% in 2012/13.
- Overall in 2016/17, 1.3% of students met the recommended daily number of servings for all four food groups. Only 3.4% of students got the recommended number of servings for fruits and vegetables, and 5.5% for grain products. Over time the proportion of students meeting the recommended number of servings of milk and meat products decreased, while grains and fruits and vegetables remained constant.
- In 2016/17, 50% of students reported that had tried smoking at some time in the past. The proportion increased from 35% in grade 9 to 63% in grade 12. This proportion was consistent over time. Of students who reported smoking, the most commonly used products were cigarettes (24%) and e-cigarettes (13%). Over time, the proportion of students using cigarettes and e-cigarettes increased.
- Of the 78% of students in 2016/17 who reported consuming alcohol in the past, 66% did so at least once a month or more. This was consistent over time. Seventeen percent of students consumed alcohol with energy drinks in 2016/17, this was significantly lower than in 2012/13 (22%).
- Of the 40% of students who reported using marijuana in the past, 60% used it at least once per month. Almost 20% of students who use marijuana reported using it every day. About 1 in 5 students smoked once a week or more regardless of grade, with male students being more likely to report this frequency of use. In 2016/17, the majority (62%) reported it would be easy to obtain marijuana, this represents an increase over time from 56% in 2012/13.
- About a quarter (24%) of students in 2016/17 reported being bullied at some point in the past 30 days. More females (26%) reported being bullied than males (22%). Of the students who reported being bullied, 18% were physically attacked, 69% were verbally attacked, 31% were target of a cyber-attack(s) and 19% had their possessions stolen or damaged.

These results provide us with valuable information to determine priority areas related to health status and behaviors of the youth within our catchment area. It also provides us with trends over time to help us track the impact of our initiatives.

## INTRODUCTION

In 2012, Dr. Scott Leatherdale from the School of Public Health and Health Systems at the University of Waterloo established a partnership with the Northwestern Health Unit (NWHU) to facilitate our participation in the COMPASS survey.

COMPASS is a longitudinal study that aims to measure health status information on tobacco use, alcohol and marijuana use, physical activity, nutrition, obesity, sedentary behaviours and school experience for youth in grades 9-12. The survey will run for nine years, having begun in the 2012/13 school year. It is funded by the Canadian Institutes of Health Research and is being led by Dr. Leatherdale in collaboration with a team of researchers from the University of Waterloo, the University of Alberta and the University of Toronto<sup>1</sup>.

This report outlines the results of the 2016/17 COMPASS survey for high school students in the NWHU catchment area, and compares these results to the previous four years. These results have given us important information on health status and health behaviours of youth in our area.

## METHODS

### Data Collection

Surveys are administered to students in grades 9-12 in six high schools across the NWHU catchment area as part of the COMPASS project which includes 43 schools across Ontario. The data collection process occurs annually and is facilitated by representatives from the COMPASS team with help from staff members of the NWHU. The COMPASS team provides consent letters to parents and arranges the dates for survey completion at the schools. Students and parents can opt out at any time. Surveys are administered to students in hard-copy form by classroom teachers with support from NWHU staff. Students' responses are kept entirely confidential. Once complete, surveys from each participating school are collected in envelopes and mailed back to the COMPASS team for processing.

The COMPASS questionnaire was designed to take students approximately 30 minutes to complete<sup>1</sup>, and contained questions on:

- Height and weight
- Daily physical activity
- Daily sedentary activity
- Eating behaviours
- Experience with tobacco
- Alcohol and marijuana use
- Feelings of school connectedness
- Academic achievement
- Bullying

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<sup>1</sup> Leatherdale et al. (2014) The COMPASS study: a longitudinal hierarchical research platform for evaluating natural experiments related to changes in school-level programs, policies and built environment resources. *BMC Public Health*, 14:331. Retrieved from <http://www.biomedcentral.com/content/pdf/1471-2458-14-331.pdf>



The survey has been completed 8,713 times over the five year period by high school students across the NWHU Catchment area. Since survey administration for COMPASS occurs annually, most students will complete the survey each year of their time in high school. Although, since surveys are anonymous, it is unknown which participants are represented in multiple years.

### Sample

The final sample was 8,713 surveys. A total of 1,895 students completed the survey in 2016/17. Of those who identified their age and sex, 47% were females and 51% were males. By grade, 27% were in grade 9 and 10, 24% were in grade 11 and 21% in grade 12. Table 1 provides a breakdown of the sample by grade, sex and year.

Table 1. Participant characteristics, 2012/13-2016/17

	2012/13 N=1,535			2013/14 N=2,028			2014/15 N=1,940			2015/16 N=1,315			2016/17 N=1,895		
	F	M	NS	F	M	NS	F	M	NS	F	M	NS	F	M	NS
Grade 9	212	257	2	323	275	5	265	318	8	175	203	7	243	265	6
Grade 10	185	191	2	233	274	6	281	250	1	159	174	3	249	265	5
Grade 11	172	180	3	245	235	4	213	216	4	150	162	6	219	229	6
Grade 12	159	160	3	209	195	6	187	184	1	118	140	3	181	204	5
Not stated	1	2	6	4	1	13	1	1	10	1	6	8	0	4	14

\*F= Female, M= Male, NS=Not Stated

### Analysis

Upon completion of the survey, the COMPASS team sends an anonymized data set to the NWHU containing the results from all six participating high schools.

Data preparation, collation and analysis were carried out using Microsoft Excel® and STATA® (v. 15). Proportions with 95% confidence intervals were calculated using STATA®, with the confidence intervals being estimated using the logit transform for proportions and means.

## RESULTS

### Physical Activity

Students were asked about their level of moderate and hard physical activity each day, as well as their involvement in activities and sports inside and outside their school. Hard physical activity is considered to include activities such as jogging, team sports, fast dancing, jump-rope and any other activities that increase your heart rate and make you breathe hard and sweat. Moderate physical activity includes lower intensity activities like walking, biking to school and recreational swimming.

In 2016/17, students in the NWHU region reported that they spend an average of 64 minutes per day doing moderate physical activity, and 64 minutes per day doing hard physical activity. Combined, students on average spend about 125 minutes (just over 2 hours) doing moderate or hard physical activity. Male students spend a combined total of 140 minutes of moderate or hard physical activity per day (Figure 1). Female students on average spend about 106 minutes per day. Males spend on average about 30 minutes more per day on physical activity than females,

and the difference is statistically significant. There were no significant differences between grades and over time when looking at the minutes of physical activity per day (Table 2).

Figure 1. Average minutes of physical activity per day by sex, NWHU, grades 9-12, 2016/17

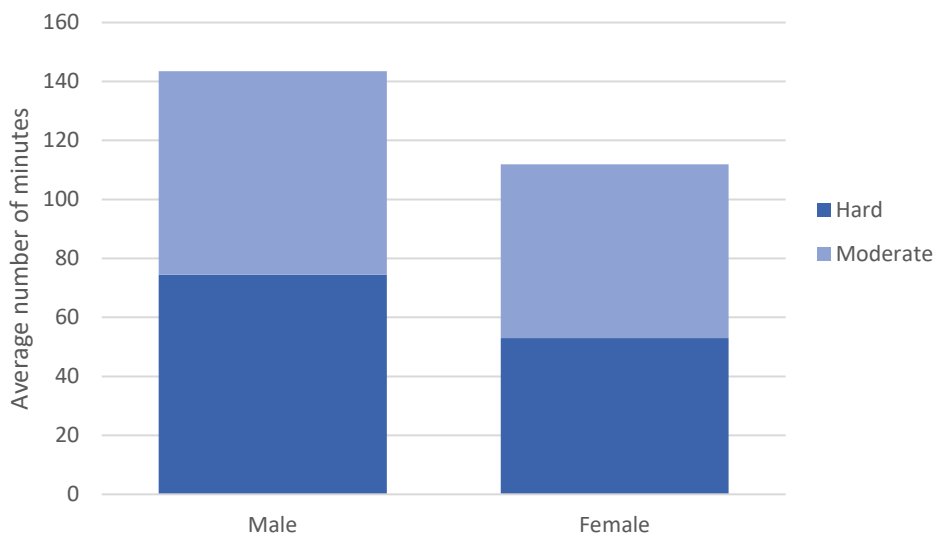


Table 2. Average minutes of physical activity per day by year, NWHU, grades 9-12, 2012/13-2016/17

2012/13 % (95% CI)	2013/14 % (95% CI)	2014/15 % (95% CI)	2015/16 % (95% CI)	2016/17 % (95% CI)
125.1(120.6-129.5)	120.3(116.2-124.4)	120.6(116.4-124.8)	124.4(119.1-129.7)	125(120.7-129.3)

Guidelines for physical activity among youth aged 12-17 recommend 60 minutes of moderate to vigorous physical activity every day.<sup>2</sup> In the NWHU region, 50% of high school students met the recommended amount of daily activity based on self-reported time spent on physical activity each day of the week.

In comparison, according to the Canada Health Measures Survey (CHMS), 8% of Canadian children and youth meet the recommended 60 minutes per day.<sup>3</sup> This is significantly lower than the estimate from COMPASS for teens in the NWHU area. A possible explanation is that youth in the NWHU area have overestimated their levels of activity; students self-reported their levels of activity, as opposed to participants in the CHMS which were given accelerometers which monitored their daily levels.

<sup>2</sup> Canadian Society for Exercise Physiology. (2016). *Canadian Physical Activity Guidelines*. Retrieved from [http://csepguidelines.ca/wp-content/themes/csep2017/pdf/Canadian24HourMovementGuidelines2016\\_2.pdf](http://csepguidelines.ca/wp-content/themes/csep2017/pdf/Canadian24HourMovementGuidelines2016_2.pdf)

<sup>3</sup> Statistics Canada. (2017). *Physical activity levels of Canadian children and youth, 2014 to 2015*. Retrieved from <http://www.statcan.gc.ca/daily-quotidien/170419/dq170419e-eng.pdf>

Proportionally more males meet the recommended amount of daily activity than females, with around 56% of males getting 60 or more minutes per day compared with around 44% of females (Figure 2). The difference between sexes is statistically significant. There were no notable differences in levels of reported activity when comparing grades or over time (Table 3).

Figure 2. Proportion of students who met the recommended amount of physical activity by year and sex, NWHU, grades 9-12, 2016/17

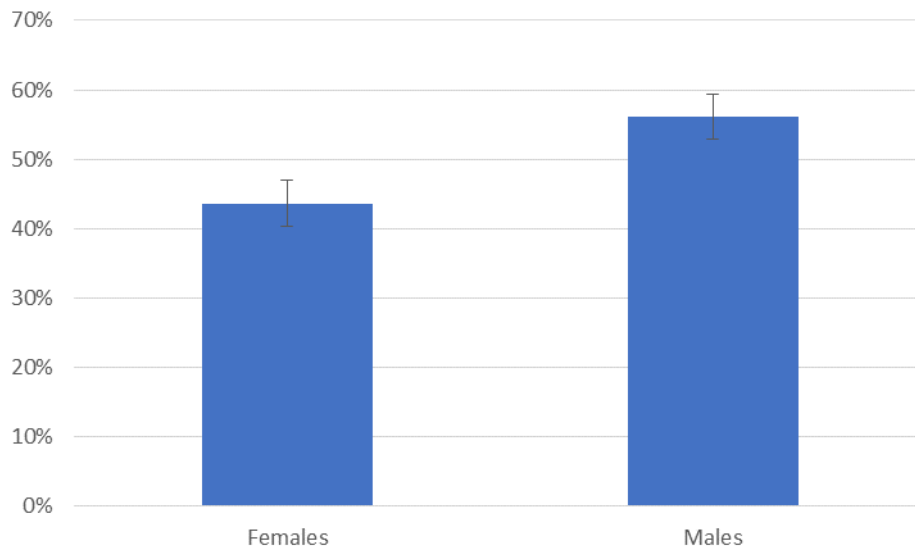


Table 3. Proportion of students who met the recommended amount of physical activity by year, NWHU, grades 9-12, 2012/13-2016/17

<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
51.8(49.3-54.4)	45.8(43.6-48.0)	48.6(46.4-50.9)	48.9(46.2-51.6)	49.8(47.5-52.1)

In 2016/17, about 50% of students surveyed were currently taking or were going to take a physical education (PE) class during the course of the school year. More males tend to take PE classes than females, and this trend becomes more pronounced with increasing grade. Enrolment in PE classes dropped significantly between grades 9 and 12 (Figure 3). This is likely due to the fact that in Ontario students only require one credit in health and PE to obtain the Ontario Secondary School Diploma. Participation in PE decreased significantly from 60% in 2012/13 to around 50% from 2013/14 to 2016/17 (Table 4).

