



LA TROBE
UNIVERSITY

ARCSHS
NATIONAL SURVEY
OF AUSTRALIAN
SECONDARY STUDENTS
AND SEXUAL HEALTH
1992-2018: TRENDS
OVER TIME

Six Waves of the National Survey
of Australian Secondary Students
and Sexual Health

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Australian Research Centre
in Sex, Health and Society

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Published by La Trobe University, October 2019. La Trobe University is a registered provider under the Commonwealth Register of Institutions and Courses for Overseas Students (CRICOS). CRICOS Provider 00115M.

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The National Survey of Australian Secondary Students and Sexual Health was funded by the Australian Government Department of Health. Suggestion citation:

Fisher, C.M. and Kauer, S. 2019. National Survey of Australian Secondary Students and Sexual Health 1992 – 2018: *Trends Over Time*, (ARCSHS Monograph Series No. 118), Bundoora: Australian Research Centre in Sex, Health & Society, La Trobe University.

DOI: 10.26181/5d89517641f9c ISBN: 978-0-9953969-8-2

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Acknowledgments

The National Australian Survey of Secondary Students and Sexual Health has provided periodic updates on the sexual health and wellbeing of young people for 25 years. Conducted approximately every 5 years since 1992, the survey sought to describe the sexual health knowledge, behaviours and attitudes crucial to informing policy and practice. A culmination of the six iterations of the survey, the current report on *Trends Over Time* would not have been possible without the contribution of a large and changing cast of experts.

We would like to acknowledge all those who have come before us in generating the knowledge synthesised for this report on *Trends Over Time*: Michael Dunne, Maria Donald, Jayne Lucke, Robyn Nilsson and Beverley Raphael from the 1992 team at the National Centre for HIV Social Research, University of Queensland; Jo Lindsay, Anthony Smith and Doreen Rosenthal from the 1997 team at the Centre for the Study of Sexually Transmissible Diseases at La Trobe University; Anthony Smith, Paul Agius, Sue Dyson, Anne Mitchell and Marian Pitts from the 2002 team at the Australian Research Centre in Sex, Health and Society at La Trobe University; Anthony Smith, Paul Agius, Anne Mitchell, Catherine Barrett and Marian Pitts from the 2008 team at the Australian Research Centre in Sex, Health and Society at La Trobe University; Anne Mitchell, Kent Patrick, Wendy Heywood, Pamela Blackman and Marian Pitts from the 2013 team at the Australian Research Centre in Sex, Health and Society at La Trobe University; and most recently, Christopher Fisher, Andrea Waling, Lucille Kerr, Rosalind Bellamy, Paulina Ezer, Gosia Mikolajczak, Graham Brown, Marina Carman and Jayne Lucke from the 2018 team at the Australian Research Centre in Sex, Health and Society at La Trobe University.

Further, we wish to acknowledge those who provided invaluable support throughout the various iterations of the survey: Susan Kippax, Rod Ballard, Malcolm Rosier, Russell Greig, Chris

Anderson, Mark Riley, Chris Caudle, Julia Taylor, Jane Kidd, Robyne McKenny, Jayne Clifford, Robyn Leggat and Pauleen Cass (1992); Mary Sheehan, Rob Ballard, Kevin Gardner, Roberto Forero, Maryin McCarthy, Brendan Gibson, Frances Byers, Manoa Renwick, Chris McNamara, Kevin Gardner, Pamela Rajkowski, Ian Cameron, Chris Powell, Peter Roberts, Rod Ballard, Meil McCormack, Laila Fanebust, Vicki Wyatt, Tom Misson, Jenny Smith, Damien Jolly and Malcolm Rosier (1997); Jon Gobsone, Rod Ballard, Helen Kerr-Roubicek, Rosemary Davis, Kim Proctor, Margaret Isselman, Graeme Cooksey, Jane Flentje, Maria Marriner, Rebecca Johnston, Phillipa Lovell, Jan Watson, and Philomena Horsley (2002); Nona Cameron, Jennifer Blackman, Melanie Hales, Nancy Yim, Jennifer Webb, Rosemary Davis, Maria Marriner and Sally Cockburn (2008); Emily Bariola and Micah Scott (2013); Wendy Heywood and Denisa Goldhammer (2018).

Providing invaluable assistance in the production of the *Trends Over Time* report, we wish to thank and acknowledge the contributions of Gosia Mikolajczak, Rosalind Bellamy, Paulina Ezer, Lucille Kerr, Andrea Waling, Jayne Lucke, Marina Carman, Adam Bourne, Suzanne Fraser, Jackie Wykes and Tom Cho.

The team wish to acknowledge and thank the thousands of young people who have participated in the survey over the last 25 years without which these studies would not have been possible. To all the schools, principals, education administrators and others involved in organising for data collection in schools up through the 2013 study, we also thank you for your willingness to open your schools to collecting valuable information to support your students' health and wellbeing.

Finally, we wish to acknowledge the Commonwealth Department of Health for their ongoing support for each iteration of the survey and the current *Trends Over Time* report.





Executive **summary**

Over the last 25 years, the National Survey of Australian Secondary Students and Sexual Health has provided a robust snapshot of young people’s sexual health knowledge and behaviours in Australia.¹⁻⁶ The cross-sectional survey is funded by the Australian Government Department of Health and has been conducted approximately every five years since 1992. Over the years, the survey has involved 15,756 students in Years 10 and 12, from the Government, Catholic and Independent school systems, and from every Australian state and territory.

This *Trends Over Time* monograph reports, for the first time, on comparable questions across all iterations of the survey. Comparisons highlight how Australian secondary students’

sexual health knowledge and practices have—and have not—changed over 25 years. Trend analyses indicate where progress in improving key determinants of sexual health and wellbeing among young people has been observed, as well as areas where significant changes have not been observed.

This report compares domains that were covered in three or more waves of the survey. Table 1.1 summarises these domains and indicates whether or not significant and meaningful changes were found over time, and if so, in what direction (see Chapter 3 for more detail on reporting of significant and meaningful changes).

Table 1.1 Survey domains and significant and meaningful changes over time

Domain	Changed
HIV transmission knowledge	None
Perceived risk for HIV	None
General STI knowledge	Increased
Perceived risk for STI	None
Self-reported STI diagnosis	None
Hepatitis knowledge	None
Self-reported hepatitis vaccination	None
HPV knowledge	None
Self-reported HPV vaccination	Decreased ¹
Peer norms on condom use	None
Diversity of reported sexual attraction	Increased ²
Sexual behaviours	None
Sexual experiences	None
Unwanted sex	None
Condom use	None
Last sexual experience	None ³
Sources of information on sexual health	Increased ⁴

¹ There was an overall decrease, but the trends show a decrease for female students and increase for male students

² Increases in 2018 were likely due, in part, to changes in the response options for the question

³ Except for age of last partner, which became more closely matched to students over time

⁴ Use of female friends and the internet websites increased over time

1.1 What has changed in 10-25 years?

General STI knowledge has improved (as measured by four questions asked consistently over all six surveys). Overall, the proportion of correct answers grew from an average of 37% in 1997 to 62% in 2018. This increase was most closely related to a higher number of correct responses to questions about **chlamydia**, particularly between 1997 and 2008, which corresponds to concerted national efforts in the late 1990s to early 2000s to raise knowledge and awareness of chlamydia among young people.

There has been a significant overall decline in the number of young people reporting that they have been **vaccinated for human papillomavirus (HPV)**. However, when broken out by gender, the trends over time were in opposite directions. Young women were considerably less likely to report being vaccinated for HPV in 2018 than in 2008 (82% in 2008 to 47% in 2018), while young men increasingly reported being vaccinated (3% in 2008 to 31% in 2018). The trends indicate that self-report vaccination rates for young men and women are likely to converge in the next several years. The National HPV Vaccination Program has made vaccinations available to young women since 2007,⁸ while the vaccine only became routinely available to young men in 2013, which would likely account for the increase in reporting. The scale of the national program has resulted in widespread uptake (80% for females and 76% for males), so the decline in young women self-reporting is surprising.⁹ One possible explanation for the difference between self-reported and confirmed vaccination rates is that the vaccination has become part of routine health care, and is therefore less memorable (particularly for young people who may receive several injections at a time).

Over time, there has been an increase in young people's comfort in being open about the **diversity of their experiences of sexual attraction**. The percentage of young people reporting some or exclusive sexual attraction to people of the same gender has grown from 6% in 1997 (remaining relatively steady through 2008) to 39% in 2018 (up from 17% in 2013). More recent efforts to incorporate inclusion and diversity in relationships and sexuality education, as well as broader social and cultural shifts, have likely contributed in significant and meaningful ways to this increase. Another important explanation for the dramatic

increase in 2018 could be changes to the response options provided to students. Prior to 2018, the question had three options (attracted to same, both, or opposite sex), whereas in 2018, the scale was revised in line with best practices for survey research to include five options (only attracted to females/males, mainly attracted to females/males, or equally attracted to both). While there are limitations inherent in collapsing the response options in 2018 for comparison purposes, other national research also shows a steady increase in young people reporting a greater diversity of sexual attraction.¹⁰⁻¹⁴

Most questions about sexually active students' last sexual experience did not show any significant changes over time, except that **the average age of students' last sexual partner** is now more closely aligned with their own age. For example, the proportion of female students in Year 10 who reported that their last partner was 18 or older has declined from 25% in 1997 to 11% in 2018. Across both year levels and genders, the number of students who reported that their last sexual partner was 20 or older has declined dramatically. These declines might be explained by a mixture of complex social and cultural (and perhaps legal) shifts over the last 25 years, which now place greater value on young people having sexual partners closer to their own age.

Finally, the **sources of information on sexual health** that young people use have been dramatically changed by the internet. The number of students who reported accessing internet websites for sexual health information grew steadily from 42% in 2002 to 80% in 2018. At the same time, young people's level of trust in the accuracy of online information was generally low; so, while young people are very likely to use internet websites for sexual health information, they approach it with a degree of caution⁶. A significant increase was also seen in the use of female friends as a source of sexual health information, averaging around 50% in 2002 and 2008, decreasing to 40% in 2013, then rising dramatically to 75% in 2018. A similar trend was seen in the use of male friends, growing from 33% in 2002 to 58% in 2018. These changes highlight the need to continue to monitor how young people access and use sexual health information, in order to design and adjust education and prevention programs.

1.2 What has not changed in 25 years?

The remaining survey domains—HPV and hepatitis knowledge, perceived risks, behaviours, and experiences—have not registered significant and meaningful change in the last 25 years. For many of these domains, the lack of change can be seen as good:

- **HIV transmission knowledge**, as measured in this survey, has **remained high** (82%–91%) over the last 25 years
- the number of students who have engaged in **penetrative sex** (fluctuating between 35% and 47% over the last 25 years) and **oral sex** (fluctuating between 39% and 52%) has not changed significantly
- students reporting **always or sometimes using a condom** in the previous year was **very high** (85.6%–87.3%)
- the **majority** of sexually active students (88.3%–71.6%) reported that a **condom was available** the last time they had sex
- the **vast majority** of students indicated their **last sexual experience** was wanted, with a small number of students reporting that they had unwanted sex during their last sexual encounter (4.7%–7.6%).

For other domains, a lack of change highlights the need for ongoing attention:

- **HPV and hepatitis knowledge remain low**, with an average of less than 50% of students providing the correct answers to questions
- about one quarter of sexually active students have consistently reported having had sex they did not want to at some time in their lives. The most common reasons for having had **unwanted sex** included being too drunk, though this reason significantly declined over time (61%–32.2%)
- a little more than half of sexually active students (57.7%–59.5%) **used a condom the last time they had sex**.

1.3 The future

The national strategies continue to call for action to improve young people's awareness and accurate knowledge of HIV, STIs and viral hepatitis. While HIV knowledge has remained relatively high (save for a few questions), and overall STI knowledge has increased, there continues to be room for improvement, particularly on HPV and viral hepatitis. Given the shifts towards sexual health information-seeking via the internet and friends, future work may look to using a multi-faceted coordinated approach to improving knowledge through in-school curricula, community-based health promotion campaigns, evidence based peer educator programs and national public health messaging. The findings of the National Survey of Australian Secondary Students and Sexual Health will continue to play a vital role in bringing the experiences and voices of young people into this discussion.

Background

This *Trends Over Time* report compares the results of six waves of the National Survey of Australian Secondary Students and Sexual Health (1992, 1997, 2002, 2008, 2013, and 2018). The cross-sectional national survey is funded by the Australian Government Department of Health and serves as a key piece of research to inform the National Blood Borne Virus and Sexually Transmissible Infections strategies.⁷

The first survey was conducted by a team of researchers at the University of Queensland, and subsequent surveys have been carried out by researchers at the Australian Research Centre in Sex, Health and Society (ARCSHS) at La Trobe University.

The first survey developed out of Australia's response to HIV. Australia led the world in bringing together affected communities, health professionals, and other experts to formulate the first national strategy to address HIV, released in 1989. The national strategy brought together the latest health promotion principles in a call to action to prevent further spread of the disease through innovative educational initiatives. In order to develop an evidence base for these initiatives, the Commonwealth Department of Health funded research "to provide baseline information on Australian students' knowledge of HIV/AIDS and other STDs and to describe some of their beliefs and attitudes about sex and HIV/AIDS," as well as to estimate "the prevalence of sexual intercourse and age of first sexual experiences" (p. 6).¹ This research became the first national survey of secondary students and sexual health, which included students in every Australian state and territory except New South Wales, and aimed to identify various factors related to behaviour and knowledge that could inform relevant school education and other health promotion programs.

The Australian Government recognised that "it remains important that interventions aimed at instigating and maintaining safe sex practices continue to be targeted toward young people at the beginning of their sexual careers" (p. 11).² To this end, the survey was repeated in 1997 as a nationally representative study on the knowledge, attitudes, and practices of secondary students in Australia. The administration of the second survey was expanded to include all states and territories.

Over the years, some elements of the survey have changed, due to a range of factors:

- the release of new related national strategies (Aboriginal and Torres Strait Islander Sexual Health in 1996, hepatitis C in 1999, STIs in 2005 and hepatitis B in 2010)
- the prevailing social and cultural trends of the time, such as the introduction of the internet and an emerging public health interest in HPV (especially after the introduction of a vaccine)
- evolving social and public health science identifying new domains of interest such as body piercing and tattooing (unclean equipment being a vector for transmissible infections), emotions related to sexual experiences, and, more recently, experiences of formal relationships and sexuality education.

