Sexual attraction and substance use
Findings from the Youth Insights Survey 2016-2018

This research was undertaken to better understand young people in the Rainbow community. This research sought to identify differences of risky behaviour engagement between Rainbow and non-Rainbow young people.

Rainbow is an umbrella term, which includes the diverse range of sexual attractions, sexual orientations, and gender and sex variants.[1] Data used in this report is based on the Youth Insights Survey (YIS), which asks about sexual attraction. Therefore in this report we use the terms heterosexual, neither/unsure, and LGB (Lesbian, Gay, and Bisexual) rather than Rainbow.[2]

Key points:

- Young people who identify as LGB experience higher rates of some substance use and multi-substance use than young people who identify as heterosexual.

- Young people who are attracted to neither gender or are unsure of their sexual attraction (Neither/Unsure) experience lower rates of substance use compared to heterosexual young people.

- These findings are consistent with previous sexual orientation research, with LGB youth reporting higher rates of some past-month substance use and multi-substance use.

Adolescence is a developmental period of exploration for both sexuality and substance use (Lucassen et al., 2014). Young people with diverse sexual orientations (non-heterosexual attraction) are disproportionately affected by substance use. These disparities increase over the transition into adulthood (Dermody et al., 2014; Marshal et al., 2009).

An international study showed that the odds of youth with diverse sexual orientations using substances was three times greater than among heterosexual youth (Marshal et al., 2008). Studies from Aotearoa New Zealand show similar results (Lucassen et al., 2014; Surace et al., 2019).

This analysis used pooled data from the 2016 and 2018 YIS to explore the relationship between sexual attraction and substance use in Year 10 students (predominately aged 14 to 15 years). It aims to identify any differences in risky behaviour.

One in 20 Year 10 students identified as LGB

The majority of Year 10 students (young people) identified as *opposite sex-attracted* (heterosexual) (88%), with 5% identifying as *same/both sex-attracted* (LGB) and 6% being *neither sex-attracted/unsure* of their sexual attraction (neither/unsure).

A higher proportion of females than males reported being LGB (7% versus 3%).

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[1] See rainbowmentalhealth.nz for more information on the use and definition of the term "Rainbow".
[2] *Gender diverse* was offered as an option for gender for the first time in 2018. See methodology section for more information.

LGB young people reported higher levels of some substance use

Young people reported how often they drank alcohol, heavily drank alcohol (more than five drinks in less than four hours), used cannabis, and smoked cigarettes in the past month. Overall, the majority of young people did not engage in past-month substance use (67%). For those who did, alcohol was the most frequently used substance, Figure 1.

The use of cannabis and cigarette smoking was significantly higher for LGB compared to heterosexual young people, after adjusting for demographics[3].

Neither/unsure young people had mostly low levels of past-month substance use. Reported use of both drinking and heavy drinking was significantly lower for neither/unsure compared to heterosexual young people.

Figure 1 Young peoples' reported past-month substance use by sexual attraction
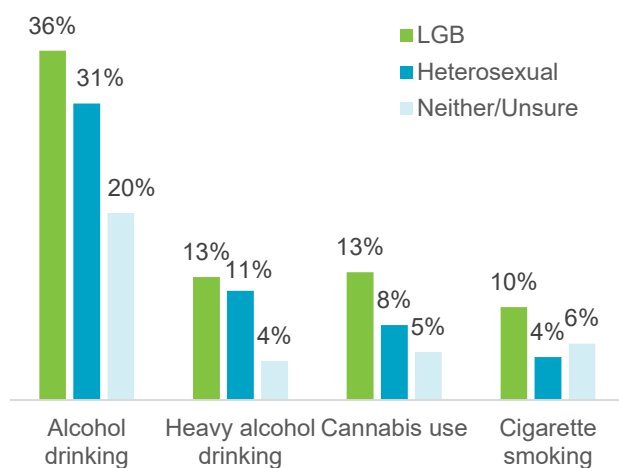
Base: *n*=5,732 All respondents (2016-2018)

Smoking and cannabis use was higher among young LGB females

Young LGB females were 2.3 times more likely to report past-month smoking and twice as likely to report past-month cannabis use compared to young heterosexual females.