Figure 3. Proportion of students who are taking a physical education class by year and grade, NWHU, grades 9-12, 2016/17

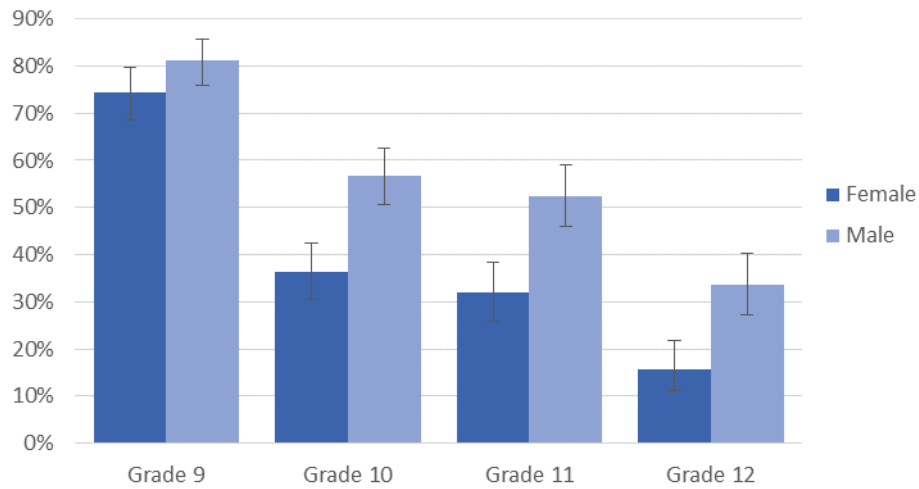


Table 4. Proportion of students taking a physical education class by year, NWHU, grades 9-12, 2012/13-2016/17

<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
59.6(57.1-62.1)	51.4(49.2-53.6)	52.6(50.4-54.9)	48.2(45.4-50.9)	49.5(47.2-51.8)

In 2016/17, nearly a third of students surveyed (31%) took part in extracurricular physical activity (i.e. before-school, after-school or noon hour activities put on by the school), 41% participated in competitive school sports and 41% in league/team sports outside of school. A total of 60% participated in one or more of the aforementioned activities (Figure 4). This proportion was consistent over time (Table 5).

Figure 4. Proportion of students participating in one or more of extracurricular physical activity, competitive school sports or league/team sports outside of school by year and grade, NWHU, grades 9-12, 2016/17

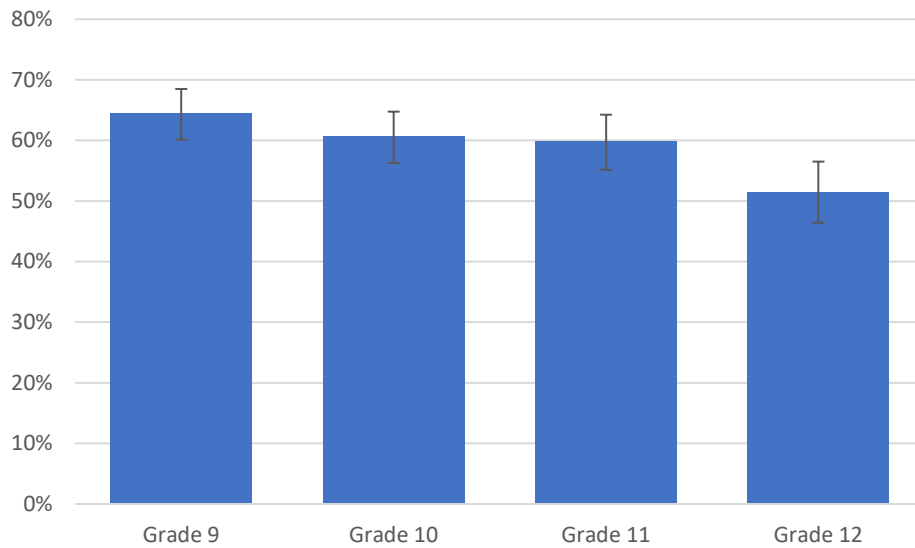


Table 5. Proportion of students participating in one or more of extracurricular physical activity, competitive school sports or league/team sports outside of school by year, NWHU, grades 9-12, 2012/13-2016/17

<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
63.4(60.9-65.8)	60.7(58.6-62.8)	60.1(57.9-62.3)	60(57.3-62.6)	59.6(57.4-61.8)

Students were asked about how many times in a week they work on strengthening their muscles. The Canadian physical activity guidelines specify that youth should do muscle strengthening exercises at least 3 days per week.<sup>4</sup> About 47% of students in 2016/17 met this criteria. A slightly greater proportion of male students (52%) met the criteria when compared to female students (41%; Figure 5). This proportion decreased over time from 53% in 2012/13 to 47% in 2016/17 (Table 6).

<sup>4</sup> Canadian Society for Exercise Physiology. (2016). *Canadian Physical Activity Guidelines*. Retrieved from [http://csepguidelines.ca/wp-content/themes/csep2017/pdf/Canadian24HourMovementGuidelines2016\\_2.pdf](http://csepguidelines.ca/wp-content/themes/csep2017/pdf/Canadian24HourMovementGuidelines2016_2.pdf)

Figure 5. Proportion of students spending three or more days per week strengthening their muscles by year and grade, NWHU, grades 9-12, 2012/13-2016/17

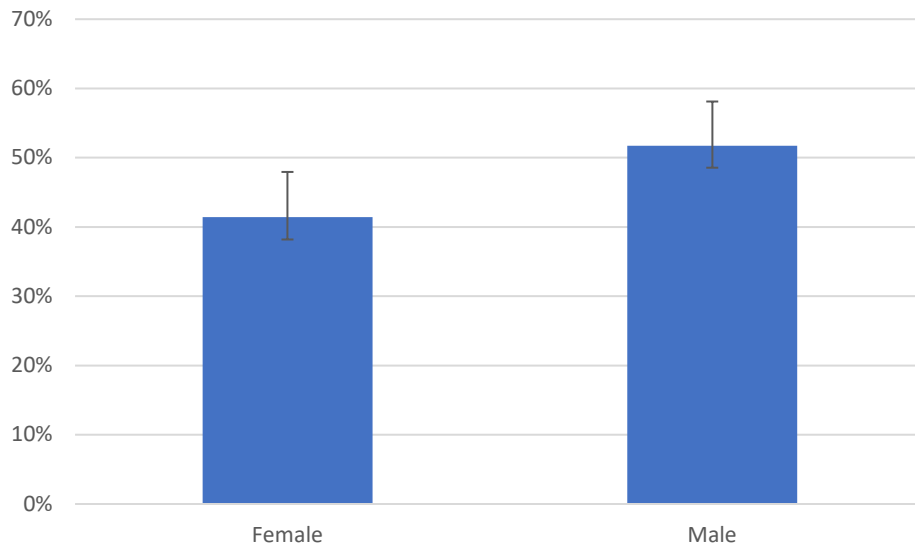


Table 6. Proportion of students spending three or more days per week strengthening their muscles by year, NWHU, grades 9-12, 2012/13-2016/17

2012/13 % (95% CI)	2013/14 % (95% CI)	2014/15 % (95% CI)	2015/16 % (95% CI)	2016/17 % (95% CI)
53.0(50.5-55.5)	51.3(49.1-53.4)	47.5(45.2-49.7)	47.6(44.8-50.3)	46.9(44.6-49.1)

When asked about how they perceived their own weight, just over half of students in 2016/17 (53%) felt that they were about the right weight and 33% of students felt that they were slightly or very overweight. More boys (20%; 95%CI 17-22) considered themselves very or slightly underweight when compared to girls (8%; 95%CI 7-11). Girls were more likely to consider themselves slightly or very overweight (39%; 95% CI 36-43) when compared to boys (27%; 95%CI 24-30; Figure 6). Trends in self-perceived weight were consistent over time (Table 7).

In 2016/17, based on body mass index (BMI) calculation, around 65% of students fell into the “healthy weight” category (Table 8), which is higher than the 53% of students who felt they were in the normal range based on their own perception (Figure 7). Thirty four percent of students were classified as overweight or obese, which fairly accurately reflects the students’ own perceptions (33%). About 14% of students felt they were slightly or very underweight, while according to BMI calculations 1% of students are technically considered underweight. Looking at BMI over time, a significant increase was observed in the proportion of students in the overweight and obese category over time (Figure 8)

Figure 6. Proportion of students by self-perceived weight by sex and grade, NWHU, grades 9-12, 2016/17

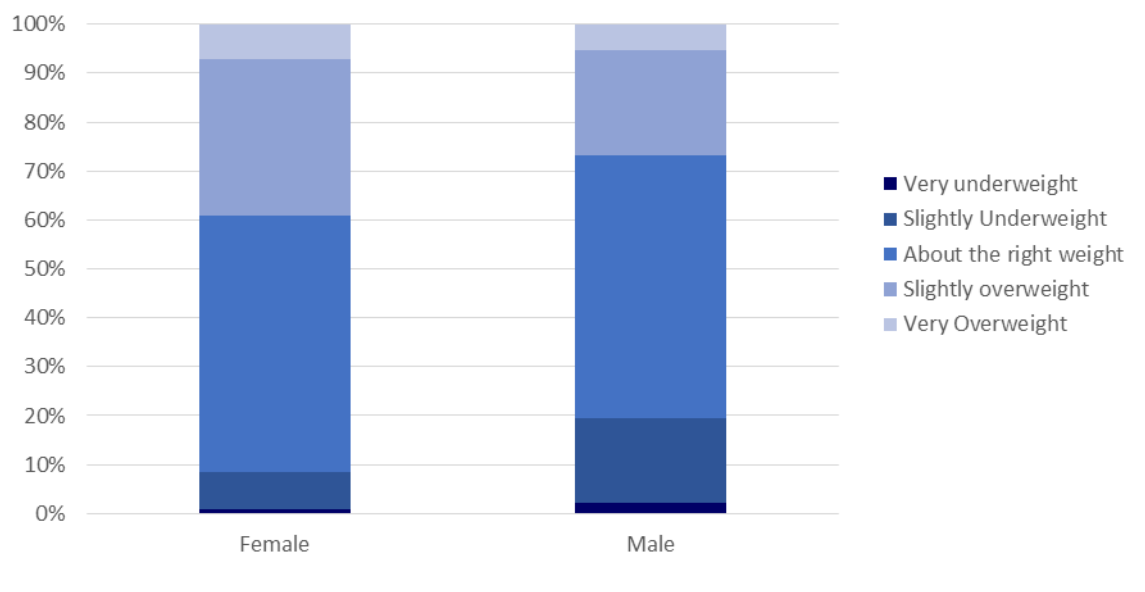


Table 7. Proportion of students by self-perceived weight by year, NWHU, grades 9-12, 2012/13-2016/17