The survey has become a fundamental source of data to inform the progress of national and state/territory strategies to address HIV, STIs, and sexual health and wellbeing more broadly. In addition, the study has driven and informed new and innovative programs such as *Talking About Sex*, *Growing and Developing Health Relationships*, *Catching On*, and *LoveSexRelationships.edu.au*.¹⁵⁻¹⁸ Finally, the survey results have helped guide sexual and public health practice, and are regularly used in strategy and program development within government and community-based sexual health organisations.¹⁹⁻²¹

Despite changes over time, a robust feature of the survey has been the consistency with which it has tested factual knowledge on HIV transmission and general STI, hepatitis and HPV knowledge; recorded perceived risk for HIV and STIs; measured peer norms on and personal use of condoms; documented sexual attraction, behaviours, and experiences; and tallied sources of information on sexual health used by young people.

This consistency allows, for the first time, a report on how young people's sexual health knowledge and behaviours, as well as other related factors, have changed (or not) over time. Thirty years since the release of the first *National HIV/AIDS Strategy*, Australia again leads the world in reporting on long term progress to promote young people's sexual health and wellbeing.

Methodology, survey instrument, and sample

While the questions, methodologies, and samples used in the national survey have changed over time, a core set of elements have remained consistent. *Trends Over Time* compares these consistent elements. This chapter describes the similarities and differences in the survey instrument, administration, and methodology across each wave of the survey, as well as the methodology for the trend analyses and the resulting sample for the report.

3.1 Survey instrument

The trend analyses reported here include only questions that were asked in at least three iterations of the survey, as this is the minimum needed to provide reliable estimates of trends

over time. Additionally, the analyses only include data from students in Years 10 and 12. While some iterations of the survey sampled a larger age range of students, Years 10 and 12 have been consistently included across time. Finally, while a diversity of gender identities has been observed in small proportions, particularly in the 2013 and 2018 surveys, the vast majority of students over time have identified as either male or female. Due to the low numbers of trans and gender diverse students overall, and notable numbers in only the two most recent waves, only male and female students were retained for these trend analyses over time.

The following survey domains occurred across three or more waves of surveys and are included in this report:

Table 3.1 Survey domains covered

Domain	1992	1997	2002	2008	2013	2018
HIV transmission knowledge	X	X	X	X	X	X
Perceived risk for HIV	X	X	X	X	X	X
General STI knowledge		X	X	X	X	X
Perceived risk for STI	X	X	X	X		X
Self-reported STI diagnosis		X	X	X	X	X
Hepatitis knowledge and vaccination		X	X	X	X	X
HPV knowledge and vaccination				X	X	X
Peer norms on condom use	X	X	X	X	X	X
Sexual attraction		X	X	X	X	X
Sexual behaviours	X	X	X	X	X	X
Sexual experiences	X	X	X	X	X	X
Unwanted sex			X	X	X	X
Condom use	X	X	X	X	X	X
Last sexual experience	X	X	X	X	X	X
Sources of information on sexual health	X	X	X	X	X	X

3.2 Sampling, recruitment and survey administration

The survey has had to adapt to shifting social, structural, and cultural norms with regards to sampling methods. Full details of sampling methods for each iteration can be found in the individual reports. Here, a brief description is provided along with implications for analysing trends over time.

The 1992, 1997, 2002, and 2008 surveys used nearly identical procedures for sampling. These first four surveys used a probability sampling procedure to generate, after proportional weighting, a representative sample (except 1992 where New South Wales did not participate, leaving the sample representative of the rest of Australia). A two-tier random cluster sampling procedure was used. This was common for school-based population studies of the time, and involved randomly selecting schools from a list of schools in Australia (only government schools in 1992 and 1997). Lower population states (e.g., Northern Territory, Tasmania) were oversampled in order to provide reliable estimates after data weighting. Once schools were selected, they were invited to participate in the survey. The schools that agreed to participate formed the first tier of the sampling frame. A second randomly selected list of schools was used to fill in any gaps created by refusals to participate, and formed the second tier.

Response rates successively declined from 85.1% in 1992 to 26.0% in 2008, and this decline resulted in changes to sampling and recruitment in 2013 and 2018. The 2013 survey research team encountered increasing resistance to participation, ultimately exhausting the first and second list of schools. To address the gap in data, the team layered on a secondary recruitment strategy to add a convenience sample to the dataset by offering an online version of the survey that was advertised through websites and word-of-mouth via community-based organisations. The mix of a low response rate in the school-based sample and including an online sample meant that the 2013 report was comprised of a convenience sample instead of the probability samples of previous iterations.

These challenges in 2013 prompted an extensive consultation with key stakeholders, resulting in the recommendation to take the survey fully online and out of the schools. The 2018 survey used a minimum quota sampling procedure based on census data; proportions were calculated based on a three-tier stratum of school type (Government, Catholic, and Independent), gender (male/female; census data was not available for trans and gender diverse persons) and year in school (10 through 12). Minimum sample size was then calculated based on a desired medium effect size. The survey was advertised on social media and minimum quotas tracked; once all quotas were filled, recruitment ceased. While all minimum quotas were achieved and the sample was largely in line with census data proportions, a conservative approach was taken deeming the final sample to be one of convenience.

Ethics approval

Individual surveys received appropriate approvals at the time of each study and are documented in individual reports. This *Trends Over Time* study received a separate ethics approval from La Trobe University (HEC19242) to analyse all six data sets.

3.3 Data management and analysis

Data from Year 10 and 12 students who identified as male or female were gathered from all six waves of the survey and merged into a single SPSS data file with an identifier added to indicate year of participation.

Given the probability-based sampling of the first four waves, data was weighted to account for overrepresentation (e.g., low population states were oversampled). Within each of the four cohorts, a stratified weight—based on year in school and gender—was calculated using census data for that period. Given the convenience nature of the two most recent surveys, these remained unweighted.

The weighting aimed to provide the best possible estimates for comparative analyses; however, it is important to note the limitations inherent in the data sampling. The 1992 survey did

not include New South Wales, and the decreasing response rate over the first four surveys indicates a decrease in the representativeness of these samples. The convenience samples of 2013 and 2018 did not purport to be representative, although the samples were closely aligned to census-based population estimates, particularly in 2018.

Despite the limitations inherent in comparing these cohorts, the weighting allows for a relatively good comparison over time. This report presents the weighted descriptive results for each cohort across comparable years. For each domain, regression analyses were carried out where appropriate. Several analyses resulted in statistical significance but with poor predictive models and were therefore not of practical use. Consequently, only results explaining

10% or more of the variance ($R^2 > 0.10$) were considered significant and reported. In general terms, the variance is the amount of change explained by the time points (at least three from the 1992, 1997, 2002, 2008, 2013, and 2018 surveys) after controlling for differences in gender and year level; low variance means there are likely other significant factors that may better explain the changes over time but were not included in the statistical model. Figures present these findings and include a trendline demonstrating the direction of change.

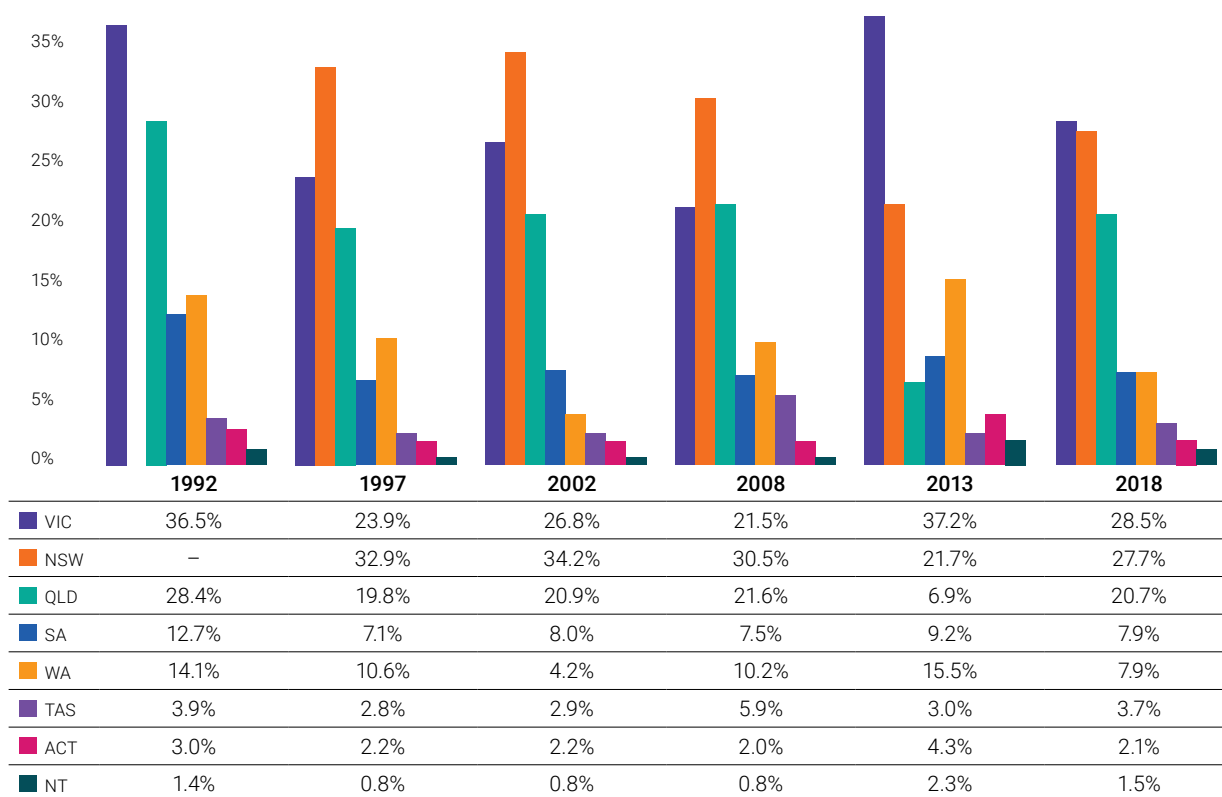
3.4 Demographic characteristics of the samples

Table 3.2 provides a breakdown of the sample sizes by gender and year level for each wave of the survey. Figure 3.1 shows the sample sizes achieved in each state and territory over the years.

Table 3.2 Sample size by gender and year level

		1992		1997		2002		2008		2013		2018	
		%	n	%	n	%	n	%	n	%	n	%	n
Male	Year 10	23.6	401	22.9	797	25.2	593	21.4	619	26.8	390	17.3	670
	Year 12	19.7	335	21.0	730	18.0	423	14.0	405	13.8	201	27.7	1,073
	Total	43.3	736	43.9	1,527	43.2	1,016	35.3	1,024	40.6	591	45.0	1,743
Female	Year 10	29.5	501	27.7	963	32.8	772	35.5	1,027	35.1	510	24.1	932
	Year 12	27.1	461	28.5	991	24.0	564	29.2	846	24.3	353	30.9	1,196
	Total	56.7	962	56.1	1,954	56.8	1,336	64.7	1,873	59.4	863	55.0	2,128
Total		100.0	1,698	100.0	3,481	100.0	2,352	100.0	2,897	100.0	1,454	100.0	3,871

Figure 3.1 Percentage of sample in each state and territory



Additional methodological and demographic details on the sample by state/territory, gender and year level, students and parents born overseas, school type, and Aboriginal and/or Torres Strait Islander identity are available upon request; please email ARCSHS@latrobe.edu.au

3.5 Limitations of the trends over time analyses

Inherent in cross-sectional surveys of this nature, there are some limitations that contextualise the findings.

- **Selection bias.** For the first four cohorts, several factors may have limited the selection of young people who participated. Administrators increasingly declined to have their school participate, which may have biased which communities and students ultimately participated. Additionally, parents or guardians of students in schools that agreed to participate may not have consented to their student taking the survey. While the two-stage random cluster sampling was meant to minimise selection bias, participation was voluntary and those who choose not to participate may in some way be different from the general population. Similarly, for the 2013 and 2018 surveys, young people who voluntarily responded to the online survey might differ from the population of students at large. For example, Facebook ads promoting the 2018 survey were explicit that the survey concerned sex and/or sexual health, which may have led some students who were not yet sexually active to think they would not qualify and therefore to decide not to click on the ad and/or participate.
- **Sampling bias.** Across the first four waves of the survey, the proportion of schools electing to participate dropped significantly. While strategies were employed to replace schools who opted out, the increasing reliance on second

and third waves of random selection reduced the overall probability that the samples were representative of the general population. The 2013 and 2018 surveys were partially or completely online and open to any student who qualified, meaning there was little control over who learnt of the study, which introduced greater sampling bias.

- **Mischievous participants.** The self-administered nature of the survey, even in a classroom setting under exam-like conditions, leaves open the possibility for participants to give untruthful answers and thus introduce bias into the accuracy of results. Across the six waves, rigorous strategies were used to minimise and screen out mischievous participants. The length of the survey itself served as a deterrent. Additionally, variations of the important questions were asked more than once across the survey and used to screen out possible inconsistent participants. For the online surveys, further screening identified “speeders” giving the same answer to a series of questions within a question block, and those who left derogatory comments in open-ended questions. Such responses were also removed.
- **Missing data.** Noted above and throughout the report, there are a number of instances of “missing data”. Notably, the state of New South Wales did not participate in the 1992 survey. Independent and Catholic schools only began participating in 2002, with acceptable proportions of Catholic school students only being achieved in 2018.



HIV, STIs, viral hepatitis and HPV

Health education theories suggest that increasing accurate knowledge and perceived risk for contracting diseases may translate into individuals changing their behaviours to reduce risk (e.g., using a condom).²² Accordingly, the survey has measured young people's knowledge on HIV transmission, STIs, viral hepatitis, and HPV; their perceived risk of contracting HIV and other STIs; and whether they believed they had been vaccinated for hepatitis A and B, and HPV. Additional detailed tables and figures on non-significant findings are available upon request; please email ARCSHS@latrobe.edu.au

4.1 HIV

Since its inception in 1992, the survey has consistently asked students to report on their factual knowledge about modes of HIV transmission. The same 11 questions have been asked each time, providing for a robust comparison of changes in HIV transmission knowledge over time. Additionally, students have consistently been asked about the perceived lifetime risk for acquiring HIV.