Young LGB males showed no differences in any individual past-month substance use compared to heterosexual males, Table 1 (page 4).

Neither/unsure young males were 47% less likely to report drinking compared to heterosexual young males.

Neither/unsure young females were 53% less likely to report heavy drinking compared to heterosexual young females.
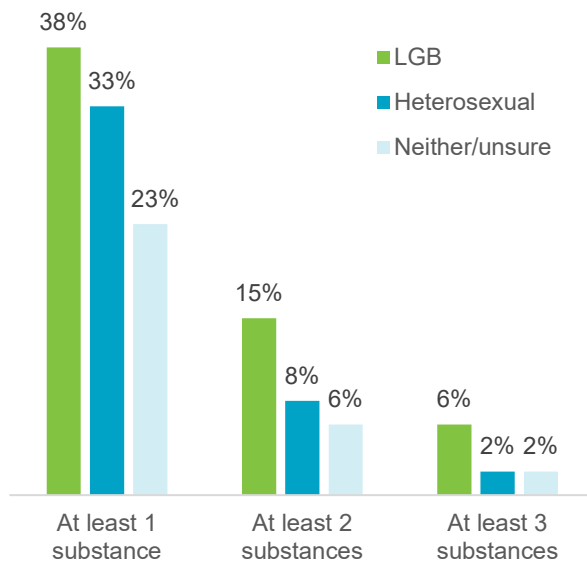
Multi-substance use was higher among LGB young people

We explored the prevalence of the use of at least one type of substance (alcohol, cannabis, cigarettes) as well as the co-use of substances (at least two and all three substances) in young people. Results are shown in Figure 2.

LGB young people were more likely to use at least two substances (1.9 times) and use all three substances (2.8 times) in the past month compared to heterosexual young people.

Neither/unsure young people were 22% less likely to use at least one substance in the past month compared to heterosexual young people.

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[3] Comparisons between groups in this report were adjusted by gender, ethnicity and school decile group, see methodology section for more information.

Figure 2 Young peoples' reported past-month multi-substance use by sexual attraction

Base: *n*=5,732 All respondents (2016 – 2018)

Discussion

One in 20 (5%) Year 10 students identified as LGB and these young people were more likely to engage in cannabis and cigarette smoking than any other group. Multi-substance use was also highest among LGB youth.

This could potentially be related to higher substance use among young people experiencing romantic attraction. Greaves et al. (2017) found that a lack of attraction among young people was related to lower substance use, hypothesising that being in love or

experiencing romantic attraction was related to higher substance use.[4]

However, there are likely to be other factors influencing both sexual orientation and substance use, including level of maturity and peer influence. Substances are also often used to reduce stress, which can particularly be felt by minority groups who are more likely to face discrimination, bullying, and stigma. These factors reflect higher rates of mental distress in these communities (Jotanovic, 2019).

A recent qualitative study of alcohol use among Rainbow young people noted that Rainbow people are influenced by both New Zealand drinking norms, and Rainbow-specific drinking norms (Adams, et al, 2019). These drinking cultures continue for older youth, especially as many Rainbow-friendly spaces centre on alcohol and other drugs, eg, bars and clubs. This demonstrates the need for more Rainbow-friendly spaces that are free of substances, and tighter regulation to reduce how accessible and heavily promoted alcohol is to young people.

The higher levels of smoking and cannabis use among young LGB females highlights the need for tailored and culturally appropriate health promotion and quit smoking services. Greater recognition of the Rainbow community in research and service delivery could improve the appropriateness and effectiveness of these support services.

[4] It is important to note that while sexual attraction and romantic attraction are often connected and intertwined for people, they are separate concepts that may not overlap for others.