	<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
Very underweight	1.5(1.0-2.3)	1.8(1.3-2.5)	2.0(1.4-2.7)	2.3(1.6-3.2)	1.6(1.1-2.3)
Slightly underweight	12.0(10.4-13.7)	12.2(10.8-13.7)	11.5(10.1-13.0)	14.7(12.8-16.7)	12.6(11.2-14.2)
About the right weight	55.9(53.4-58.4)	54.2(52.0-56.4)	52.0(49.8-54.3)	50.5(47.8-53.3)	53.0(50.7-55.2)
Slightly overweight	26.1(24.0-28.4)	26.2(24.3-28.1)	28.8(26.8-30.9)	27.8(25.4-30.3)	26.4(24.4-28.5)
Very overweight	4.4(3.5-5.6)	5.7(4.7-6.8)	5.7(4.8-6.9)	4.7(3.7-6.0)	6.4(5.4-7.6)

Table 8. Proportion of students self-perceived weight and BMI category by year, NWHU, grades 9-12, 2012/13-2016/17

	<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
Underweight	1.3(0.8-2.2)	1.6(1.1-2.4)	1.6(1.0-2.4)	2.1(1.3-3.3)	1.2(0.8-2.0)
Healthy weight	70.4(67.7-72.9)	68.7(66.3-71.0)	65.6(63.1-68.1)	65.4(62.2-68.5)	64.5(61.8-67.1)
Overweight	18.8(16.6-21.1)	20.0(18.0-22.1)	21.5(19.4-23.8)	19.8(17.3-22.6)	21.0(18.9-23.3)
Obese	9.6(8.0-11.4)	9.7(8.2-11.3)	11.3(9.7-13.1)	12.7(10.6-15.1)	13.2(11.5-15.2)

Figure 7. Proportion of students self-perceived weight and BMI category, NWHU, grades 9-12, 2016/17

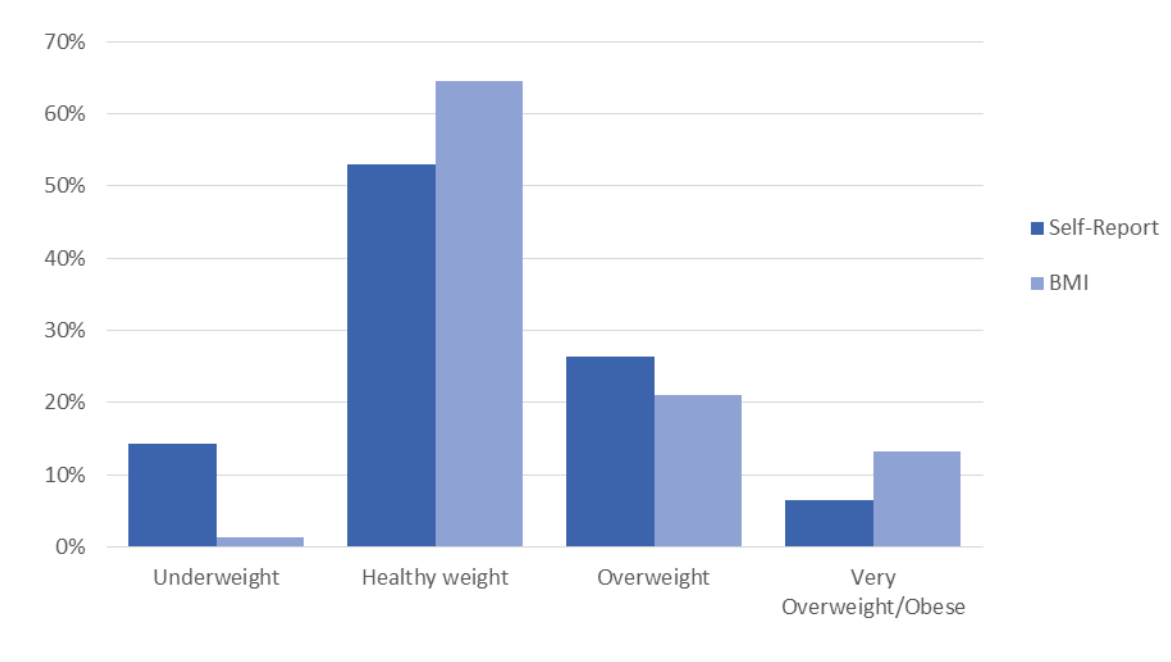
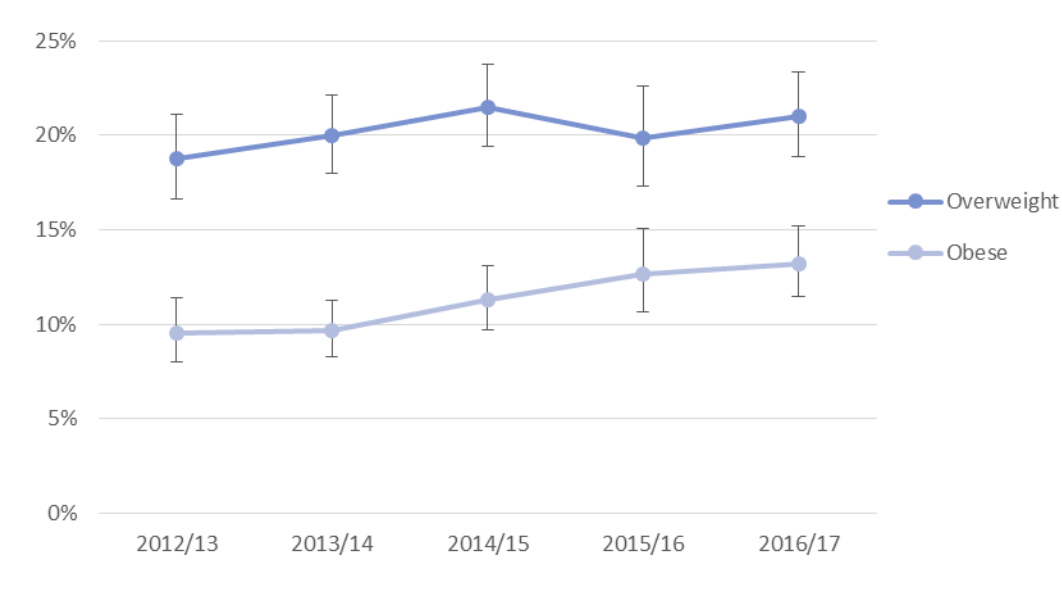


Figure 8. Proportion of students considered overweight or obese by BMI over time, NWHU, grades 9-12, 2012/13-2016/17



Students were asked what they were trying to do about their weight. In 2016/17, 41% were trying to lose weight, 17% were trying to gain weight, 15% were trying to stay the same weight, and 28% were not doing anything about their weight (Table 9). Significantly more girls were

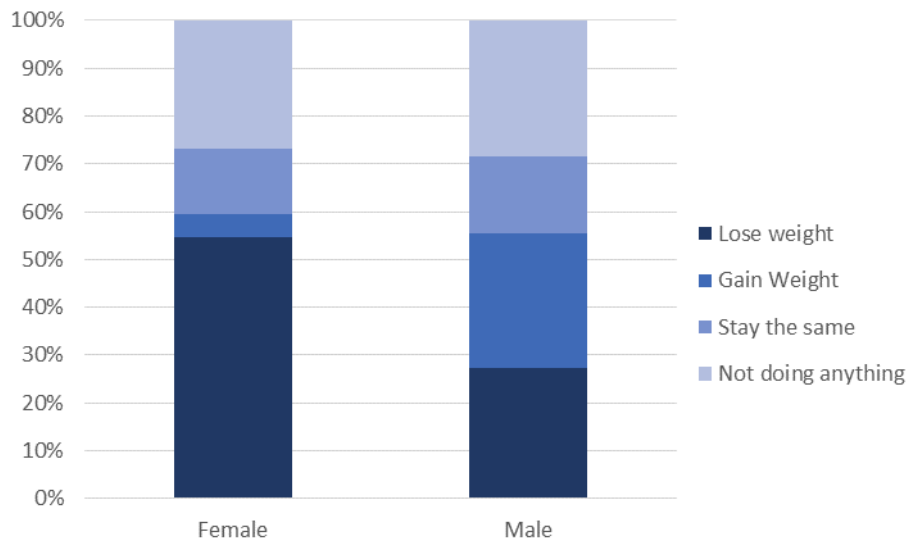


trying to lose weight compared with boys, whereas significantly more boys were trying to gain weight (Figure 9). When compared to 2012/13 significantly more students were not trying to do anything about their weight 2016/17 (Table 9).

Table 9. What students are trying to do about their weight by year, NWHU, grade 9-12, 2012/3-2016/17

	2012/13 % (95% CI)	2013/14 % (95% CI)	2014/15 % (95% CI)	2015/16 % (95% CI)	2016/17 % (95% CI)
Lose weight	43.0(40.5-45.5)	42.7(40.6-44.9)	41.4 (39.2-43.6)	42.0(39.3-44.7)	40.5(38.3-42.8)
Gain weight	15.9(14.1-17.8)	15.8(14.3-17.5)	15.0(13.5-16.7)	15.2(13.3-17.3)	17.0(15.4-18.8)
Stay the same	18.8(16.6-20.2)	16.1(14.5-17.8)	15.9(14.3-17.6)	15.2(13.3-17.3)	14.9(13.3-16.6)
Not doing anything	22.9(20.8-25.1)	25.4(23.5-27.3)	27.7(25.7-29.8)	27.6(25.2-30.1)	27.6(25.6-29.7)

Figure 9. What students are trying to do about their weight by sex, NWHU, grade 9-12, 2016/17



Students were asked about how much time they spend on various sedentary activities: watching TV, playing video games, doing homework, talking on the phone, surfing the internet and texting/emailing. In 2016/17, the most frequent activities were surfing the internet, texting/emailing, and watching TV. Over time trends were relatively stable with a slight increase in the number of minutes spent on the phone and a slight decrease in the number of minutes spent texting (Table 10). Students were also asked about how much sleep they get each day. On average, students reported getting seven hours of sleep per night. This trend was

consistent across sex, grade and over time (Table 10). This is less than the 8-10 hours that is recommended by for this age group.<sup>5</sup>

Table 10. Average time (in minutes) spent doing various sedentary activities by year, NWHU, grade 9-12, 2012/13-2015/16

	<b>2012/13</b> Minutes (95% CI)	<b>2013/14</b> Minutes (95% CI)	<b>2014/15</b> Minutes (95% CI)	<b>2015/16</b> Minutes (95% CI)	<b>2016/17</b> Minutes (95% CI)
TV	120.8(116.4-125.2)	124.0(119.8-128.2)	126.9(122.3-131.6)	129.9(124.1-135.7)	123.4(118.7-128.1)
Video games	100.5(94.1-106.8)	93.1(87.6-98.6)	92.9(87.0-98.9)	100.3(93.1-107.5)	93.1(87.2-98.9)
Homework	71.9(68.6-75.2)	76.7(73.4-80.1)	74.9(71.5-78.3)	80.1(75.7-84.6)	74.9(71.3-78.4)
Phone	28.2(25.2-31.2)	26.6(23.8-29.4)	30.7(27.3-34.0)	35.2(30.7-39.8)	39.4(35.4-43.3)
Surfing the Internet	130.9(124.6-137.1)	138.6(132.6-144.6)	141.5(135.3-147.8)	147.3(139.5-155.1)	138.8(132.6-144.9)
Texting	152.2(144.1-160.2)	148.1(141.1-155.1)	143.1(136.2-150.0)	144.6(136.0-153.0)	131.7(125.2-138.2)
Sleep	416.2(409.3-423.1)	410.0(404.0-416.1)	404.9(398.5-411.2)	401.1(393.0-409.1)	401.1(393.0-409.1)

### Healthy Eating

Students were asked about various nutritional habits they exhibit, both at home as well as when they are at school. In 2016/17, 33% of students in grades 9-12 reported that they eat breakfast every day. This trend was consistent over time (Table 11). While this proportion was relatively consistent between the grades, there was a difference when comparing sexes; 28% (95%CI 25-31) of females reported eating breakfast every day, compared with 38% (95%CI 35-42) of males.