Knowledge about HIV transmission

Table 4.1 shows the HIV transmission knowledge questions asked since 1992. Both incorrect and "don't know" responses were coded as not having the correct knowledge. Knowledge about HIV transmission was generally high, with over 80% correct responses to most questions. There was a small decline (less than 10%) in correct answers about HIV knowledge between 1992 and 2018, including:

- that HIV can be transmitted by sharing injecting needles (from 98.5% to 92.9%)
- that HIV can be transmitted by having sex
 - from a man to a woman (from 97.2% to 93.8%)
 - from a woman to a man (from 93.4% to 90.7%)
- that HIV cannot be transmitted by hugging (from 98.9% to 94.4%)
- that condoms can provide protection against HIV (from 94.3% to 89.4%)
- that someone who looks very healthy can pass on HIV (from 90.2% to 82.1%).

There was a larger decline in the knowledge that coughs and sneezes cannot transmit HIV (from 91.4% to 67.8%); that mosquitos cannot transmit HIV (from 62.7% to 24.9%); and that HIV can be transmitted from mother to baby during pregnancy (from 87.5% to 65.1%). There was a slight increase in knowledge that the contraceptive pill does not protect a woman from HIV (from 88.9% to 91.9%) and that HIV can be transmitted though male-to-male sex (from 90.2% to 91.7%).

Table 4.1 HIV transmission knowledge questions

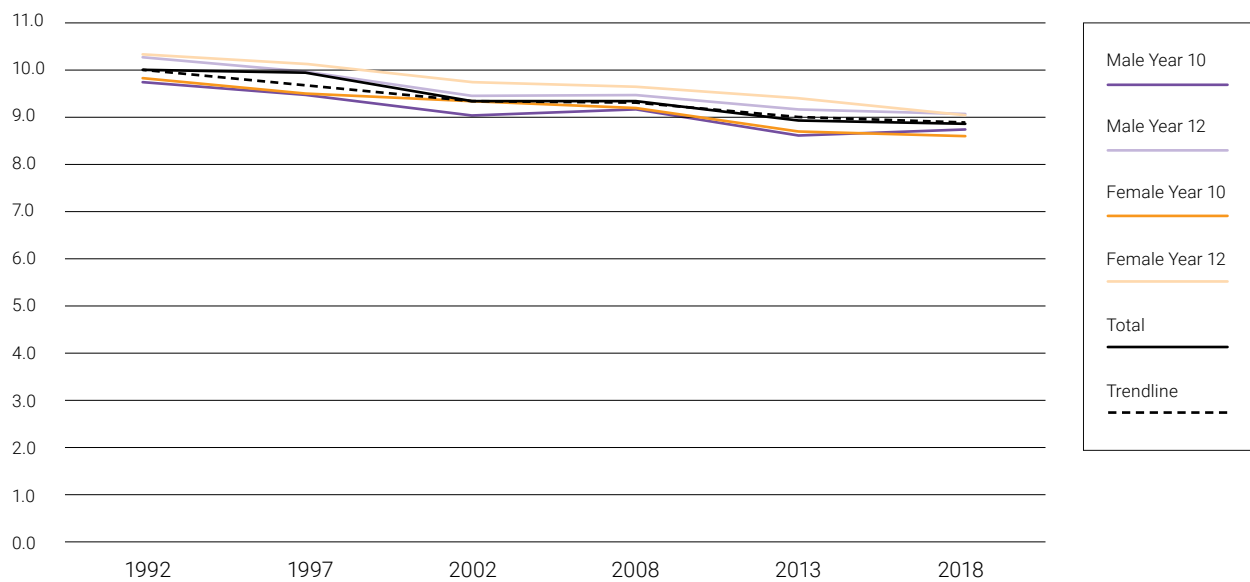
Could a person get HIV (the AIDS virus) by sharing a needle with someone when injecting drugs?	Yes	
Could a woman get HIV (the AIDS virus) through having sex with a man?	Yes	
If someone with HIV coughs or sneezes near other people, could they get the virus?		No
Could a man get HIV through having sex with a man?	Yes	
Could a person get HIV from mosquitos?		No
If a woman with HIV is pregnant, could her baby become infected with HIV? *	Yes	
Could a person get HIV by hugging someone who has it?		No
Does the pill (birth control) protect a woman from HIV infection?		No
Could a man get HIV through having sex with a woman?	Yes	
If condoms are used during sex does this help to protect people from getting HIV?	Yes	
Could someone who looks very healthy pass on HIV infection?	Yes	

*While the possibility exists for a woman with HIV to pass it on to her baby, current treatment options in Australia have virtually eliminated the occurrence of mother-to-child transmission.

Scores on each of the HIV knowledge questions were aggregated to form a composite HIV knowledge scale, with scale scores ranging from 0–11 and higher scores indicating better HIV knowledge. Being female or in Year 12 were significant predictors of higher HIV knowledge. A linear regression analysis including year level and gender found a statistically significant decline in HIV knowledge over time, although this decline was small, with the model only explaining 9.2% of the variance ($p < 0.01$). Figure 4.1 illustrates this small but steady decline in HIV knowledge over

time. This decline can be attributed to two questions in particular: mosquitos cannot transmit HIV, and HIV is not transferable by coughing or sneezing. Removing these two questions from the regression analysis yields much the same result with a smaller decline, accounting for 5% of the variance ($p < 0.01$). While significant, the trendline fell slightly short of meaningful significance due to variances of less than 10%, meaning after controlling for gender and year level, time did not sufficiently explain the decreases in knowledge.

Figure 4.1 Students' mean HIV transmission knowledge score by year level and gender



Student perception of their likelihood of getting HIV infection

Since 1992, students were asked the degree to which they believed they may be at risk of becoming infected with HIV. There were five response options: "never", "very unlikely", "unlikely", "likely", and "very likely". Table 4.2 shows the distribution

of responses to this question by gender, with higher scores indicating greater perceived risk. Students perceived their risk of HIV infection as "very unlikely" or "unlikely". Mean scores for this scale show no difference between gender, year level, or over time.

Table 4.2 Students' beliefs about how likely they are to get HIV infection by gender

		1992		1997		2002		2008		2013		2018	
		%	n	%	n	%	n	%	n	%	n	%	n
Male	Never	18.7	137	20.3	308	20.5	123	19.3	196	23.9	140	11.6	200
	Unlikely/Very unlikely	74.8	547	75.6	1,148	73.8	443	74.9	762	70.4	412	82.0	1,412
	Likely/Very likely	6.4	47	4.1	63	5.7	34	5.8	59	5.6	33	6.3	109
Female	Never	14.8	142	16.2	316	10.7	98	14.0	260	18.5	158	9.0	189
	Unlikely/Very unlikely	74.5	714	76.5	1,494	83.7	768	80.2	1,488	77.4	662	84.2	1,762
	Likely/Very likely	10.7	103	7.3	142	5.7	52	5.8	107	4.1	35	6.7	141



4.2 Sexually transmitted infections (STIs)

Knowledge about STIs

Since 1997, students have been asked to indicate their knowledge about STIs by responding to a series of true/false questions. The 1992 survey did cover STI awareness and knowledge but via elicitation questions with write-in answers; these were not comparable to the other cohorts. Over time, the questions asked changed; however, a core set of the same 10 questions were asked in at least four iterations of the survey. Similarly, the survey has consistently asked students if they have ever been diagnosed with an STI.

Table 4.3 shows the STI questions asked since 1997. Both incorrect and “don’t know” responses were coded as not having correct knowledge. STI related knowledge was fairly poor, with an average of 50% correct responses overall. However, STI knowledge improved over time for 9 of the 10 questions, with an average of over 15% improvement from 1997 to 2018. The largest improvements in knowledge were about chlamydia,

with more students correctly answering that chlamydia does not only affect women (from 10.9% in 1997 to 72.8% in 2018, a 61.9% increase) and that chlamydia can lead to sterility among women (from 29.2% to 53.6%). There was a moderate improvement (over 20%) in several questions with students correctly answering that gonorrhoea can be transmitted during oral sex (from 34.9% to 61.8%) and that genital warts are not only spread during intercourse (from 34.0% to 56.1%). There was a small but steady improvement (around 10%) in correctly answering that someone can have an STI without any obvious symptoms (from 83.0% to 94.5%), that STIs (excluding HIV) are not all curable (from 56.9% to 68.1%), that genital herpes is not curable (from 33.0% to 40.9%), that condoms do not prevent all STIs (from 73.7% to 84.6%), and that HIV does not only infect gay men and injecting drug users (from 79.6% to 92.2%). Few students (12.9% in 1997 and 10.7% in 2018) knew that cold sores and genital herpes can be caused by the same virus.

Table 4.3. STI knowledge questions

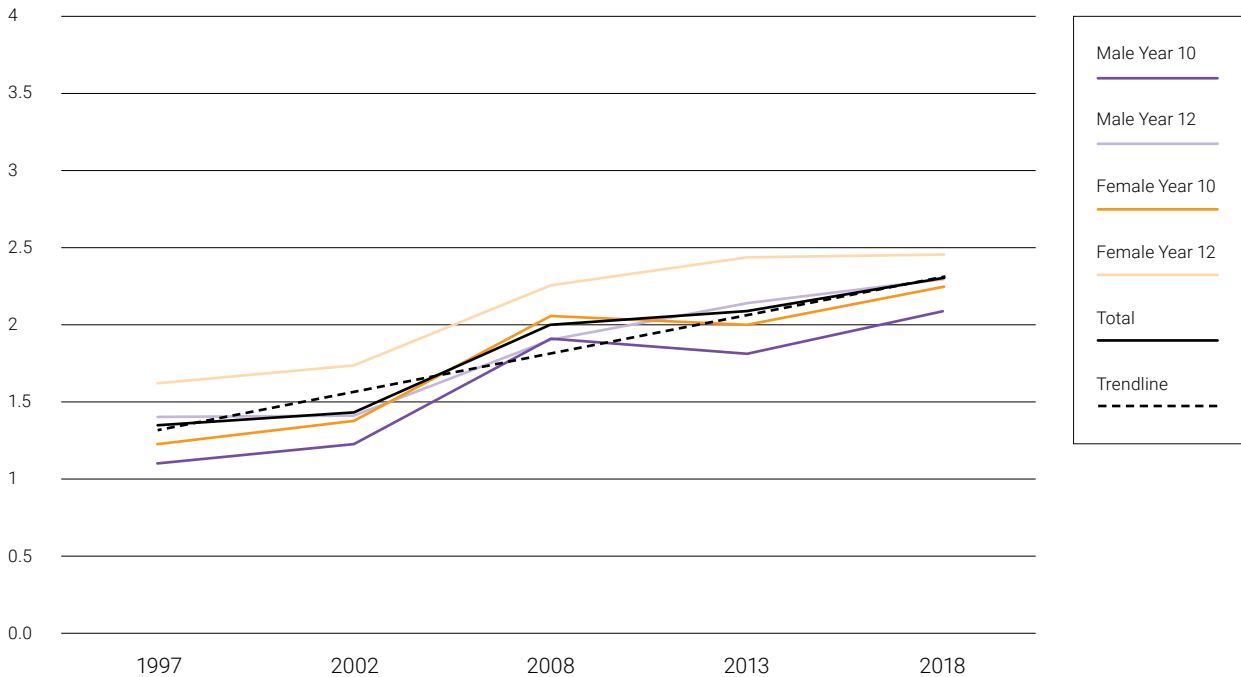
Someone can have a sexually transmissible infection without any obvious symptoms	True	
Apart from HIV, all sexually transmissible infections can be cured*		False
Chlamydia is a sexually transmissible infection that affects only women		False
Chlamydia can lead to sterility among women	True	
Once a person has caught genital herpes, then they will always have the virus	True	
People who always use condoms are safe from all STIs*		False
Gonorrhoea can be transmitted during oral sex*	True	
Genital warts can only be spread by intercourse*		False
HIV only infects gay men and injecting drug users*		False
Cold sores and genital herpes can be caused by the same virus	True	

*These questions were not included in the 2013 survey

Student scores on the four STI knowledge questions asked at each time point (1997–2018) were aggregated to form a composite STI knowledge scale ranging from 0–4, with higher scores indicating better knowledge. Only items answered at each time point were included in this scale. A linear regression

explaining 18.5% of the variance found a significant increase in STI knowledge over time, with students answering an average of 1.5 questions correctly in 1997, to students answering an average of 2.5 questions correctly in 2018 ($p < 0.01$). Figure 4.2 illustrates the improvement in STI knowledge over time.

Figure 4.2 Students' mean STI knowledge score by year level and gender



Student perception of their likelihood of getting an STI

In every wave except 2013, students were asked the degree to which they believed they may be at risk of becoming infected with an STI. There were five response options: “never”, “very unlikely”, “unlikely”, “likely”, and “very likely”. The vast majority of students perceived their risk of getting an STI as “very unlikely” or “unlikely” with no difference between gender, year level, or over time.

Prevalence of STIs

Sexually active students were asked if they had ever been diagnosed with an STI, with very few students reporting a diagnosis (3.7% in 1997 and 2.4% in 2018). There was no difference in self-reported STI diagnoses over time

4.3 Hepatitis

Starting in 1997, the survey has asked a series of questions testing students’ knowledge about viral hepatitis, as well as asking whether or not they believed they had been vaccinated against hepatitis A and/or B. Eight knowledge questions were asked in at least four iterations of the survey; three were asked in all five surveys since 1997.

Knowledge about hepatitis

Table 4.4 shows the knowledge questions about viral hepatitis. Both incorrect and “don’t know” responses were coded as not having the correct knowledge. Students’ knowledge of hepatitis was generally fairly poor, with an average of less than 50% of students answering the questions correctly. Hepatitis knowledge improved slightly over time (about 10% on average); however, there was a lot of variability over the years, suggesting this may not be a reliable trend over time. The data suggests that there is a slight improvement of hepatitis knowledge from 1997 to 2018 for all but two questions: that hepatitis B can be transmitted sexually, and that hepatitis C can be transmitted by sharing razors and toothbrushes. Less than 20% of students correctly answered that there is no hepatitis C vaccination, that hepatitis B can be transmitted sexually, and that hepatitis C can be transmitted by sharing razors and toothbrushes. Over 50% of students knew that hepatitis C has long term effects on your health, that there is a hepatitis B vaccination, and that people who inject drugs are at risk of hepatitis C.