Table 1 Prevalence of past-month substance use by gender and sexual attraction, pooled 2016 – 2018 YIS

Gender, sexual attraction	Smoking	Cannabis	Drinking (any)	Heavy drinking
	% (95% Confidence interval)			
Male				
Heterosexual (R)	4.3 (3.3-5.3)	7.4 (6.1-8.7)	31.3 (29.1-33.5)	10.3 (8.9-11.6)
LGB	7.1 (0.5-13.8)	9.8 (2.4-17.2)	39.2 (27.3-51.0)	10.3 (3.2-17.3)
Neither/Unsure	6.1 (1.4-10.8)	5.4 (1.7-9.0)	13.0 (6.2-19.8)*	-
Female				
Heterosexual (R)	4.6 (3.7-5.6)	8.2 (6.9-9.6)	30.5 (28.3-32.8)	12.6 (11.1-14.1)
LGB	10.1 (5.5-14.7)**	14.9 (9.4-20.5)***	34.3 (26.4-42.1)	13.4 (8.1-18.7)
Neither/Unsure	5.2 (1.8-8.6)	4.3 (1.6-7.0)	22.9 (16.9-28.8)	5.2 (2.1-8.3)****

Notes: Grey line with (R) denotes the reference group that each group is being compared against.
      Dash (-) indicates data was suppressed due to insufficient sample size.
      * Neither/Unsure compared to Heterosexual drinking for males RR=0.53, t=-2.34, p=0.020
      ** LGB compared to Heterosexual smoking for females RR=2.32, t=3.30, p=0.001
      *** LGB compared to Heterosexual cannabis use for females RR=1.95, t=3.63, p<0.001
      **** Neither/Unsure compared to Heterosexual heavy drinking for females RR=0.47, t=-2.40, p=0.017

References

Adams, J., Asiasiga, L., and Neville, S. (2019). Drinking Cultures of Rainbow New Zealanders. Wellington: Health Promotion Agency.

Dermody, S. S., Marshal, M. P., Cheong, J., Burton, C., Hughes, T., Aranda, F., and Friedman, M. S. (2014). Longitudinal disparities of hazardous drinking between sexual minority and heterosexual individuals from adolescence to young adulthood. *Journal of Youth and Adolescence*, *43*(1), 30–39. https://doi.org/10.1007/s10964-013-9905-9

Greaves, L. M., Barlow, F. K., Lee, C., Matika, C. M., Wang, W., Lindsay, C. J., Case, C., Sengupta, N. K., Huang, Y., Cowie, L. J., Stronge, S., Storey, M., De Souza, L., Manuela, S., Hammond, M. D., Milojev, P., Townrow, C. S., Muriwai, E., Satherley, N., Fraser, G., Sibley, C. G. (2017). The Diversity and Prevalence of Sexual Orientation Self-Labels in a New Zealand National Sample. *Archives of Sexual Behavior, 46*(5), 1325–1336. https://doi.org/10.1007/s10508-016-0857-5Költő, A., Cosma, A., Young, H.,

Jotanovic, D.(2019). Hugs not Drugs (or both). *Matters of Substance, 30(2).* Accessed November 2020: https://www.drugfoundation.org.nz/matters-of-substance/july-2019/hugs-not-drugs-or-both/

Moreau, N., Pavlova, D., Tesler, R.,Nic Gabhainn, S. (2019). Romantic attraction and substance use in 15-year-old adolescents from eight European countries. *International Journal of Environmental Research and Public Health*, *16*(17), 3063. https://doi.org/10.3390/ijerph16173063

Lucassen, M.F.G., Clark, T. C., Moselen, E., Robinson, E.M., and The Adolescent Health Research Group. (2014). Youth'12 The Health and Wellbeing of Secondary School Students in New Zealand: Results for young people attracted to the same sex or both sexes. Auckland, NZ: The University of Auckland. https://www.fmhs.auckland.ac.nz/assets/fmhs/faculty/ahrg/docs/Youth'12%20Young%20People%20Attracted%20to%20the%20Same%20or%20Both%20Sexes%20Report.pdf