Table 11. Proportion of students who ate breakfast every day by year, NWHU, grades 9-12, 2012/13-2016/17

<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
37.4(35.0-39.8)	37.3(35.2-39.4)	33.8(31.7-35.9)	32.5(30.7-35.1)	33.3(31.2-35.5)

For those students who do not eat breakfast every day, 32% reported that they don't have time for breakfast, 23% claimed they're not hungry in the morning, and 16% said they prefer to sleep in (Table 12).

<sup>5</sup> Canadian Society for Exercise Physiology. (2016). *Canadian Physical Activity Guidelines*. Retrieved from [http://csepguidelines.ca/wp-content/themes/csep2017/pdf/Canadian24HourMovementGuidelines2016\\_2.pdf](http://csepguidelines.ca/wp-content/themes/csep2017/pdf/Canadian24HourMovementGuidelines2016_2.pdf)

Table 12: Students' main reason for skipping breakfast, grades 9-12, NWHU, 2012/13-2016/17

	<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
I don't have time	29.8(27.6-32.2)	31.0(29.0-33.0)	31.0(28.4-33.4)	30.1(28.4-33.4)	31.5(29.4-33.6)
The bus comes too early	9.5(8.1-11.1)	8.1(7.0-9.4)	8.1(7.0-9.4)	8.4(7.0-10.0)	8.5(7.4-10.0)
I sleep in	16.4(14.6-18.4)	15.5(14.0-17.2)	15.0(13.5-16.7)	17.9(15.9-20.0)	15.9(14.4-17.7)
I'm not hungry in the morning	26.3(24.2-28.6)	23.7(21.9-25.6)	23.4(21.6-26.2)	23.8(21.6-26.2)	22.6(20.8-24.5)
I feel sick when I eat breakfast	13.0(11.4-14.7)	12.7(11.3-14.2)	14.3(12.8-15.9)	14.8(13.0-16.9)	14.0(12.5-16.7)
I'm trying to lose weight	4.0(3.1-5.1)	4.9(4.1-6.0)	4.1(3.3-5.1)	4.8(3.8-6.1)	5.0(4.1-6.1)
There is nothing to eat	3.8(2.9-4.9)	3.6(2.9-4.5)	3.1(2.5-4.0)	4.1(3.2-5.3)	4.3(3.5-5.3)
Other	2.3(1.7-3.2)	3.4(2.7-4.2)	3.0(3.4-3.9)	4.3(3.3-4.5)	3.5(2.8-4.5)

Note: responses do not add up to 100% because students could select multiple responses.

Students were asked about the number of servings of each food group they had consumed the previous day. For teens, the Canada Food Guide recommends 7-8 servings of fruits and vegetables per day, 6-8 servings of grain products, 3-4 servings of milk and alternatives, and 2-3 servings of meat and alternatives.<sup>6</sup>

Overall in 2016/17, 1% of students in grades 9-12 met the recommended daily number of servings for all four food groups (Table 13). This low proportion is largely due to the fact that very few students met the guidelines for fruits and vegetables and for grain products (Figure 10). Only 3.4% of students got the recommended number of servings for fruits and vegetables, and 5.5% for grain products. These nutritional habits are consistent in each grade. Over time the proportion of students meeting the recommended number of servings of milk and meat products decreased, while grains and fruits and vegetables remained constant (Figure 11).

Table 13. Proportion of students meeting guidelines for all four food groups by year, NWHU, grades 9-12, 2012/13-2016/17

<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
0.7(0.4-1.3)	1.6(1.2-2.3)	1.6(1.1-2.3)	1.1(0.7-1.9)	1.3(0.9-2.0)

<sup>6</sup> Health Canada. (2007). *How Much Food You Need Every Day*. Retrieved from <http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/basics-base/quantit-eng.php>

Figure 10. Proportion of students who meet the recommended daily number of servings in each of the four food groups by sex, NWHU, grades 9-12, 2016/17

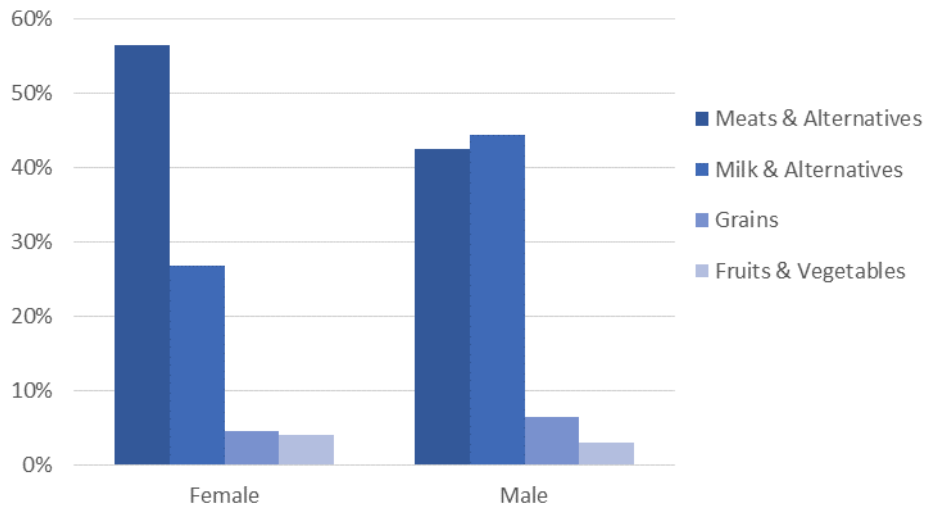
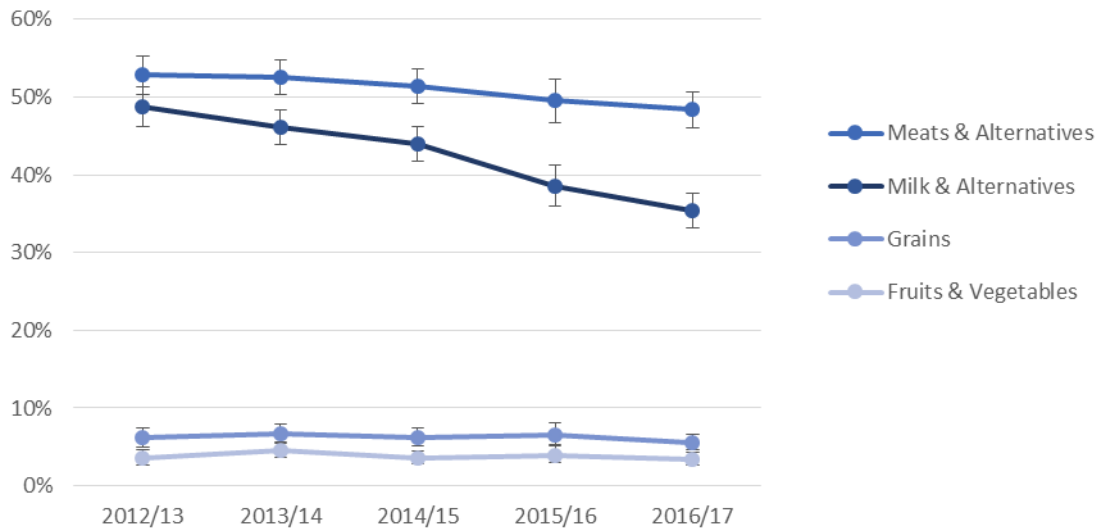


Figure 11. Proportion of students who meet the recommended daily number of servings in each of the four food groups over time, NWHU, grades 9-12, 2012/13-2016/17



According to a 2017 study of Canadian Community Health Survey (CCHS) data, 21% of Canadians meet or exceeded the recommended number of daily servings for fruits and

vegetables<sup>7</sup>. This is significantly higher than the 3.4% for high school students in the NWHU area. As these results rely on self-reported estimates, it is always difficult to assess the accuracy, but efforts were made to ensure that students had adequate information to accurately estimate their food intake while completing the survey.

### Experience with smoking

In 2016/17, 50% of students reported that had tried smoking at some time in the past. The proportion of students who smoked increased as grade level increased with 35% (95%CI 31-39) of grade 9 students reporting having tried smoking compared to 63% (95%CI 57-67) of grade 12 (Figure 12). This proportion was consistent over time (Table 14).

Figure 12. Proportion of students by smoking status and grade, NWHU, grade 9-12, 2016/17

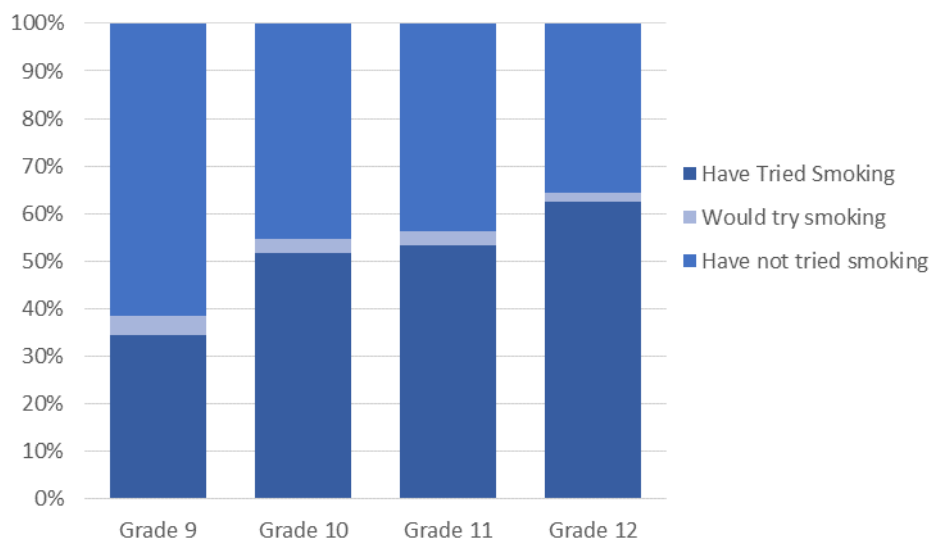


Table 14. Proportion of students who have tried smoking by year, NWHU, grade9-12, 2012/13-2016/17

<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
44.8(42.3-47.3)	45.8(43.6-48.0)	48.9(46.7-51.2)	48.0(45.3-50.7)	49.5(47.2-51.7)

In 2016/17, 32% students reported smoking cigarettes and/or using alternative smoking/tobacco products<sup>8</sup> in the last 30 days. While in past years a greater proportion of males reported smoking, in 2016/17 males (33%, 95% CI: 30-36) and females (30%, 95% CI: 27-33) were

<sup>7</sup> Krueger, H., Koot, J., Andres, E (2017). The economic benefits of fruit and vegetable consumption in Canada. *Can J Public Health*, 108(2). Retrieved from <http://journal.cpha.ca/index.php/cjph/article/view/5721/3606>

<sup>8</sup> Cigarillos, cigars, e-cigarettes, smokeless tobacco, and using a hookah to smoke tobacco or shisha

equally likely report smoking in the last 30 days (Figure 13). The proportion of smokers overall increased significantly over the five year time period (Table 15).