Table 4.4 Knowledge statements about hepatitis

Hepatitis C has no long-term effects on your health*		False
It is possible to be vaccinated against hepatitis A*	True	
It is possible to be vaccinated against hepatitis B*	True	
It is possible to be vaccinated against hepatitis C*		False
People who have injected drugs are not at risk for hepatitis C		False
Hepatitis C can be transmitted by tattooing and body piercing	True	
Hepatitis B can be transmitted sexually	True	
Hepatitis C can be transmitted by sharing razors or toothbrushes [†]	True	

Note – These questions were not included in the 1992 survey

* Was not included in the 2013 survey

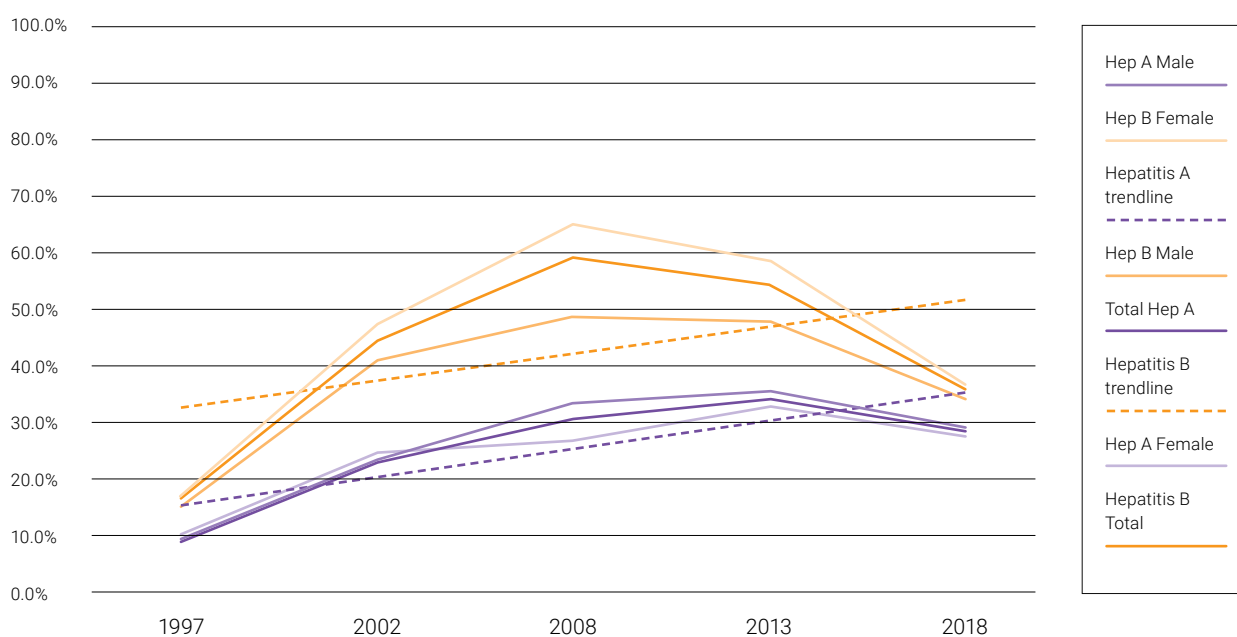
[†] Was not asked in 1997

The hepatitis knowledge questions asked at each time point (1997–2018) were aggregated to form a composite hepatitis knowledge scale, with scores ranging from 0–3, with higher scores indicating better hepatitis knowledge. Only the three items that were asked at each time point were included in this composite scale (see Table 4.4). Students answered an average of 1 question correctly in 1997 and 1.4 questions in 2018. There was no change over time.

Hepatitis vaccination

Self-reported hepatitis vaccination rates have increased considerably. Between 1997 and 2018, self-reported vaccinations grew from 9.4% to 28.9% for hepatitis A and 16.8% to 35.7% for hepatitis B. Figure 4.3 illustrates this increase, peaking in 2008 and then decreasing over time. Binary logistic regression analysis found no significant difference in self-reported vaccinations over time, likely due to rates peaking in 2008. Future research may be needed to better understand this nonlinear relationship of hepatitis vaccinations over time.

Figure 4.3 Percentage of hepatitis A and B vaccinations by gender



4.4 Human papillomavirus (HPV)

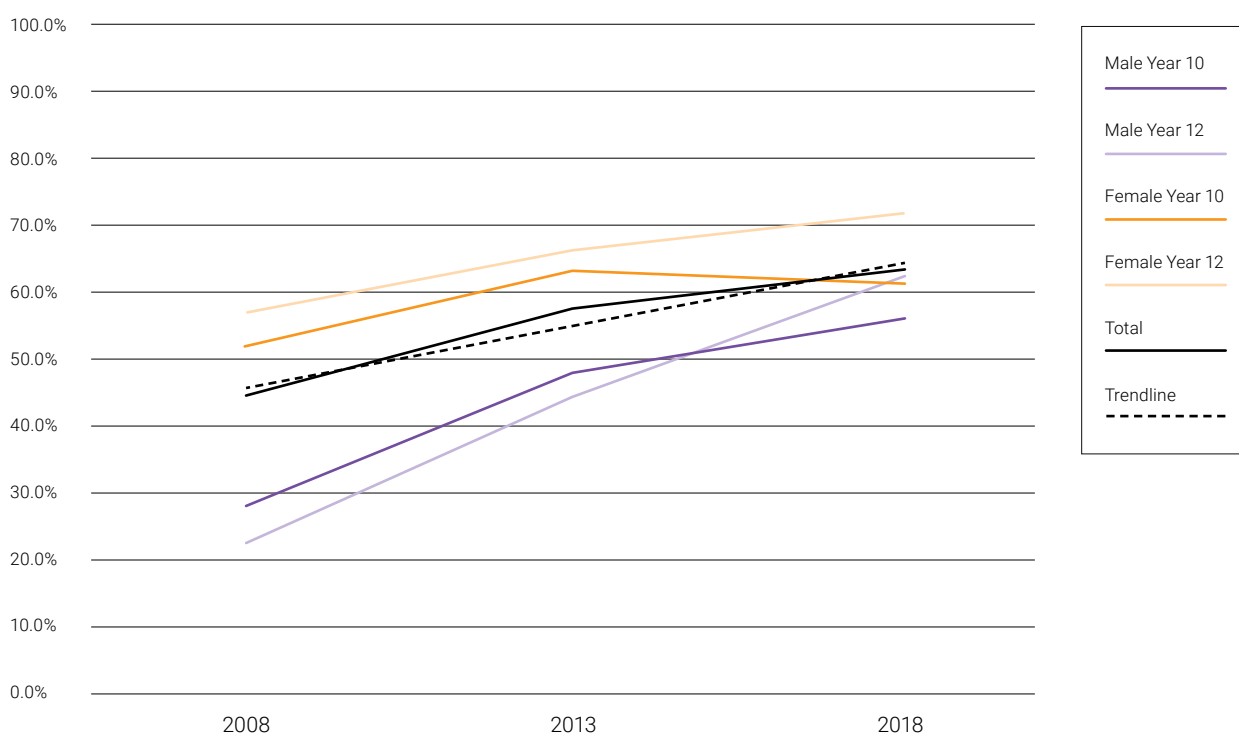
HPV questions were introduced in the 2008 survey after the national implementation of the HPV vaccination program in 2006. Questions covered awareness of the virus, students' knowledge of HPV, and vaccination against HPV.

Awareness of HPV

Students' awareness of HPV has steadily increased from 44.3% in 2008 to 63.6% in 2018. Figure 4.4 shows that female students (54.2%–66.9%) were more likely to have heard about HPV than male students (25.9%–59.7%). The awareness gap between male

and female students decreased from 28.3% in 2008 to 7.3% in 2018. A binary logistic regression analysis including year level and gender found a significant increase in awareness of HPV over time, although only 5.7% of the variance was explained by this model ($p < 0.01$). Being female or in Year 12 were significant predictors of higher HPV awareness. While significant, the trendline fell short of meaningful significance due to variances of less than 10%, meaning that after controlling for gender and year level, time did not sufficiently explain the increases in awareness.

Figure 4.4 Percentage of students who have heard of HPV by gender



Knowledge about HPV

Thirteen questions pertaining to knowledge of HPV were asked in 2008, 2013, and 2018 (see Table 4.5). Both incorrect and “don’t know” responses were coded as not having the correct knowledge. HPV knowledge was fairly low for male and female students, with on average less than 50% of students answering correctly in any year. Knowledge improved over time for most questions, including students correctly answering that: HPV does not only or mainly

affect men (from 21.9% in 2008 to 43.3% in 2018); HPV does not only or mainly affect women (from 11.0% to 34.5%); and HPV affects both men and women (from 32.2% to 53.3%). There was a small but significant decline in correctly answering that you cannot tell if you have HPV (from 31.6% to 22.0%) and that women who have had HPV vaccinations still need regular cervical cancer tests (from 44.6% to 32.0%).

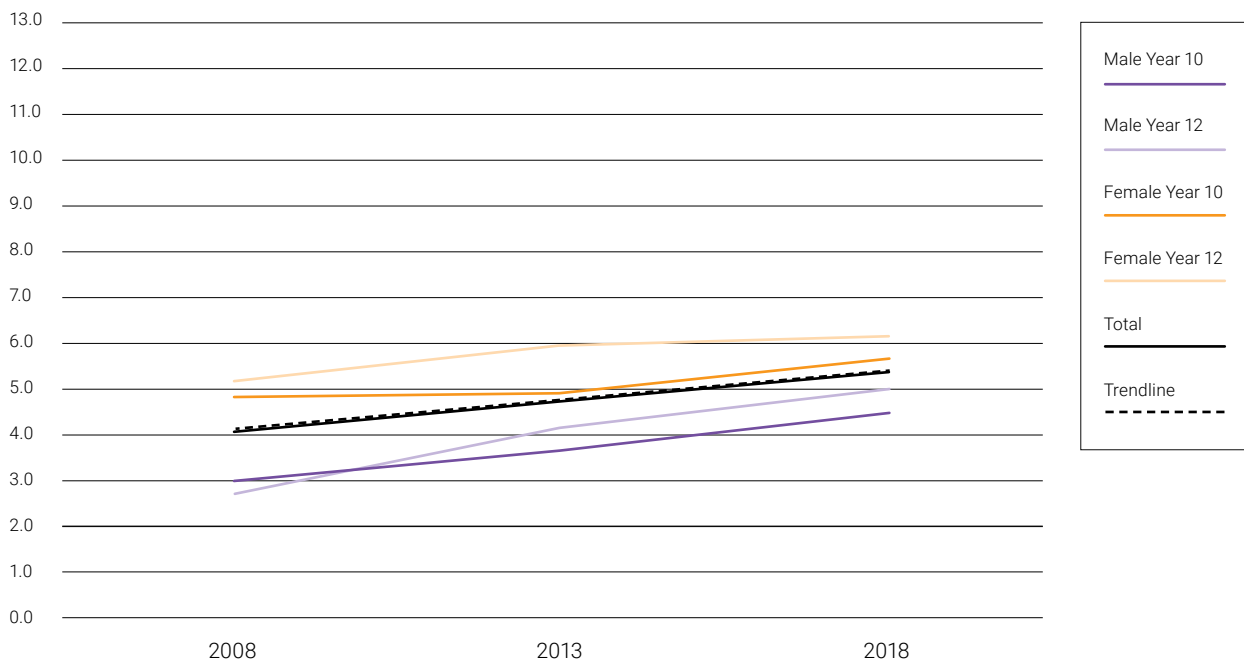
Table 4.5 HPV knowledge questions

HPV affects only or mainly men		False
HPV affects only or mainly women		False
HPV affects both men and women		False
HPV is the virus that causes genital warts	True	
HPV causes cervical cancer in women	True	
Using condoms when you have sex gives complete protection against HPV		False
You can tell if you have HPV		False
Being infected with HPV always leads to cervical cancer		False
Vaccinating young people against HPV would encourage them to become sexually active		False
The HPV vaccination won't work if a person is already sexually active		False
The HPV vaccine gives you HPV		False
My GP can give me the HPV vaccine free of charge	True	
If a woman has had the HPV vaccination, she also needs to have regular cervical cancer tests	True	

Overall, there was about a 5% increase in correctly answering the HPV knowledge questions over time with students correctly answering an average of four questions in 2008 and five questions in 2018. The HPV knowledge questions were aggregated to form a composite HPV knowledge scale, ranging from 0–13, with higher scores indicating better knowledge.

Figure 4.5 shows the HPV knowledge score over time. A linear regression analysis found a significant increase in HPV knowledge over time, between genders and across year levels ($p < 0.01$), although only 6.7% of the variance was explained, meaning that after controlling for gender and year level, time did not sufficiently explain the increases in knowledge.