Marshal, M. P., Friedman, M. S., Stall, R., and Thompson, A. L. (2009). Individual trajectories of substance use in lesbian, gay and bisexual youth and heterosexual youth. *Addiction*, *104*(6), 974–981. https://doi.org/10.1111/j.1360-0443.2009.02531.x

Marshal, M. P., Friedman, M. S., Stall, R., King, K. M., Miles, J., Gold, M. A., Bukstein, O. G., and Morse, J. Q. (2008). Sexual orientation and adolescent substance use: a meta-analysis and methodological review. *Addiction (Abingdon, England)*, *103*(4), 546–556. https://doi.org/10.1111/j.1360-0443.2008.02149.x

Surace, A., Riordan, B. C., and Winter, T. (2019). Do New Zealand sexual minorities engage in more hazardous drinking than non-sexual minorities?. *Drug and Alcohol Review, 38*(5), 519–522. https://doi.org/10.1111/dar.12940

Citation

Methodology

The Youth Insights Survey (YIS) is a nationally representative survey of Year 10 students (predominantly 14 and 15-year-olds) in Aotearoa New Zealand, conducted every two years from 2006 to 2018. The survey used a two-stage cluster sample design, where schools were first randomly selected and then classes were selected within the school. To represent the Year 10 population, responses were weighted for each survey year according to the gender and ethnicity distribution of Year 10 students in Aotearoa New Zealand. The survey collected data on health-related behaviours, lifestyles, activities and connectedness to family and friends. A full description of the methodology and complete questionnaires for the YIS can be found at hpa.org.nz/our-work/research/publications.

This analysis used a pooled dataset from the 2016 and 2018 YIS. Over the 2016 to 2018 period, 5,732 Year 10 students participated in the survey, see Table 1.

Table 1 Sample characteristics of pooled 2016 - 2018 YIS

Demographic	Sample size (n)	Weighted %
Total	**5,732**	
Gender		
Male	2,758	50.3%
Female	2,901	48.5%
Gender diverse (2018 only)	30	0.01%
No response	43	0.01%
Sexual attraction		
Opposite sex attraction	5,001	88.0%
Same/both sex attraction (LGB)	301	5.0%
Neither/unsure sex attraction	342	6.0%
No response	88	1.5%
Age group		
13 years or younger	75	1.2%
14-years-old	4,473	78.5%
15-years-old	1,100	18.9%
16 years or older	42	1.0%
No response	42	1.0%

To conduct sexual minority research, the question: "Who are you sexually attracted to?" was asked with the following responses: *opposite sex* (heterosexual); *same sex* (gay/lesbian); *both sexes* (bisexual); *neither*; and *I am not sure* (unsure). Following the Youth2000 series discussion of sexual minority research, we combined *same* and *both* sex-attraction as well as *neither* and *not sure* (see Lucassen et al., 2014). For asking about gender ("Are you..?"), the answer option of *gender diverse* was first included alongside *male* and *female* in 2018. In 2016, there was a similar number of missing responses as *gender diverse* in 2018. Respondents whose gender was missing or *gender diverse* were included in the overall analysis, but were not reported on separately in this report.

To determine substance use, respondents were asked to indicate how many times in the past month they drank any alcohol, heavy amounts of alcohol (more than five drinks in less than four hours), smoked tobacco and used cannabis.

Analyses were performed using STATA version 15.0. Proportions were calculated using the delete-a-group jack-knife method. Ninety-five percent confidence intervals have been used to represent the sample errors for estimates. Adjusted risk-ratios were calculated using generalized linear model regression. Adjusted risk-ratios controlled for gender (male/female binary), ethnicity (prioritised as Māori, Pasifika, Asian, NZ European/Other), and school decile group (low 1-3, mid 4-7, high 8-10). Any differences between groups were confirmed using p-values that were calculated using Pearson's chi-square test. We consider $p<0.05$ as statistically significant.