Figure 13. Proportion of students reported smoking cigarettes and/or using alternative smoking/tobacco products<sup>6</sup> in the last 30 days by year, NWHU, grades 9-12, 2012/13-2016/17

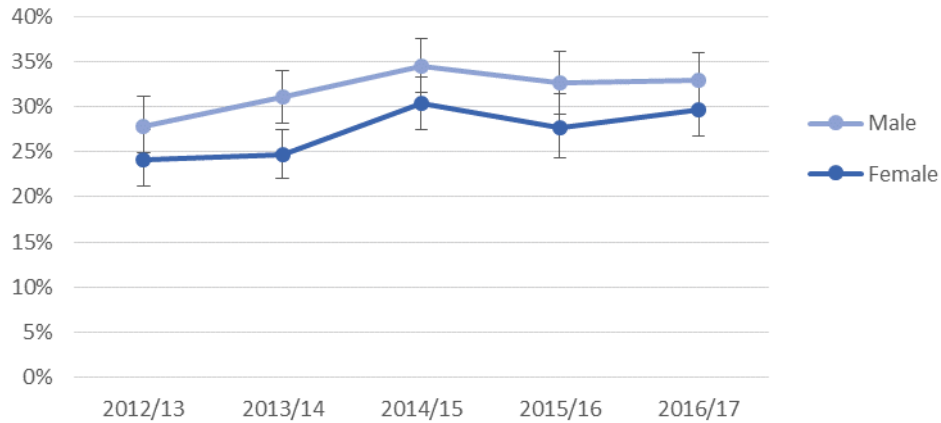


Table 15. Proportion who have smoked or used alternative tobacco product in the past 30 days by year, NWHU, grade9-12, 2012/13-2016/17

<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
26.0(23.9-28.2)	27.8(25.9-29.8)	32.4(30.4-34.5)	30.0(27.6-32.6)	31.5(29.5-33.6)

The most commonly used products were cigarettes (24%) and e-cigarettes (13%; Figure 14). While males and females were equally as likely to report smoking cigarettes, males more commonly reported smoking e-cigarettes (17%; 95CI 15-19) when compared to females (9%; 95%CI 4-11). Over time the proportion of students using cigarettes and e-cigarettes increased (Table 16).

Students were asked about how often they smoked cigarettes specifically. Of the 463 students who reported smoking cigarettes in the last 30 days, 33% reported smoking them every day (Figure 15).

Figure 14. Proportion of all students who used cigarettes or alternative products in the last 30 days by type of product and sex, NWHU, grades 9-12, 2016/17

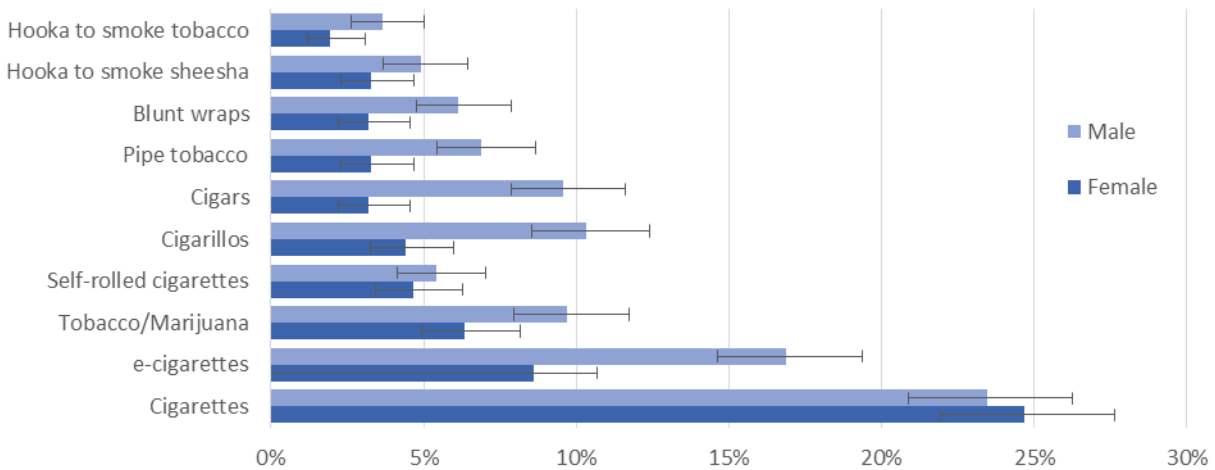
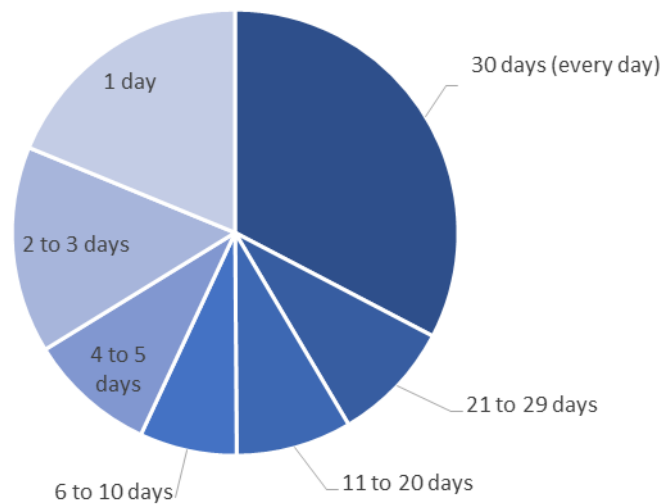


Table 16. Proportion of all students using cigarettes or alternative products in the last 30 days by type of product and year, NWHU, grades 9-12, 2012/13-2016/17

	<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
Cigarettes	19.2(17.3-21.3)	19.9(18.2-21.7)	24.2(22.3-26.1)	22.7(20.5-25.0)	24.2(22.3-26.2)
Pipe Tobacco	2.9(2.1-3.8)	4.4(3.6-5.4)	5.3(4.3-6.3)	3.3(2.5-4.5)	5.2(4.3-6.3)
Cigarillos or little cigars	8.1(6.9-9.6)	7.6(6.5-8.8)	9.4(8.2-10.8)	7.9(6.6-9.5)	7.4(6.3-8.7)
Cigars	5.4(4.4-6.7)	6.3(5.3-7.5)	7.9(6.8-9.2)	5.9(4.7-7.3)	6.5(5.5-7.7)
Rolled-your-own cigarettes (tobacco)	3.3(2.5-4.3)	5.0(4.2-6.1)	5.2(4.3-6.3)	4.5(3.5-5.7)	5.0(4.4-6.1)
Loose tobacco with marijuana	5.3(4.3-6.6)	7.4(6.4-8.7)	8.7(7.5-10.1)	9.7(8.2-11.5)	8.0(6.9-9.3)
Hooka to smoke tobacco	1.0(0.6-1.7)	2.4(1.9-3.2)	3.1(2.5-4.1)	3.0(2.2-4.0)	2.8(2.2-3.7)
Hooka to smoke sheesha	3.3(2.5-4.3)	4.5(3.7-5.5)	4.8(3.9-5.8)	4.5(3.5-5.7)	4.1(3.3-5.1)
Blunt wraps	2.6(1.9-3.5)	4.2(3.4-5.2)	4.7(3.9-5.8)	4.9(3.8-6.2)	4.7(3.9-5.8)
e-Cigarettes	Not asked	9.0(7.8-10.3)	11.5(10.2-13.0)	11.3(9.7-13.1)	12.8(11.3-14.4)

Figure 15. Proportion of students who reported smoking cigarettes by frequency of smoking, NWHU, grades 9-12, 2016/17



Of the 1,298 students in 2016/17 who did not report smoking in the last 30 days, 25% had tried smoking in the past and 4% reported they might try smoking cigarettes in the future, and 8% reported they thought they would smoke a cigarette during the next year. Peer pressure was not reported to be a factor for most students as 92% indicated they would not smoke a cigarette, if it were offered to them by one of their best friends.

In 2016/17, 9% of students reported using smokeless tobacco (chewing tobacco, pinch, snuff, or snus) this increased from 5% in 2012/13 (Table 17). Males (14%; 95%CI 12-16) were more likely to use smokeless tobacco than females (4%; 95%CI 3-5). Proportions were relatively stable across grades. Three percent of students reported using nicotine replacement products (gum, patches, lozenges, or inhalers). This was consistent across sex, grade level and time.

Table 17. Proportion of students using smokeless tobacco and nicotine replacement products by year, NWHU, grades 9-12, 2012/13-2016/17

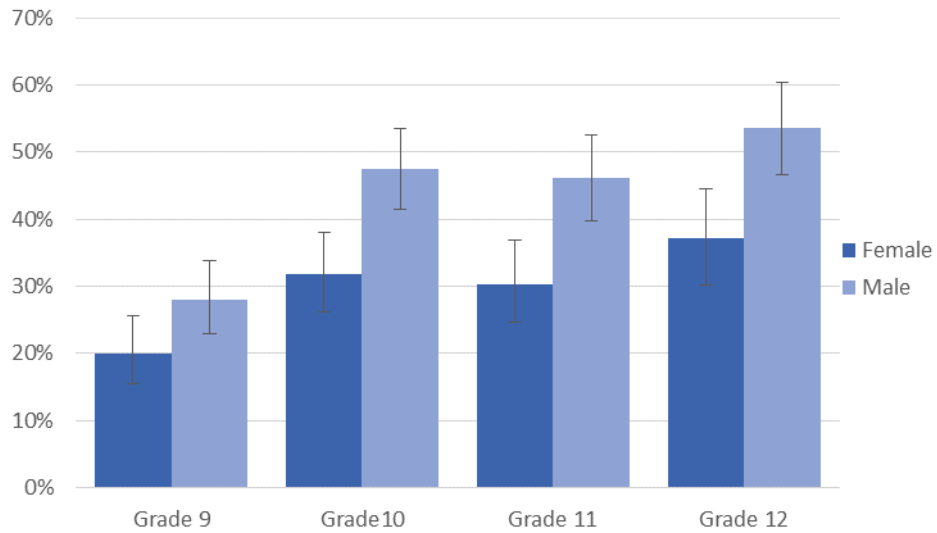
	<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
Smokeless tobacco	5.0(4.0-6.2)	7.4(6.4-8.7)	6.9(5.9-8.1)	6.2(5.0-7.7)	9.0(7.8-10.3)
Nicotine replacement products	1.4(0.9-2.1)	2.0(1.4-2.7)	1.7(1.2-2.4)	1.8(1.2-2.7)	2.5(1.9-3.3)

Thirty-five percent of students in 2016/17 reported they had tried e-cigarettes sometime in the past. Males and students in higher grades were more likely to report having tried them (Figure 16). The majority of students (71%) reported doing so because of curiosity. This question was



only asked in 2015/16 and 2016/17 and the proportions did not differ across the two time periods.

Figure 16. Proportion of students who have ever tried e-cigarettes by grade and sex, NWHU, grades 9-12, 2016/17



### Alcohol and Marijuana Use

Students were asked about their habits with regards to alcohol and marijuana use. Twenty-two percent of students in 2016/17 reported they have never consumed alcohol. Males and students in lower grades were more likely to report never having consumed alcohol (Figure 17). This proportion increased over time, from 17% in 2012/13 to 22% in 2016/17 (Table 18).