Figure 4.5 Mean HPV knowledge score by gender and year level



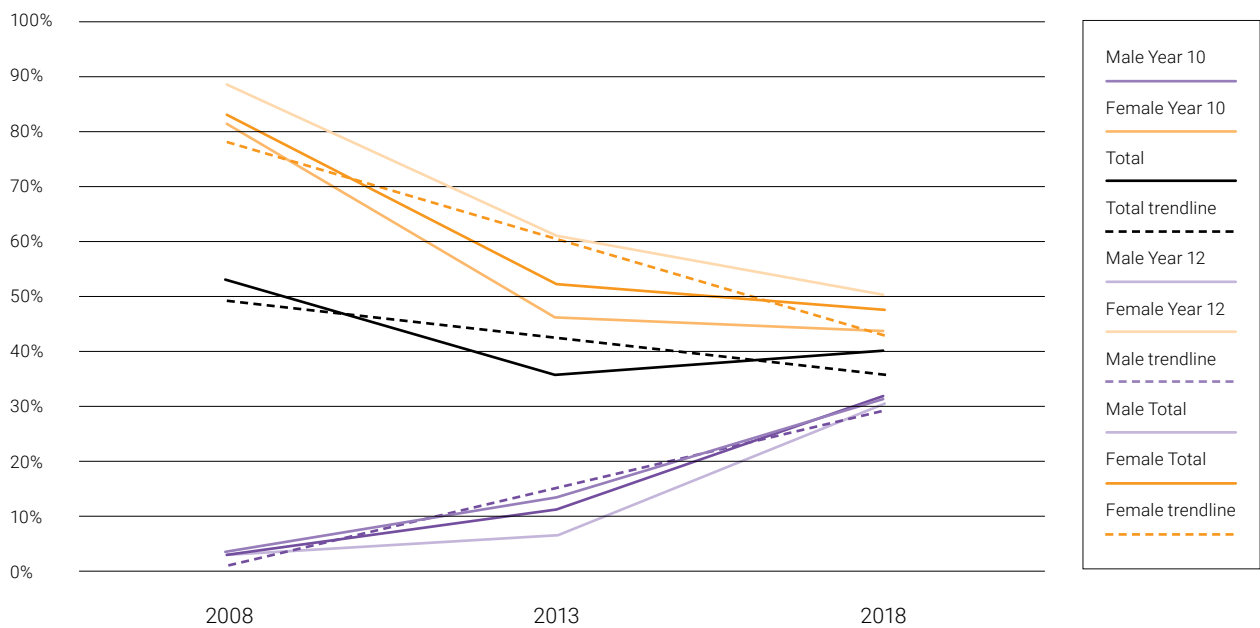
Note: Total and trendline are the same

HPV vaccination

Overall self-reported HPV vaccination rates decreased considerably between 2008 and 2018, although self-reports are considerably less than known vaccination rates.⁹ Between 2008 and 2018, total reported HPV vaccination rates declined from 57.2% to 39.9%. However, gender differences were observed (see Figure 4.6). Logistic regression analysis found a small but

significant decrease in reported vaccination over time, with the regression model explaining 19.5% of the variance ($p < 0.01$). Being female or in Year 10 were significant predictors of a decline in self-reported HPV vaccinations. Figure 4.6 shows that while vaccinations for female students declined over time, male students reported an increase in HPV vaccination over time.

Figure 4.6 Self-reported HPV vaccinations



Condom beliefs, sexual attraction, personal experiences and behaviour

The survey has consistently asked students to report on their beliefs about peer condom use, their sexual attractions towards others, their personal experiences, and—for sexually active students—their own behaviours. Most questions have been asked since the inception of the survey in 1992, with some new additions and minor variations over the years. Additional detailed tables and figures on non-significant findings are available upon request; please email ARCSHS@latrobe.edu.au

5.1 Beliefs about condom use

Responses to the question regarding their peers' condom use (see Table 5.1) demonstrated that students generally believe that most or all students their age used condoms (from 58.1% in 1992 to 68.3% in 2018). There was a small number of students who believed that their peers did not have sex (ranging from 2.8% in 1992 to 3.5% in 2018). There were no differences over time.

Table 5.1 Students' beliefs about their peers' condom use

	1992		1997		2002		2008		2013		2018	
	%	n	%	n	%	n	%	n	%	n	%	n
They don't have sex	2.8	48	5.7	194	4.0	93	2.8	82	5.5	79	3.5	134
None use condoms	1.7	29	0.7	25	0.5	12	0.6	16	0.7	10	0.9	34
A few do	21.2	359	14.1	484	11.1	259	11.3	327	13.5	195	12.0	460
About half do	16.2	274	17.7	608	13.2	307	13.9	401	15.9	231	15.4	591
Most of them do	49.9	845	57.5	1,972	65.1	1,519	68.1	1,971	60.1	871	63.8	2,452
All of them do	8.1	137	4.2	144	6.2	145	3.4	98	4.3	63	4.5	172

Students were asked who they thought mostly suggests using a condom during sex: girls, boys, or both girls and boys. Answers varied by gender, with most female students (48.6% in 1992 and 55.1% in 2018) believing that girls mostly suggest condom use and most male students (49.2% in 1992 and 52.4% in 2018) believing that both girls and boys suggest condom use. Boys alone were thought to be less likely to suggest condom use for both male (5.4% in 1992 and 10.6% in 2018) and female (2.2% in 1992 and 3% in 2018) students. A logistic regression analysis found a significant difference over time, between gender and across year levels. However, this difference was small, explaining 7.2% of the variance ($p < 0.01$), meaning that after controlling for gender and year level, time did not sufficiently explain the differences.

5.2 Sexual attraction

Students were asked about their sexual attraction to other people (see Table 5.2). From 1997 to 2013, students were asked if they were attracted to the opposite sex, both sexes, or their own sex. In 2018, students were asked if they were only attracted to females/males, mainly attracted to females/males, or equally attracted to both. These changes to the sexual attraction question were undertaken to more closely align with best practices in survey design while retaining the ability to collapse responses for comparison. The results presented here thus collapse the mainly and equally attracted items for

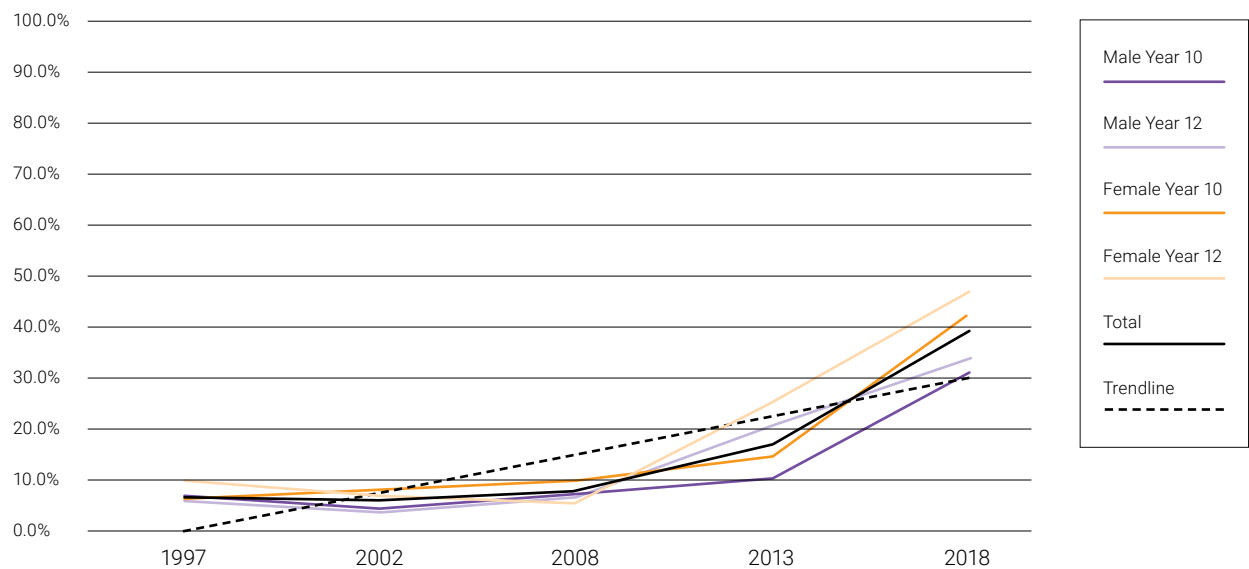
comparison to previous surveys.^{23,24} The increase in young people reporting some attraction or an exclusive attraction to people of the same gender in 2018 may be in part a result of more response options for the question.

The majority of students reported being attracted to people of the opposite gender (91.8% in 1997, 80.2% in 2013, and 60.4% in 2018). Table 5.2 lists the percentage of students who reported being attracted to the opposite sex, both sexes, the same sex, or who were unsure. There was an increase in both male and female students reporting that they were attracted to both sexes (from 3.1% in 1997 to 34.8% in 2018). Same sex attraction increased for male students (from 1.9% in 1997 to 6% in 2018) but fluctuated for female students (see Table 5.2). A logistic regression analysis found a significant increase in same/both sex attraction over time (see Figure 5.1), with female students and Year 12 students more likely to report same/both sex attraction ($p < 0.01$). This regression model explained 12% of the variance in same/both sex attraction. Due to the change in wording of the question in 2018, however, these results should be interpreted with caution. An inherent challenge of how the question was asked in all iterations is the assumed traditional gender binary of male and female. Future research should seek to find new ways of asking about sexual attraction which allow for the diversity of gender identities.

Table 5.2 Who students are sexually attracted to – opposite sex, both sex, and same sex attraction

		1997		2002		2008		2013		2018	
		%	n	%	n	%	n	%	n	%	n
Males	Opposite sex	93.6	1,396	95.4	960	91.2	930	83.6	493	67.3	1,107
	Both sexes	3.2	47	1.0	10	1.0	10	4.7	28	25.9	426
	Same sex	1.9	29	2.3	23	5.1	52	8.1	48	6.0	98
	Not sure	1.3	19	1.3	13	2.7	27	3.6	21	0.9	15
Females	Opposite sex	90.4	1,754	91.5	1,219	91.0	1,701	78.0	669	54.7	1,091
	Both sexes	3.1	61	0.3	5	0.6	11	13.4	115	42.2	842
	Same sex	3.6	69	6.4	85	6.4	120	4.4	38	1.3	26
	Not sure	2.9	57	1.8	24	2.0	37	4.2	36	1.8	36
Total	Opposite sex	91.8	3,150	93.2	2,179	91.1	2,632	80.2	1,162	60.4	2,198
	Both sexes	3.1	108	0.6	14	0.8	22	9.9	143	34.8	1,268
	Same sex	2.9	98	4.6	108	6.0	172	5.9	86	3.4	124
	Not sure	2.2	76	1.6	37	2.2	65	3.9	57	1.4	51

Figure 5.1 Percentage of students reporting same or both sex attraction



Note: There were more response options in 2018 to align with best practices; these were collapsed for comparison purposes and may have resulted in over-estimation of same or both sex attraction in 2018.

5.3 Personal experiences

Sexual experience

Students were asked to indicate whether or not they had engaged in six different sexual behaviours. The behaviours were named in the survey as reported here, without further definitions.

Tables 5.3 through 5.6 present this data by gender and year level.

Students most commonly reported “deep kissing” (80.3% in 1992 and 74% in 2018), followed by “being touched on your genitals” (64.0% in 2002 to 65.0% in 2018), “touching a partner’s genitals” (63.5% in 2002 to 64.4% in 2018), “receiving oral sex” (40.7% in 2002 to 51.4% in 2018), and “giving oral sex” (39.0% in 2002 to 52.1% in 2018). The least reported behaviour was penetrative sex (34.5% in 1992 to 46.6% in 2018). Year 12 students were significantly more likely to engage in all behaviours ($p < .001$). Binary logistic regression analyses were conducted and suggest some small but significant changes reported below. Figures 5.2–5.5 show the percentage of students reporting each behaviour by gender and year level over time.

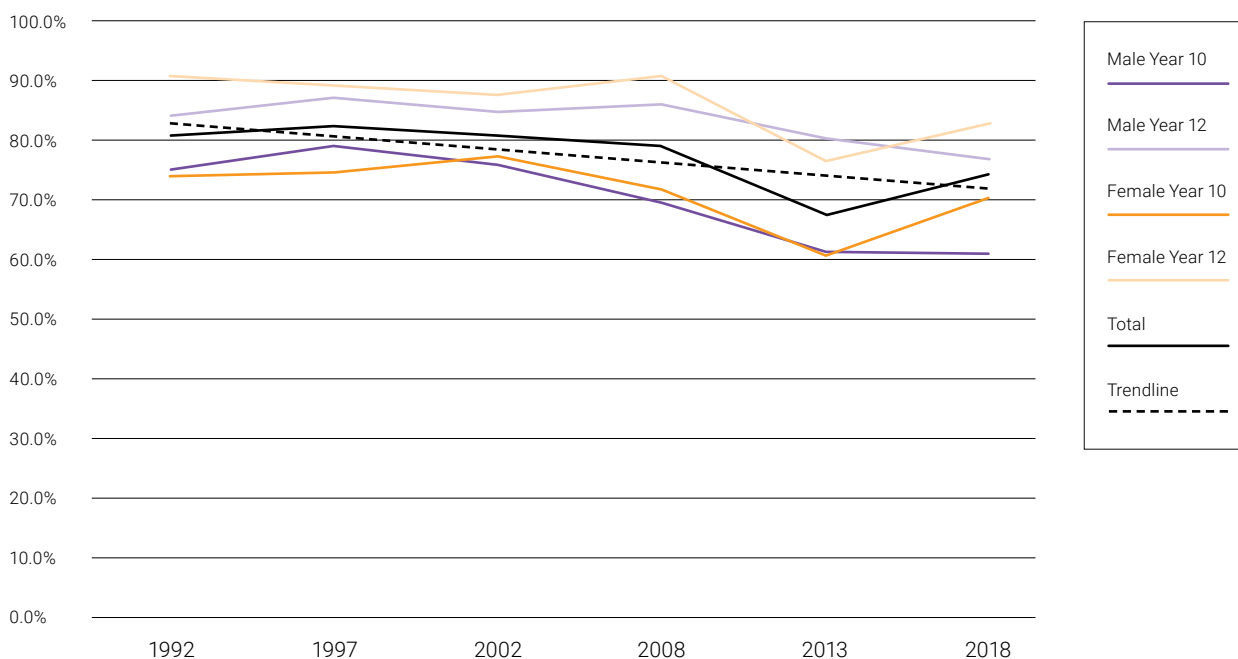
Deep kissing

For deep kissing (see Table 5.3 and Figure 5.2), a significant decline over time was found, with the model explaining 3.6% of the variance ($p < 0.01$), with female students and Year 12 students reporting more deep kissing than male students and Year 10 students, respectively ($p < 0.01$). The low variance indicates that after controlling for gender and year level, time did not sufficiently explain the decreases in deep kissing behaviour.

Table 5.3 Students’ reported sexual activities – deep kissing

	1992		1997		2002		2008		2013		2018	
	%	n	%	n	%	n	%	n	%	n	%	n
Total	80.3	1,323	82.1	2,776	80.5	1,877	78.5	2,235	67.1	966	74.0	2,812

Figure 5.2. Percentage of students reporting deep kissing



Touching a partner's genitals or touched on the genitals by a partner

Touching and being touched on the genitals followed similar patterns to deep kissing (see Table 5.4). For touching a partner's genitals or being touched, no differences over time were identified. There were no differences between male and female students.

Table 5.4 Students' reported sexual activities – genital touching

	2002		2008		2013		2018	
	%	n	%	n	%	n	%	n
Touching a partner's genitals	63.5	1,496	63.0	1,800	50.7	760	64.4	2,464
Being touched on your genitals	64.0	1,511	64.1	1,829	51.6	775	65.0	2,481

Giving or receiving oral sex

For giving oral sex, a small but significant increase over time was identified (see Table 5.5 and Figures 5.3–5.4), with the model explaining 6.7% of the variance ($p < 0.01$); female students and Year 12 students were more likely to report giving oral sex than male students or Year 10 students, respectively ($p < 0.01$). For receiving oral sex, a small but significant increase over time was found, with the model explaining 6.4% of the variance ($p < 0.01$);

Year 12 students were more likely to report having ever received oral sex than Year 10 students ($p < 0.01$). The low variances for both giving and receiving indicate that after controlling for gender and year level, time did not sufficiently explain the increases in oral sex. There were no differences between male and female students in receiving oral sex.

Table 5.5 Students' reported sexual activities – oral sex

	2002		2008		2013		2018	
	%	n	%	n	%	n	%	n
Giving oral sex	39.0	923	44.6	1,258	38.5	578	52.1	1,988
Receiving oral sex	40.7	962	–	–	38.6	577	51.4	1,962

Figure 5.3 Percentage of students reporting giving oral sex

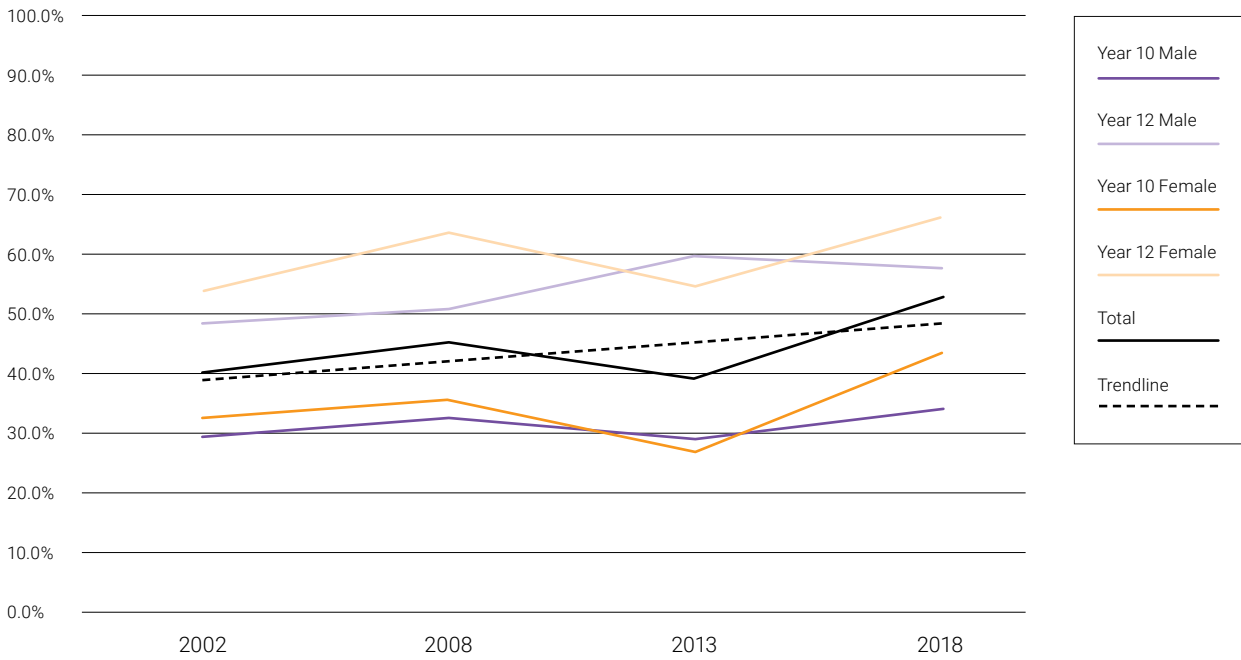
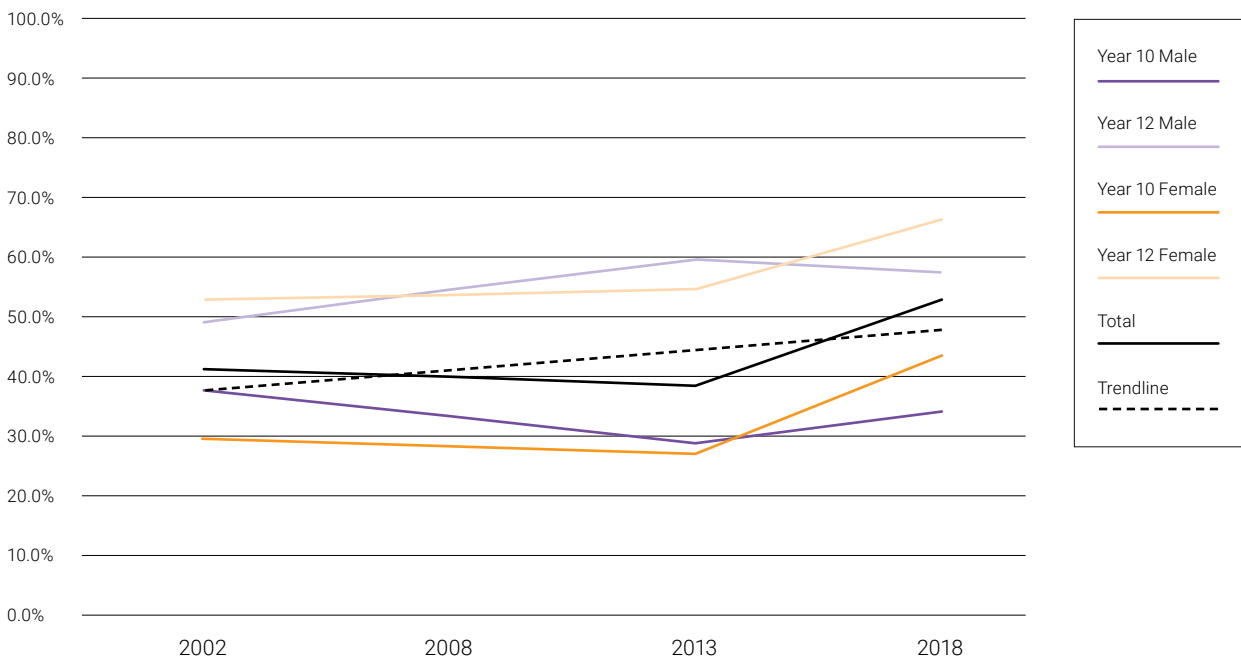


Figure 5.4 Percentage of students reporting receiving oral sex



Note: The question about receiving oral sex was not asked in 2008

Penetrative sex

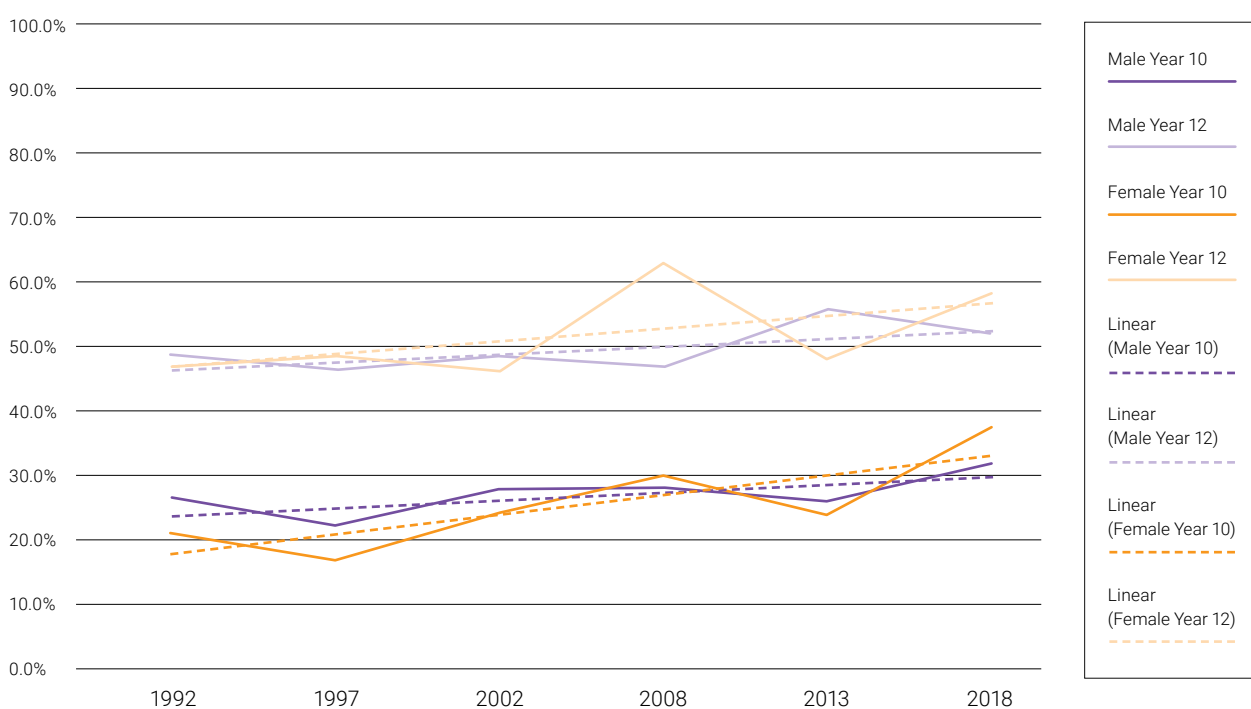
For penetrative sex (see Table 5.6 and Figure 5.5), a significant increase over time was found, with the model explaining 7.3% of the variance ($p < 0.01$); Year 12 students reported more penetrative sex than Year 10 students ($p < 0.01$). The low variance for penetrative sex indicates that after controlling for gender and year level, time did not sufficiently explain the increases in

penetrative sex. The increase in 2018 results was likely due to a different recruitment strategy (see 3.2 Sampling, recruitment, and survey administration). When comparing the 2018 results to nationally representative studies of sexual behaviour in Australia, the 46.6% of students reporting penetrative sex is slightly less than the national average in 2013.¹⁴

Table 5.6 Students' reported sexual activities – penetrative sex

		1992		1997		2002		2008		2013		2018	
		%	n	%	n	%	n	%	n	%	n	%	n
Male	Year 10	26.0	101	21.8	171	27.6	161	28.2	165	25.6	97	31.4	200
	Year 12	48.3	159	46.3	332	48.2	201	46.8	182	55.4	108	51.7	541
Female	Year 10	20.8	104	16.3	157	24.3	185	29.6	291	23.5	119	36.8	329
	Year 12	46.6	215	47.8	471	46.1	258	62.8	518	47.9	168	57.9	675
Total		34.5	580	32.8	1,130	34.7	804	41.5	1,157	34.4	492	46.6	1,745

Figure 5.5 Percentage of students reporting penetrative sex



5.4 Sexually active students

Number of sexual partners in previous year

The majority of sexually active students, those who had engaged in penetrative (vaginal and/or anal) sex, reported having one sexual partner in the past year (overall 54.2% in 1992 and 61.3% in 2018; see Table 5.7). No differences were found over time.

Table 5.7 Number of sexual partners in the previous year

	1992		1997		2002		2008		2013		2018	
	%	n	%	n	%	n	%	n	%	n	%	n
None	6.7	38	6.3	71	5.7	45	2.7	31	5.5	26	4.0	69
One	54.2	308	57.7	648	56.9	453	52.4	594	53.8	254	61.3	1,056
Two	18.5	105	20.4	229	17.7	141	15.0	170	16.1	76	15.7	270
Three or more	20.6	117	15.7	176	19.7	157	29.9	339	24.6	116	19.1	329

Unwanted sex

Since 2002, the survey has asked students if they had ever had sex when they didn't want to. The term "want" was not defined and left to individual students to determine what "didn't want" meant to them. The survey has never asked explicitly about forced or coerced sexual experiences. In 2018, students were able to type in reasons why they had sex when they didn't want to; preliminary analyses suggest that while a few ($n = 49$; 0.77% of the total sample) explicitly indicated forced or coerced situations, a wide range of interpretations of "didn't want" exist, including ambivalence and experiences of changing one's mind.

About a quarter of sexually active students reported having had sex when they didn't want to. Table 5.8 lists the percentages of students who reported having had unwanted sex. There were no statistically significant differences over time; despite observable differences seen in Table 5.8, the small cell sizes and wave-like pattern of data over time likely contributed to no findings of statistical difference. Female students have consistently reported significantly higher rates of having had unwanted sex, especially in the youngest year group in the most recent survey, where the divergence between male and female Year 10 students is higher than in previous surveys.

Table 5.8 Sexually active students who have ever had unwanted sex

		2002		2008		2013		2018	
		%	n	%	n	%	n	%	n
Male	Year 10	21.9	35	19.3	32	20.0	18	13.8	27
	Year 12	23.8	48	15.0	27	22.9	24	18.5	98
Female	Year 10	31.9	59	33.1	96	26.3	30	42.9	136
	Year 12	25.8	66	40.4	210	28.6	48	33.8	221

Reasons for unwanted sex are listed in Table 5.9. Being drunk was the most common reason in 2002 (61.0%) and 2013 (53.3%). "My partner thought I should" was the most common in 2008 (55.8%) and 2018 (51.5%). Few students (around 10% overall) reported peer pressure as a reason for having unwanted sex, although male students (12.5%–26.2%) were more likely to report peer pressure as a reason than female students (4.3%–10.3%).