Figure 17. Proportion of students who have never consumed alcohol by grade and sex, NWHU, grades 9-12, 2016/17

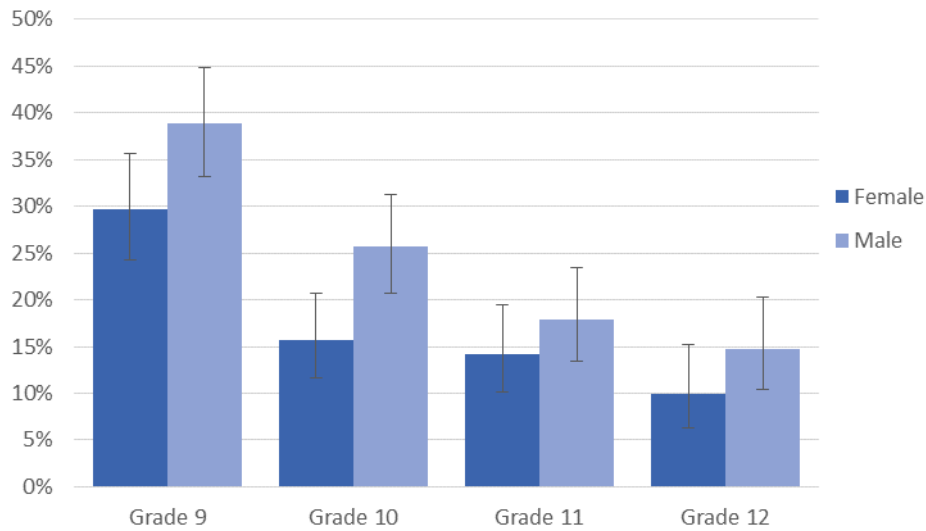


Table 18. Proportion of students who have never consumed alcohol by year, NWHU, grades 9-12, 2012/13-2016/17

<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
17.3(15.5-19.3)	18.8(17.1-20.6)	21.1(19.3-23.0)	22.2(20.0-24.5)	22.2(20.4-24.2)

Of students who reported drinking alcohol in the past, 66% of students drank alcohol at least once a month or more in 2016/17. As expected, frequency of alcohol consumption increased with increasing grade. About a quarter of grade 12 students drank alcohol at least once a week, with 15% reporting that they had consumed alcohol 2 or 3 times a week or more in the past 12 months (Figure 18). This trend was consistent over time (Table 19).

Figure 18. Students' frequency of alcohol consumption\* in the past 12 months by grade, NWHU, 2015/16

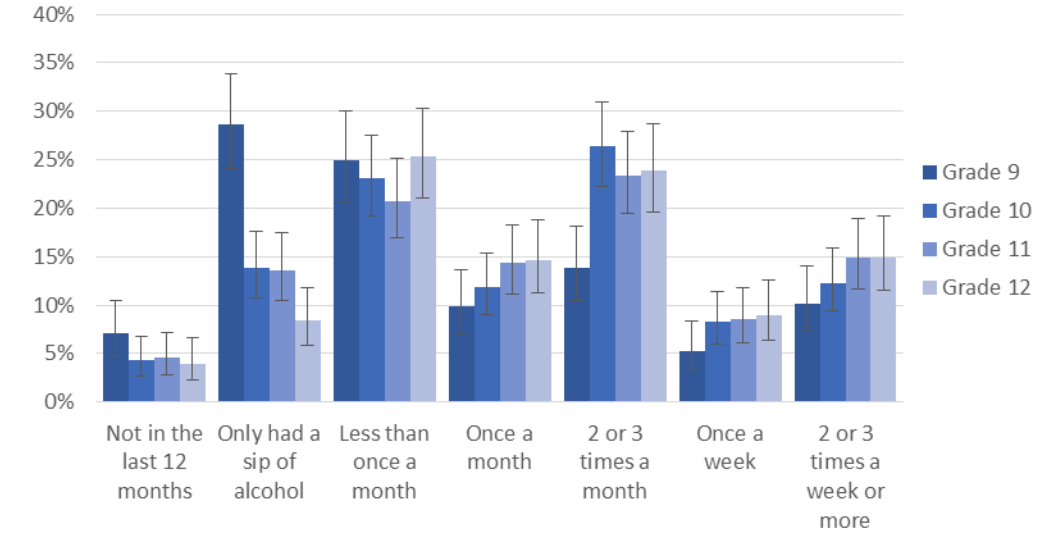


Table 19. Students' frequency of alcohol consumption in the past 12 months, among students who reported consuming alcohol by year, NWHU, grades 9-12, 2012/13-2016/17

	2012/13 % (95% CI)	2013/14 % (95% CI)	2014/15 % (95% CI)	2015/16 % (95% CI)	2016/17 % (95% CI)
Not in the last 12 months	4.3 (3.3-5.6)	6.3 (5.2-7.6)	7.9 (6.6-9.4)	7.4 (5.9-9.2)	4.9 (3.9-6.1)
Only a sip	18.7 (16.6-20.9)	15.8 (14.1-17.7)	14.2 (12.5-16.1)	13.5 (11.6-15.8)	15.8 (14.0-17.8)
Less than once a month	25.3 (23.0-27.9)	23.1(21.1-25.2)	25.4 (23.2-27.6)	23.4 (20.9-26.2)	23.3 (21.3-25.6)
Once a month	12.6 (10.9-14.6)	12.9 (11.4-14.7)	11.9 (10.3-13.6)	13.9 (11.9-16.2)	12.9 (11.3-14.7)
2 or 3 times a month	21.9 (19.7-24.3)	23.0 (21.0-25.1)	21.9 (19.8-24.0)	21.0 (18.5-23.6)	22.2 (20.1-24.4)
Once a week	7.5 (6.2-9.1)	8.3 (7.0-9.7)	7.6 (6.3-9.0)	8.1 (6.6-10.0)	7.8 (6.6-9.3)
2 to 3 times a week	9.6 (8.1-11.4)	10.6 (9.2-12.2)	11.2 (9.7-12.9)	12.5 (10.6-14.7)	13.0 (11.4-14.9)

Students were asked about binge drinking (consuming 5 or more drinks on one occasion). In 2016/17, 73% of students claimed they had done this at least once or more in the past 12 months (Figure 19). Slightly over a third (34%) had done this at least once a month. This trend has not changed over time (Table 20). Seventeen percent of students reported binge drinking least twice a week. These students were more likely to be male (21%; 95% CI 19-25) than female (12%; 95%CI 12-15).

Figure 19. Number of times students have drunk 5 or more drinks one occasion in the past 12 months among students who reported consuming alcohol by grade, NWHU, 2015/16

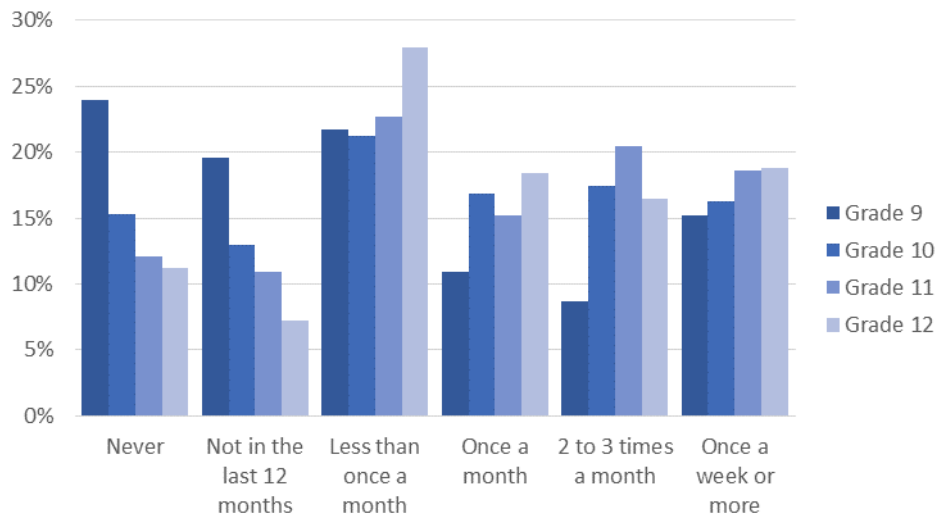


Table 20. Number of times students have drunk 5 or more drinks one occasion in the past 12 months among students who reported consuming alcohol by year, NWHU, 2012/13-2015/16

	2012/13 % (95% CI)	2013/14 % (95% CI)	2014/15 % (95% CI)	2015/16 % (95% CI)	2016/17 % (95% CI)
Never	11.3 (9.5-13.4)	13.4 (11.7-15.3)	13.3 (11.5-15.3)	15.9 (13.6-18.5)	15.0 (13.1-17.2)
Not in the last 12 months	12.9 (11.0-15.1)	12.7 (10.0-14.6)	12.6 (10.9-14.5)	11.3 (9.4-13.6)	12.2 (10.5-14.2)
Less than once a month	26.8 (24.1-29.7)	24.6 (22.4-27.0)	25.3 (23.0-27.8)	26.2 (23.3-29.2)	23.4 (21.1-25.9)
Once a month	14.1 (12.1-16.4)	15.0 (13.2-17.0)	16.0 (14.1-18.1)	15.5 (12.3-17.0)	15.8 (13.8-18.0)
2 to 3 times a month	21.3 (18.8-23.9)	20.1 (18.1-22.4)	18.9 (16.8-21.1)	16.9 (14.6-19.6)	16.3 (14.3-18.5)
Once a week or more	13.6 (11.6-15.9)	14.1 (12.4-16.1)	14.0 (12.2-16.0)	15.2 (12.9-17.8)	17.2 (15.2-19.4)

Students were also asked about their habits with regard to mixing alcohol with energy drinks (such as Red Bull, Monster, etc.). Seventeen percent of students in 2016/17 claimed they had done this in the past year, this was significantly lower than in 2012/13 (Figure 20). The decrease was generally observed across all grades with the largest decrease among grade 12 students (Figure 21).

Figure 20. Proportion of students who have mixed alcohol with energy drink in the past 12 months by year, NWHU, grades 9-12, 2012/13-2016/17

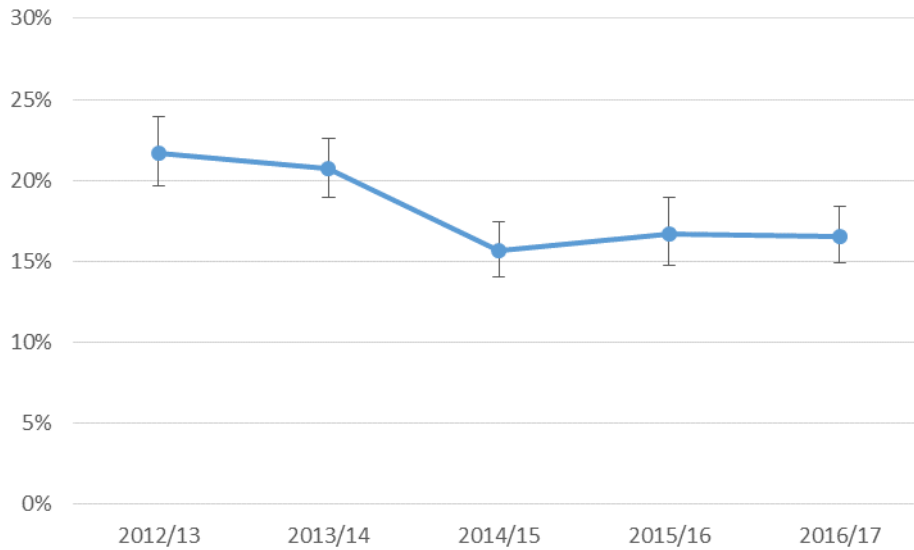
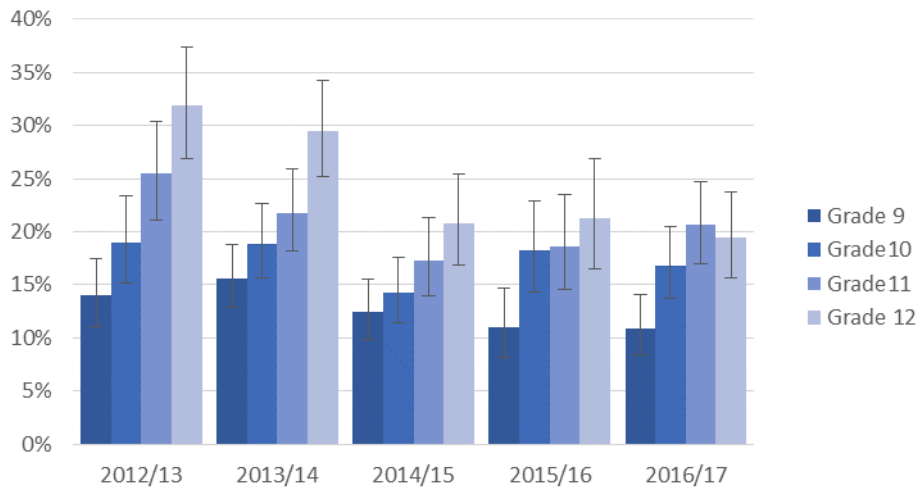


Figure 21. Proportion of students who have mixed alcohol with energy drink in the past 12 months by grade and year, NWHU, grades 9-12, 2012/13-2016/17



When asked about marijuana usage, around 60% reported they had never used it. The proportion of students who had never used marijuana decreased with increasing grade (Figure 22). This trend was consistent over time (Table 21). Of the 40% of students who reported using marijuana in the past, 60% used it at least once per month. Almost 20% of students who use marijuana reported using it every day. About 1 in 5 students smoked once a week or more

regardless of grade, with male students being more likely to report this frequency of use (Figure 23, Table 22).