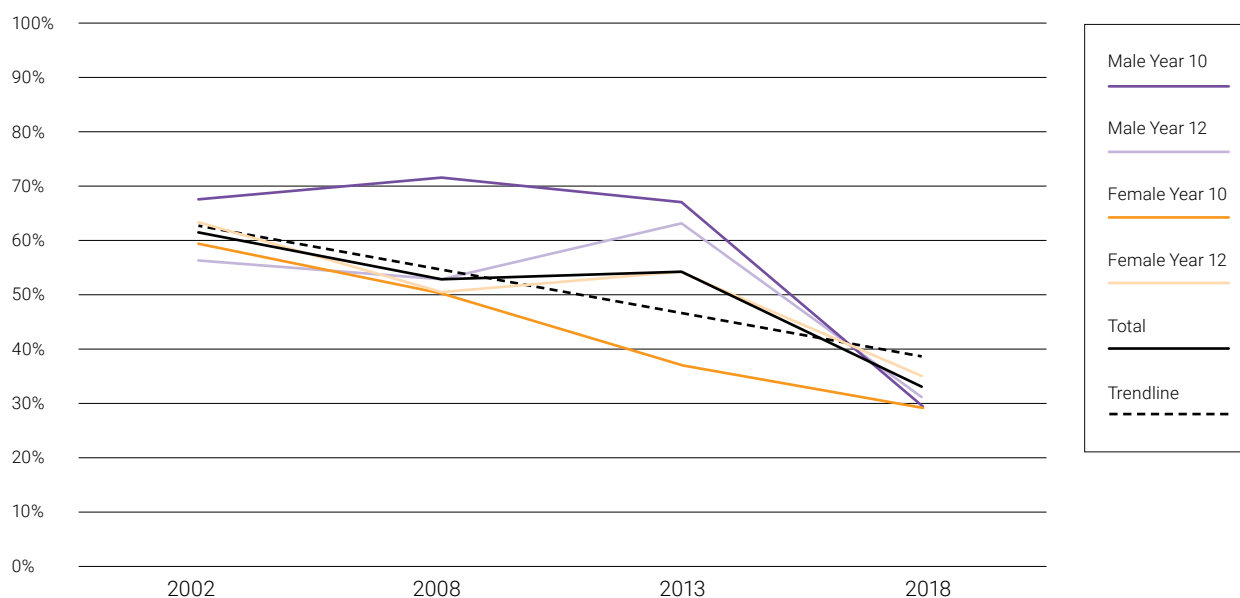
Figure 5.6 shows that alcohol use is a declining reason for having unwanted sex. This is supported by the logistic regression, which showed a significant decline in alcohol use as a reason for unwanted sex ($p < 0.01$). However, this only explained 5.1% of the variance, meaning that after controlling for gender and year level, time did not sufficiently explain the decline in alcohol use as a reason for having unwanted sex. There were no differences between genders or year levels.

Table 5.9 Sexually active students who have ever had unwanted sex – reasons

		2002		2008		2013		2018	
		%	n	%	n	%	n	%	n
Male	I was too high at the time	30.1	25	24.7	15	26.2	11	7.2	9
	I was too drunk at the time	61.0	51	62.7	37	64.3	27	31.2	39
	My partner thought I should	46.9	39	43.5	26	38.1	16	53.6	67
	My friends thought I should	12.5	10	12.7	7	26.2	11	18.4	23
Female	I was too high at the time	18.9	24	8.6	26	17.9	14	11.2	40
	I was too drunk at the time	61.0	76	50.2	154	47.4	37	32.5	116
	My partner thought I should	50.6	63	58.2	178	59.0	46	50.7	181
	My friends thought I should	4.3	5	8.4	26	10.3	8	5.3	19
Total	I was too high at the time	23.3	49	11.3	41	20.8	25	10.2	49
	I was too drunk at the time	61.0	127	52.2	191	53.3	64	32.2	155
	My partner thought I should	49.1	102	55.8	204	51.7	62	51.5	248
	My friends thought I should	7.6	16	9.1	33	15.8	19	8.7	42

Note: Multiple response questions

Figure 5.6 Percentage of students who reported alcohol use as the reason for experiencing unwanted sex



Condom use in the past year

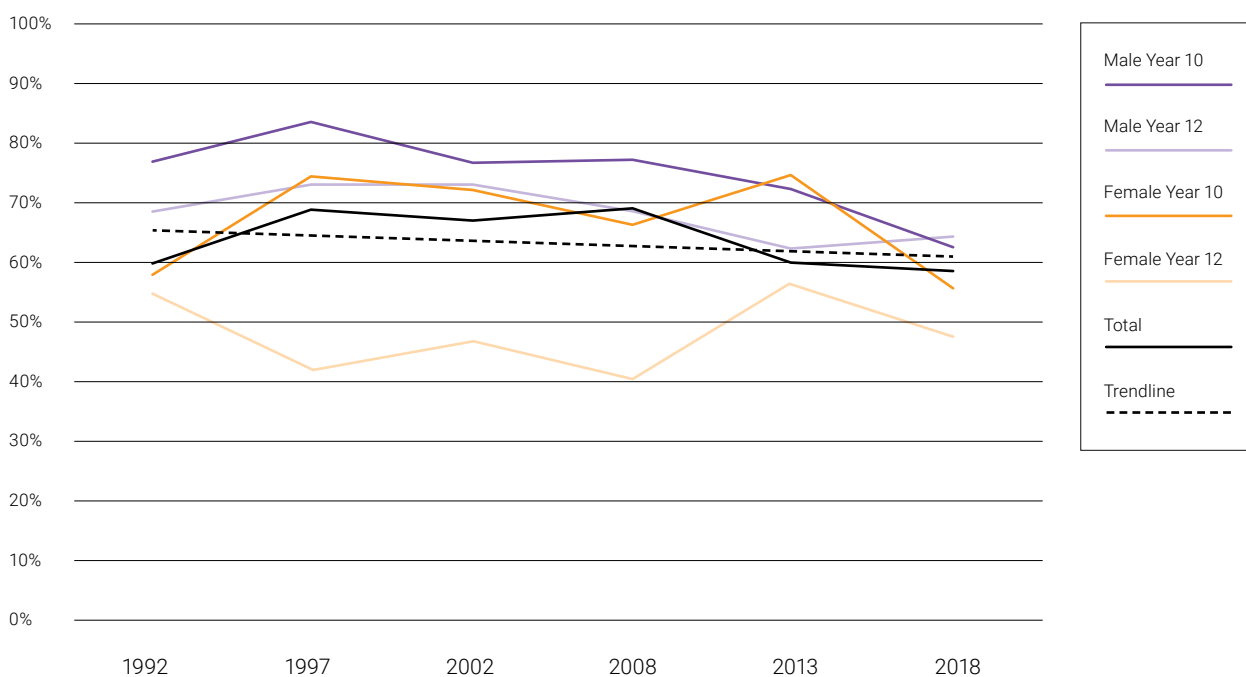
Sexually active students reported how often they used a condom in the last year (see Table 5.10). Among these students, the rates of always or sometimes using a condom were high. Figure 5.7 shows the percentage of sexually active students who reported sometimes or always using a condom (85.4% in 1992 to 87.2% in 2018). There were no statistical differences

over time between gender or year levels. As can be seen in Figure 5.7, Year 12 female students reported overall lower rates of condom use over the last year. This may in part be explained by higher rates of use of the contraceptive pill by this group (see Contraception section on page 34).

Table 5.10 Sexually active students' reported condom use in the previous year

	1992		1997		2002		2008		2013		2018	
	%	n	%	n	%	n	%	n	%	n	%	n
Always	43.0	227	53.1	553	51.9	392	50.0	554	46.3	208	38.5	629
Sometimes	42.4	224	37.8	393	39.2	296	43.0	476	41.2	185	48.7	796
Never	14.6	77	9.1	95	9.0	68	7.0	77	12.5	56	12.7	208

Figure 5.7 Percentage of students who sometimes or always used a condom in the last year



The most recent sexual encounter

Sexually active students were asked a series of questions that related to the last time they had sex. Table 5.11 shows the relationship of sexually active students to their most recent sexual partner. Most students reported that their last sexual encounter was with their current partner.

Most commonly, Year 12 female students (67.5%–82.7%) reported having their last sexual encounter with their current partner, followed by Year 10 female students (59.6%–64.1%), Year 12 male students (45%–63.2%), and Year 10 male students (35.7%–56.5%). Having sex with someone they had known for a

while but had not had sex with before was somewhat common for Year 10 male students (31.1%–47.9%). Less than 10% of female students reported having their last sexual encounter with someone they had just met (3.3%–12.5%). In comparison to the other student groups, Year 10 male students reported more commonly having their last sexual encounter with someone they had just met (7.6%–24.9%). A multinomial logistic regression analysis found no difference over time. Additional detailed tables and figures on non-significant findings and other variables on the most recent sexual encounter are available upon request; please email ARCSHS@latrobe.edu.au

Table 5.11 Sexually active students' relationship to their most recent sexual partner

	1992		1997		2002		2013		2018	
	%	n	%	n	%	n	%	n	%	n
Someone you had just met	8.9	48	10.5	117	10.9	77	8.6	40	6.8	116
Someone you had known for a while but had not had sex with before	32.0	173	30.3	337	25.4	180	36.3	168	27.9	478
Current partner	59.1	320	59.2	658	63.7	451	55.1	255	65.3	1,118

Note: This question was not asked in 2008

Overall more than 90% of students reported that their last sexual encounter was with someone of the opposite gender. Table 5.12 shows the proportion of students who had sex with opposite gender partners in their most recent sexual encounter. There were no differences over time.

Table 5.12 Sexually active students whose last sexual partner was of the opposite gender

	2002		2008		2013		2018	
	%	n	%	n	%	n	%	n
Total	97.8	771	95.0	1,073	93.4	440	93.3	1,596

Age of partner

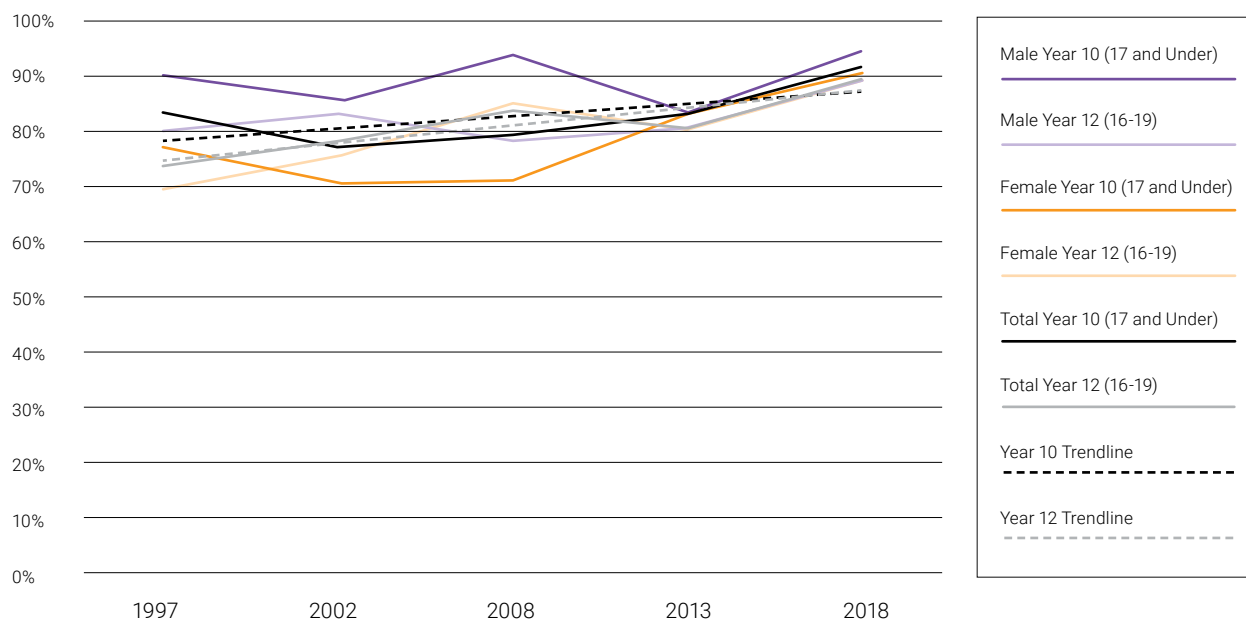
Most students reported that the age of their last sexual partner was similar to their own age (Table 5.13). The majority of Year 10 students (79.2%–91.5%) reported that their last sexual partner was 17 years or under. Most Year 12 students (82.1%–89.8%) reported that their last sexual partner was 16–19 years of age. A multinomial logistic regression analysis suggested

that the age of last sexual partner was statistically different over time between genders and across year levels, accounting for 30.1% of the variance ($p < 0.01$); increasingly students were reporting that their last partner was of a similar age. Figure 5.8 illustrates the last sexual encounter with a partner of their own age (Year 10 = 17 years and under, Year 12 = 16–19 years).

Table 5.13 Age of sexually active students' last sexual partner

		1997		2002		2008		2013		2018		
		%	n	%	n	%	n	%	n	%	n	
Male	Year 10	Under 16	61.0	102	48.1	71	43.0	69	41.0	34	57.4	108
		16-17	29.9	50	41.7	61	51.3	82	44.6	37	36.2	68
		18-19	4.1	7	5.4	8	2.6	4	7.2	6	3.2	6
		20 or older	5.1	8	4.9	7	3.1	5	7.2	6	3.2	6
	Year 12	Under 16	14.4	47	9.1	18	10.0	18	13.7	14	4.9	26
		16-17	65.5	214	65.8	127	68.9	123	58.8	60	73.3	388
		18-19	14.9	49	18.2	35	9.4	17	22.5	23	15.9	84
		20 or older	5.1	17	6.8	13	11.7	21	4.9	5	5.9	31
Female	Year 10	Under 16	25.7	40	18.4	34	22.2	61	24.3	27	45.9	144
		16-17	50.8	79	52.0	95	50.1	138	60.4	67	43.6	137
		18-19	18.2	28	24.1	44	21.4	59	13.5	15	8.6	27
		20 or older	5.4	8	5.4	10	6.2	17	1.8	2	1.9	6
	Year 12	Under 16	3.4	16	1.5	4	0.7	3	2.4	4	0.9	6
		16-17	32.6	151	39.1	100	31.2	160	40.1	67	54.1	356
		18-19	37.6	174	36.8	94	53.7	275	40.1	67	35.7	235
		20 or older	26.4	122	22.6	58	14.4	74	17.4	29	9.3	61

Figure 5.8 Percentage of last reported sexual encounters with a partner of the same age



Note: For Year 10 students, the percentage of total students reporting that their last partner was 17 years of age and under is shown; for Year 12 students, the percentage of total students reporting that their last partner was 16–19 years of age is shown.