Figure 22. Proportion of students who have never used marijuana by grade and sex, NWHU, 2016/17

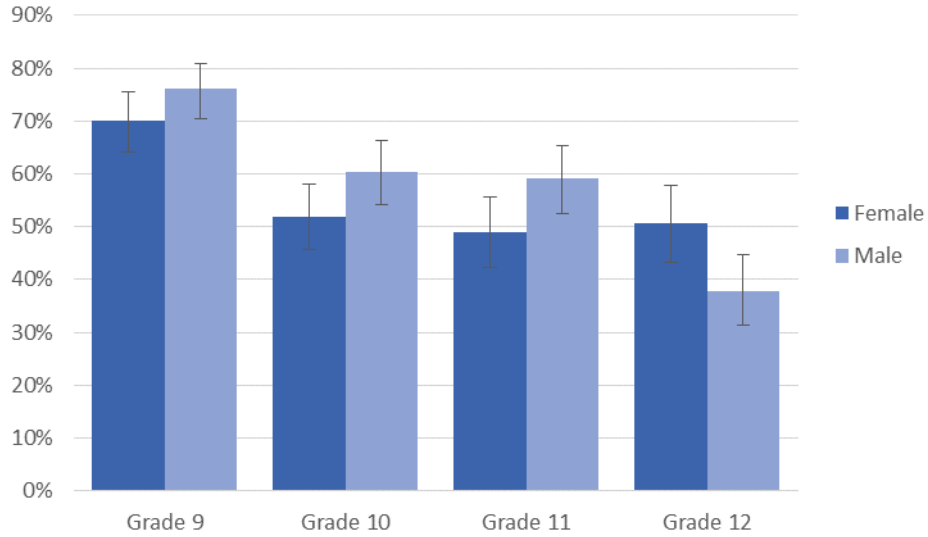


Table 21. Proportion of students who have never consumed marijuana by year, NWHU, grades 9-12, 2012/13-2016/17

<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
59.4 (56.9-61.9)	55.1 (52.9-57.3)	56.2 (54.0-58.5)	58.2 (55.4-60.8)	57.7 (55.4-60.0)

Figure 23. Frequency of marijuana use among students who have used marijuana by sex, NWHU, grades 9-12, 2016/17

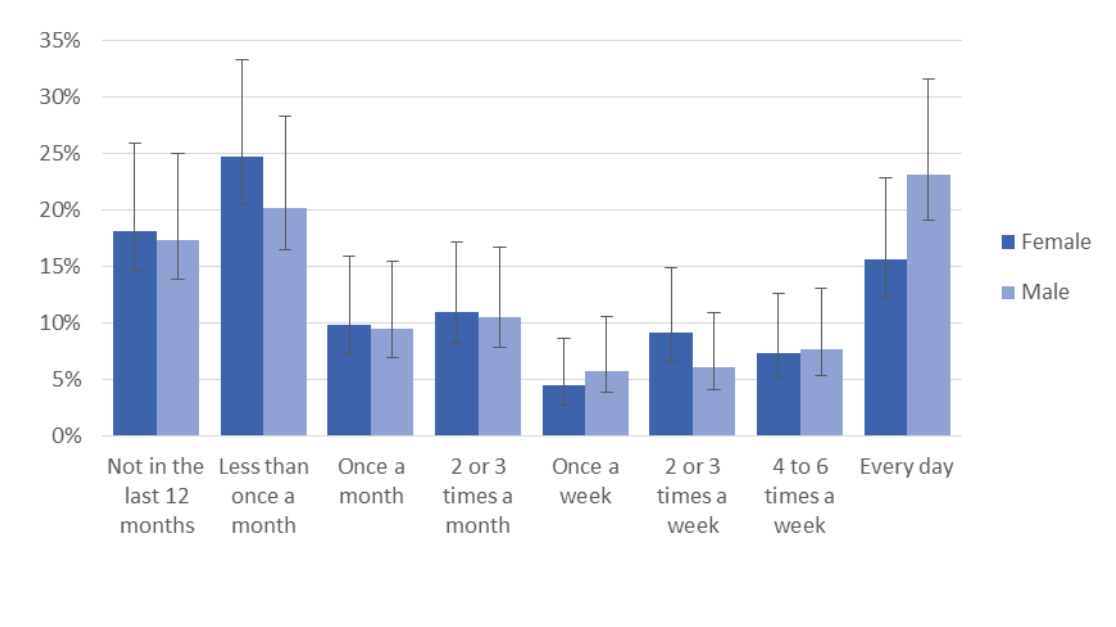


Table 22. Frequency of marijuana use among students who have used marijuana by year, NWHU, grades 9-12, 2012/13-2016/17

	2012/13 % (95% CI)	2013/14 % (95% CI)	2014/15 % (95% CI)	2015/16 % (95% CI)	2016/17 % (95% CI)
Not in the last 12 months	16.7 (13.9-19.9)	18.0 (15.6-20.7)	18.7 (16.2-21.5)	19.7 (16.5-23.3)	18.0 (15.5-20.9)
Less than once a month	25.4 (22.1-29.0)	23.3 (20.6-26.2)	25.5 (22.6-28.6)	23.6 (20.2-27.4)	22.5 (19.7-25.6)
Once a month	8.5 (6.6-11.1)	8.3 (6.7-10.3)	8.4 (6.7-10.5)	8.4 (6.3-11.1)	9.6 (7.7-11.8)
2 to 3 times a month	10.6 (8.3-13.3)	11.2 (9.3-13.5)	9.6 (7.8-11.8)	10.3 (8.0-13.2)	10.6 (8.6-13.0)
Once a week	4.3 (2.9-6.2)	5.1 (3.8-6.7)	3.5 (2.5-5.0)	3.9 (2.6-6.0)	5.0 (3.7-6.8)
2 to 3 times a week	9.2 (7.2-11.8)	9.0 (7.3-11.1)	6.9 (5.4-8.9)	6.6 (4.7-9.0)	7.4 (5.8-9.5)
4 to 6 times a week	7.3 (5.4-9.6)	7.1 (5.6-9.0)	6.9 (5.4-8.9)	7.3 (5.4-9.8)	7.5 (5.9-9.6)
Every day	18.0 (15.1-21.2)	18.0 (15.6-20.7)	20.5 (17.9-23.4)	20.2 (17.0-23.9)	19.3 (16.7-22.2)

Students were asked about their perceptions of how easy it would be to obtain marijuana. In 2016/17, the majority (62%) reported it would be easy to obtain, this represents an increase over time (Figure 24). Students in higher grades were more likely to report it would be easy to obtain marijuana (Figure 18)

Figure 24. Proportion of students who reported it would be easy to obtain marijuana by year, NWHU, grades 9-12, 2012/13-2016/17

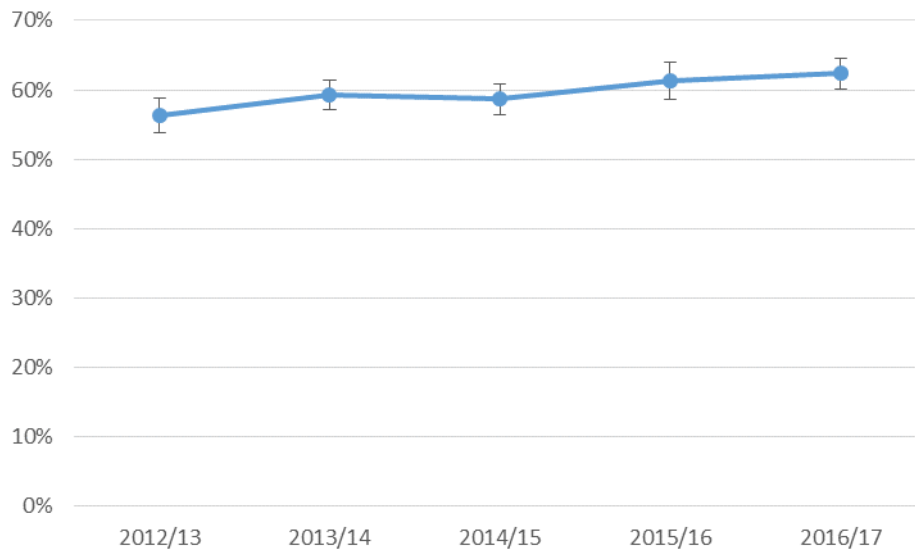
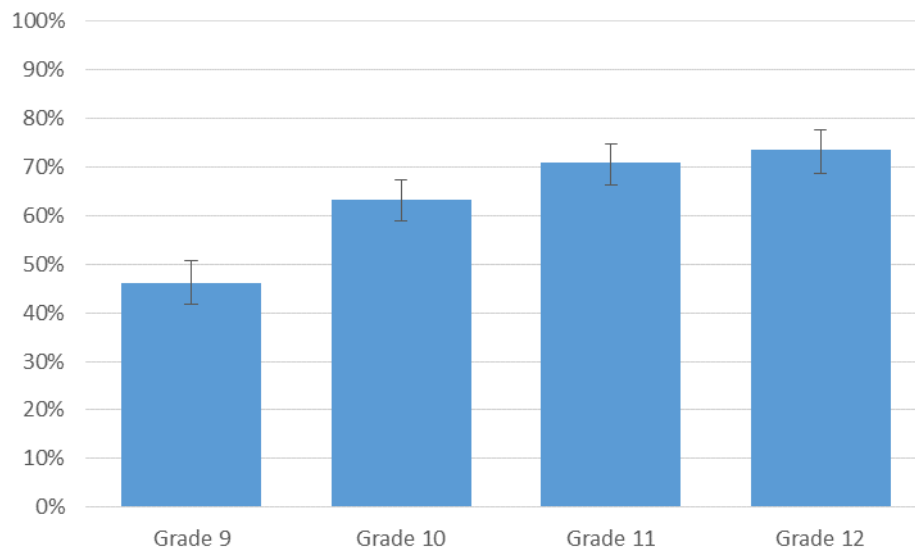


Figure 25. Proportion of students who reported it would be easy to obtain marijuana by grade, NWHU, grades 9-12, 2016/17



### School Environment

Students were also asked about the school setting and their feelings towards the school environment and personal interactions. Almost all students reported that getting good grades was important to them. Most students indicated that they felt safe and fairly treated at school a part of the school, that the teachers treat them fairly and that they felt safe. However, in



2016/17, 35% disagreed or strongly disagreed that they felt happy at school, 33% disagreed or strongly disagreed that they felt they were part of their school and 36% did not agree that they felt close to people at school (Figure 26). These trends were relatively stable over time (Table 23).

Figure 26. Frequency of student's feelings regarding their school environment, 2016/17

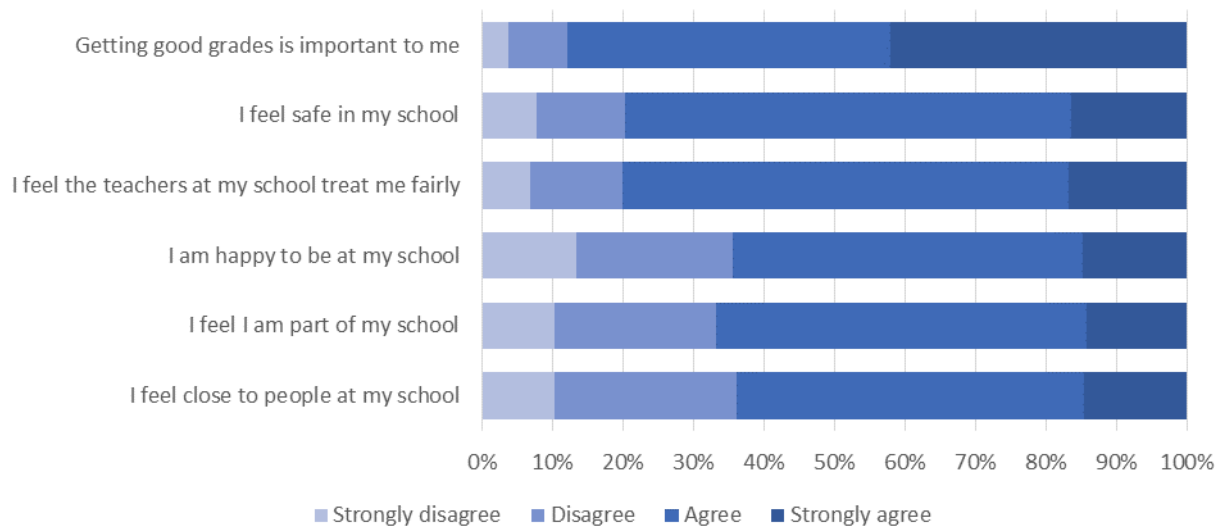


Table 23. Proportion of student with positive feelings (agree or strongly agree) regarding their school environment by year, NWHU, grades 9-12, 2012/13-2016/17

	2012/13 % (95% CI)	2013/14 % (95% CI)	2014/15 % (95% CI)	2015/16 % (95% CI)	2016/17 % (95% CI)
I feel close to people at my school	72.0 (69.7-74.2)	66.1 (64.0-68.2)	67.0 (64.0-68.2)	67.1 (64.5-69.1)	63.9 (61.6-66.1)
I feel I am a part of my school	72.4 (70.0-74.6)	67.9 (65.9-70.0)	68.2 (66.0-70.2)	67.8 (65.2-70.4)	66.8 (64.5-68.9)
I am happy to be at my school	69.2 (66.8-71.5)	66.8 (64.7-68.8)	66.7 (64.6-68.8)	68.1 (65.5-70.7)	64.5 (62.3-66.7)
I feel the teachers at my school treat me fairly	83.8 (81.8-85.6)	81.3 (79.5-83.0)	81.4 (79.5-83.1)	78.5 (76.2-80.7)	80.1 (78.2-81.9)
I feel safe at school	82.8 (80.8-84.7)	81.4 (79.6-83.1)	82.5 (80.7-84.1)	78.2 (75.8-80.4)	79.8 (77.9-81.6)
Getting good grades is important to me	90.4 (88.9-91.9)	89.5 (88.0-90.8)	88.5 (87.0-89.9)	88.4 (86.5-90.1)	87.9 (86.3-89.3)

About a quarter (24%) of students in 2016/17 reported being bullied at some point in the past 30 days. More girls reported being bullied than boys, at 26% and 22% respectively. There were no notable differences between grades. These trends were consistent over time (Table 24). Of the students who reported being bullied, 18% (n=78) indicated they had been physically attacked by other students, 69% (n=304) indicated they had been verbally attacked, 31% (n=137) said they had been the target of a cyber-attack(s) and 19% (n=82) said someone stole or damaged their things.

Table 24. Proportion of students who were bullied in the last 30 days by year, NWHU, grades 9-12, 2012/13-2016/17

<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
26.6 (24.5-28.9)	23.0 (21.2-24.9)	23.2 (21.3-25.2)	23.7 (21.4-26.1)	23.9 (22.0-25.9)

In 2016/17, 12% of students reported bullying other students at some point in the past 30 days. This proportion was consistent over time (Table 25). Bullying was slightly more common amongst boys; 14% reported bullying other students compared with 9% for females. Among students who were bullied, the most common type reported was verbal attacks (i.e. teasing, etc.), with 73% (n=158), followed by physical attacks at 24% (n=53). Cyber-attacks (18%; n=40) and stealing (14%; n=31) were less common.

Table 25. Proportion of students who bullied others in the last 30 days by year, NWHU, grades 9-12, 2012/13-2016/17

<b>2012/13</b> % (95% CI)	<b>2013/14</b> % (95% CI)	<b>2014/15</b> % (95% CI)	<b>2015/16</b> % (95% CI)	<b>2016/17</b> % (95% CI)
14.8 (13.1-16.7)	12.1 (10.7-13.6)	12.6 (11.2-14.2)	12.3 (10.6-14.2)	11.8 (10.4-13.3)

Students were asked how supportive their school was in terms of physical activity, access to healthy foods, stopping bullying, tobacco cessation, and drugs and alcohol cessation. In 2016/17, the majority of students felt that their school was supportive of physical activity (90%) and access to healthy foods (74%), and around two-thirds (68%) felt their school was supportive with regard to stopping bullying. Less students felt there was support available for tobacco (51%) and alcohol/drug cessation (53%; Figure 27). Over time, the proportion of students reporting getting support for tobacco/drugs/alcohol cessation or resistance increased, but the proportion reporting access to healthy food decreased (Table 26).

Figure 27. Frequency of student's feelings regarding support received from their school, NWHU, grades 9-12, 2016/17

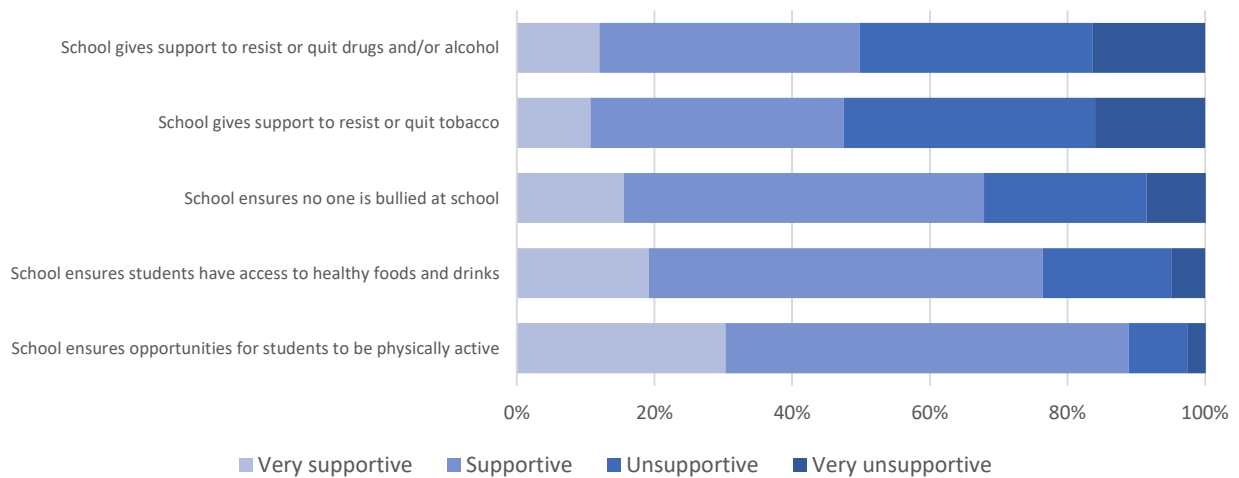


Table 26. Proportion of students with positive feelings (supportive and very supportive) regarding support received from their school, NWHU, grades 9-12, 2012/13-2016/17

	2012/13 % (95% CI)	2013/14 % (95% CI)	2014/15 % (95% CI)	2015/16 % (95% CI)	2016/17 % (95% CI)
School ensures opportunities for students to be physically active	86.2 (84.4-87.9)	89.0 (87.6-90.3)	88.9 (87.4-90.2)	90.3 (88.5-91.8)	89.7 (88.2-91.0)
School ensures students have access to healthy food	80.7 (78.6-82.7)	77.1 (75.2-78.9)	72.5 (70.4-74.5)	79.6 (77.3-81.7)	73.6 (71.5-75.6)
School ensures no one is bullied at school	66.9 (64.5-69.3)	67.5 (65.4-69.5)	67.5 (65.4-69.6)	68.9 (66.2-71.4)	68.4 (66.3-70.6)
School gives support to resist or quit tobacco	42.8 (40.3-45.4)	45.2 (43.0-47.4)	47.8 (45.5-50.0)	51.8 (49.0-54.6)	50.7 (48.4-53.0)
School gives support to resist or quit drugs and/or alcohol	45.1 (42.6-47.7)	48.0 (45.8-50.2)	49.8 (47.5-52.0)	53.2 (50.4-56.0)	53.4 (51.0-55.6)

## DISCUSSION

According to our results, 50% of students are getting 60 minutes of physical activity every day of the week. Although as previously mentioned, this figure may be inflated due to misconceptions about physical activity levels and the fact that this figure relies on self-reporting. This proportion has stayed consistent over the last five years.

One of the most surprising results from the survey is the fact that only 1.3% of students who were surveyed met the nutritional guidelines for all 4 food groups as outlined in the food guide, although an increase over time was observed from 0.7%. This low percentage was largely due to very few students meeting the guidelines for fruits and vegetables as well as grain products. Increasing levels of fruits and vegetable intake amongst youth continues to be a key priority.

Overall, students responded quite positively to the questions about their school environment. Most students felt that they were a part of their school, and in general felt positive about other aspects of their schools' environment. Increases were observed in the proportion of students who felt their school provided support to resist or quit tobacco, drug and/or alcohol. Despite these positive views, bullying amongst students is quite prevalent, with over a quarter of girls and about a fifth of boys reporting that they had experienced bullying in the past month. These proportions did not change over time.

Another interesting finding from the survey was students' perceptions about their weight, and the differences that were seen between males and females. Significantly more males than females considered themselves to be underweight, and conversely, more females than males considered themselves to be overweight. Overall, students' perceptions of their weight do not accurately reflect the patterns of their actual BMI weight categories, and these results may be indicative of current societal influences on body image.

One area of concern is the frequency of alcohol, tobacco and marijuana use amongst students, all of which increase significantly with each grade. Over time, more students reported abstaining from alcohol consumption. Although, among those who did drink alcohol, 17% reported binge drinking at least twice a week. This is a slight (not significant) increase over time from 14% in 2012/13. Similarly, in 2016/17 42% of students had never tried marijuana, this was consistent over time. Of those who had smoked marijuana, about 1 out of 10 students reported smoking marijuana on a daily basis, and 60% of use it once a month. With regard to tobacco use, one half of students had tried smoking. Of those who did smoke, cigarette and e-cigarette use were most common and their use increased over time. This kind of information brings into focus just how common the use of these substances is amongst youth in the area.

## CONCLUSION

This survey has provided us with useful health status and health behaviour data for high school-aged youth in our catchment area, which has historically been one of the largest data gaps when we are trying to track trends in the health of our population. The survey has given us some key baseline data that can be used to monitor our progress on strategic objectives.

The results of this survey provide valuable information that will help to inform our program planning over the next few years, and has allowed us to identify some priority areas when it comes to youth health status and behaviours.