Sex-related issues discussed

Sexually active students were asked whether they had discussed a range of topics with the most recent person they had sex with, before having sex (see Table 5.14). Condom use was the most discussed topic (64.4%-77.8%), followed by “avoiding pregnancy” (41.6%-63.6%) and “how to get sexual pleasure without sex” (28.9%-49.8%). There were no differences over time when controlling for gender and year.

Items on whether students discussed each topic was aggregated to form a composite score to represent discussions about sexual health. The scale ranged from 0–5, with higher scores indicating discussion about more topics. There was no statistical difference over time after controlling for gender and year level.

Table 5.14 Sexually active students who discussed sex related issues during the last sexual encounter

Talked about...	1992		1997		2002		2003		2013		2018	
	%	n	%	n	%	n	%	n	%	n	%	n
Avoiding pregnancy	53.9	308	41.6	455	43.6	343	44.3	478	51.5	241	63.6	1,052
Avoiding HIV infection	24.9	142	21.7	236	22.3	173	16.2	166	24.1	111	30.0	497
Avoiding STIs	21.8	124	21.8	235	23.3	181	20.0	207	30.2	139	37.3	614
Sexual pleasure	28.9	165	34.3	371	34.6	268	33.2	348	42.2	195	49.8	805
Using a condom	64.4	367	68.4	754	69.1	546	70.4	756	69.7	325	77.8	1,308

Condom use

Table 5.15 shows students' responses to whether a condom was available the last time they had sex and whether a condom was used. The majority of students (69.9% in 1992 and 71.6% in 2018) reported that a condom was available at their last sexual encounter; fewer students (60.6% in 1992 and 57.7% in 2018)

reported that a condom was used at their last sexual encounter. Binary logistic regression analyses found no difference over time for whether a condom was available or whether a condom was used (factoring in that a condom was available).

Table 5.15 Sexually active students reporting that a condom was available and was used at their last sexual encounter

	1992		1997		2002		2008		2013		2018	
	%	n	%	n	%	n	%	n	%	n	%	n
Were condoms available?	69.9	399	73.5	813	73.4	580	68.3	772	67.5	315	71.6	1,188
Were condoms used?	60.6	342	68.2	757	64.5	508	63.6	716	60.1	279	57.7	967

Students who reported not using a condom at their last sexual encounter were asked why they did not use one (Table 5.16). Consistently over time, the most common three reasons for not using a condom were knowledge of their partner's sexual history (34.1% in 2002 and 41.2% in 2018), followed by trust of their partner (30.7% in 2002 and 37.6% in 2018), and "It just happened" (33% in 2002 and 32.2% in 2018). Less than 4% of students from 2002 to 2018 said that they did not use

condoms because condom use wasn't their responsibility. "It just happened" was the most common reason for Year 10 and 12 male students, while trust of their partner and knowledge of their partner's sexual history were the most common reasons for Year 12 females. Reasons were varied for Year 10 female students. "I don't like them" was also a common reason for Year 10 male students. No differences were found over time after controlling for gender and year level.

Table 5.16 Reasons why sexually active students did not use a condom the last time they had sex

	2002		2008		2013		2018	
	%	n	%	n	%	n	%	n
I don't like them	24.3	65	26.5	77	33.0	61	30.2	214
My partner doesn't like them	20.6	55	24.1	70	23.8	44	30.1	213
I trust my partner	30.7	82	30.6	89	31.4	58	37.6	266
It just happened	33.0	88	33.7	98	25.4	47	32.2	228
We have both been tested for HIV/STI	11.2	30	13.7	40	20.0	37	20.2	143
I know my partners' sexual history	34.1	91	28.9	84	34.6	64	41.2	292
It's not my responsibility	3.4	9	3.1	9	1.1	2	0.6	4

Note: Multiple response questions

Feelings after sex

Sexually active students were asked a series of questions about how they felt after their last sexual encounter, which were rated on a 5-point scale (from 0–4) with options: “not at all”, “a little”, “a fair amount”, “a lot”, and “extremely”. Table 5.17 lists the means and standard deviations for positive and negative emotions.

Items that were answered from 2002–2018 were used to form composite negative and positive emotions scales. Feeling good, happy, and fantastic were used for the positive emotion scale; worried, guilty, and upset were used for the negative emotion scale. The scales ranged from 0–12, with higher scores indicating more positive or negative emotions about their last sexual encounter. Most students indicated high levels of positive feelings and low levels of negative feelings. There was no change over time after controlling for gender and year level.

Table 5.17 Sexually active students’ positive and negative feelings after their last sexual encounter

	2002		2008		2013		2018	
	m	sd	m	sd	m	sd	m	sd
Positive emotion scale (0–12)	9.3	2.99	8.8	3.19	9.1	2.96	8.6	3.25
Good (0–4)	3.2	1.01	3.0	1.03	3.2	0.97	3.0	1.09
Happy (0–4)	3.2	0.99	3.0	1.08	3.1	1.00	3.0	1.11
Fantastic (0–4)	2.9	1.24	2.7	1.29	2.9	1.19	2.7	1.31
Loved (0–4)	2.9	1.33	2.5	1.45	2.7	1.43	N/A	N/A
Negative emotion scale (0–12)	2.1	2.88	1.9	2.69	1.9	2.78	1.5	2.08
Used (0–4)	0.6	1.11	0.6	1.26	0.6	1.15	N/A	N/A
Guilty (0–4)	0.7	1.19	0.6	1.03	0.6	1.12	0.5	0.87
Upset (0–4)	0.4	0.89	0.5	1.02	0.4	0.98	0.3	0.70
Worried (0–4)	1.0	1.30	1.0	1.28	0.8	1.16	0.7	0.95
Regretful (0–4)	N/A	N/A	0.7	1.23	0.7	1.22	0.5	1.02

Note: N/A indicates that this question was not asked at this time point. The questions about feeling loved and used were not asked in the 2018 survey and the question about feeling regretful was not asked in the 2002 survey.

Contraception

Sexually active students were asked if they used contraception during their last sexual encounter, and if so what type of contraception (see Tables 5.18–5.20). Contraception that was most commonly used included condoms (56.9%–63.7%) and the pill (37.8%–47.3%). Withdrawal was the third most common form of preventing conception, ranging from 3.2% to 21.9%.

Other forms of hormonal contraception such as an Intrauterine Device (IUD), injectable, or implant were rarely in use at the time of the last sexual encounter. Controlling for gender and year level, there was no change over time for any type of contraception.

Table 5.18 Students who used common contraceptive methods during their last sexual encounter

	2002		2008		2013		2018	
	%	n	%	n	%	n	%	n
Contraceptive pill	37.8	292	47.3	532	40.0	189	46.5	751
Condoms	63.7	493	62.4	706	59.1	279	56.9	919

Note: Multiple responses

Table 5.19 Students who used other hormonal contraception during their last sexual encounter

	2002		2008		2013		2018	
	%	n	%	n	%	n	%	n
IUD	0.4	3	1.3	15	1.3	6	2.1	34
Emergency contraception (the morning-after pill)	4.2	32	6.7	76	3.2	15	4.4	71
Contraceptive implant (e.g., Implanon)	0.0	0	0.0	0	5.9	28	8.9	144
Injection (e.g., Depo-Provera)	0.0	0	0.0	0	0.4	2	0.9	15

Note: Multiple responses

Table 5.20 Students who used other contraceptive methods during their last sexual encounter

	2002		2008		2013		2018	
	%	n	%	n	%	n	%	n
Diaphragm	0.5	4	0.1	2	0.2	1	0.2	4
Withdrawal	12.7	97	9.0	101	16.1	76	21.1	341
Rhythm method	1.3	10	0.5	5	1.7	8	1.4	23
None	9.2	70	0.2	2	12.7	60	7.4	120
Other	1.8	14	2.8	32	1.3	6	0.8	13

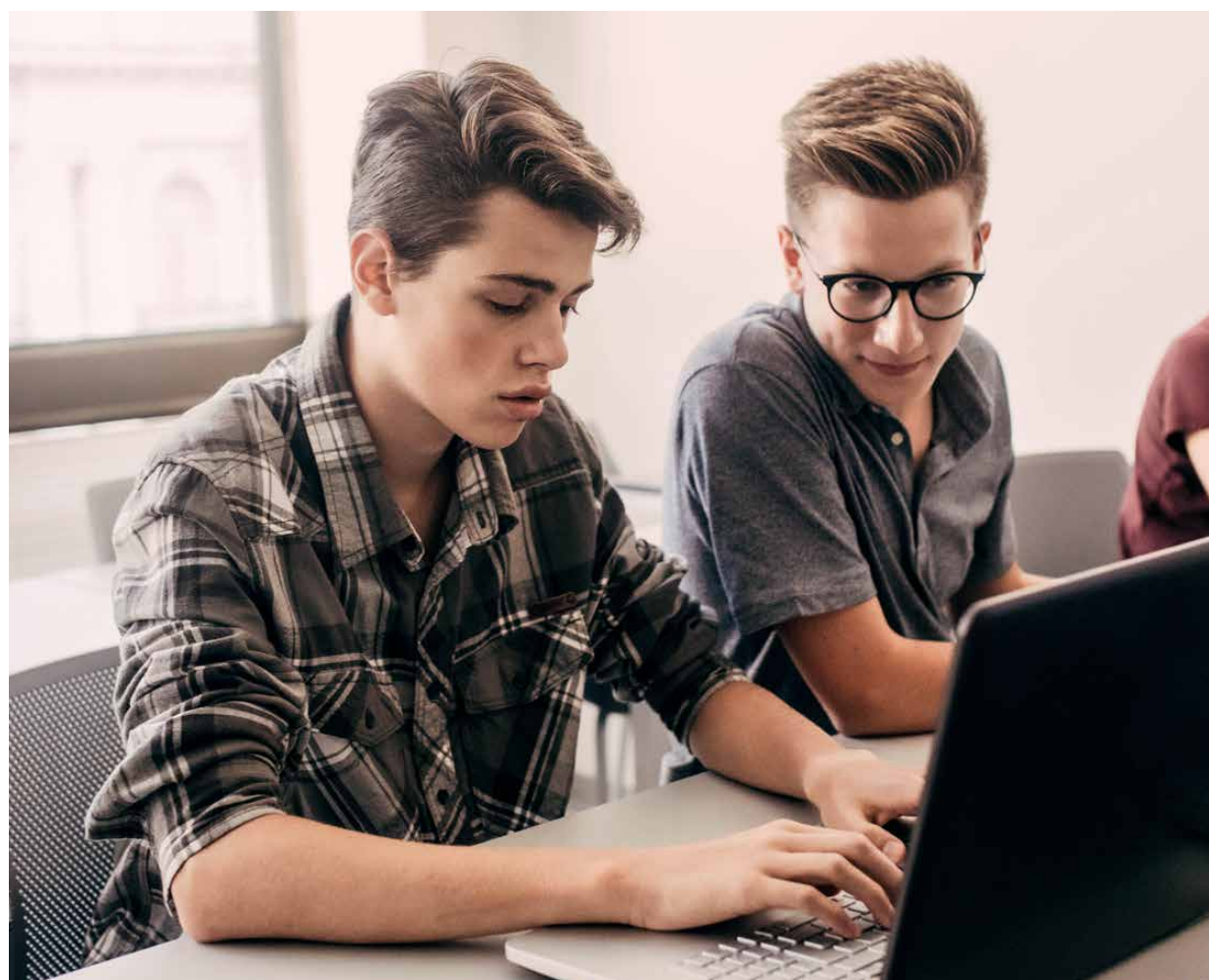
Note: Multiple responses

Pregnancy among all sexually active students

Very few sexually active students (3.5%–6.1%) reported that they had experienced sex that resulted in pregnancy (Table 5.21). No differences over time were found controlling for gender and year level.

Table 5.21 Sexually active students who had sex that resulted in a pregnancy

		2002		2008		2013		2018	
		%	n	%	n	%	n	%	n
Total	Yes	6.1	50	4.5	53	5.6	29	3.5	59
	No	86.4	699	91.1	1,071	90.0	467	94.7	1,616
	Unsure	7.4	60	4.3	51	4.4	23	1.9	32



Sources of information

Since 1992, the survey has documented the relationship between parents and students in discussing topics related to sexual health, as well as where young people seek sexual health information. Findings have historically indicated the sources from which young people are currently learning about sexual health, in order to identify the most useful communication channels for new initiatives to promote sexual health. Additional detailed tables and figures on non-significant findings are available upon request; please email ARCSHS@latrobe.edu.au

Since 1992, students have been asked to rate their confidence in talking to their parent or guardian about HIV and STIs. In 2002, the same question was asked with regard to confidence in talking about contraception and talking about sex with their

parent or guardian. Ratings ranged from 0 (not at all confident) to 5 (extremely confident). In 2018, a differentiation between talking to a mother/female guardian/stepmother or father/male guardian/stepfather was added to the question—the higher rated of the two, mother/female guardian/stepmother, was used for analysis. Table 6.1 presents means and standard deviations for these confidence scores. Across all three domains and controlling for gender and year level, students generally maintained a low to moderate level of confidence in talking to their parents or guardians about these issues. No differences in confidence in talking to their parents or guardians about HIV/STIs, contraception, or sex over time were found when controlling for gender and year level.

Table 6.1 Students' confidence in talking to their parents or guardians about sex related matters

	1992		1997		2002		2008		2013		2018*	
	m	sd	m	sd	m	sd	m	sd	m	sd	m	sd
How confident are you talking to your parents about HIV/STIs?												
Total	2.47	1.26	2.61	1.33	2.80	1.36	2.58	1.27	3.07	1.37	1.83	0.88
How confident are you talking to your parents about contraception?												
Total	–	–	–	–	2.81	1.31	2.69	1.26	3.12	1.32	2.02	0.91
How confident are you talking to your parents about sex?												
Total	–	–	–	–	2.91	1.33	2.81	1.29	2.93	1.34	1.70	0.85

*Confidence in talking to mother/female guardian/stepmother only

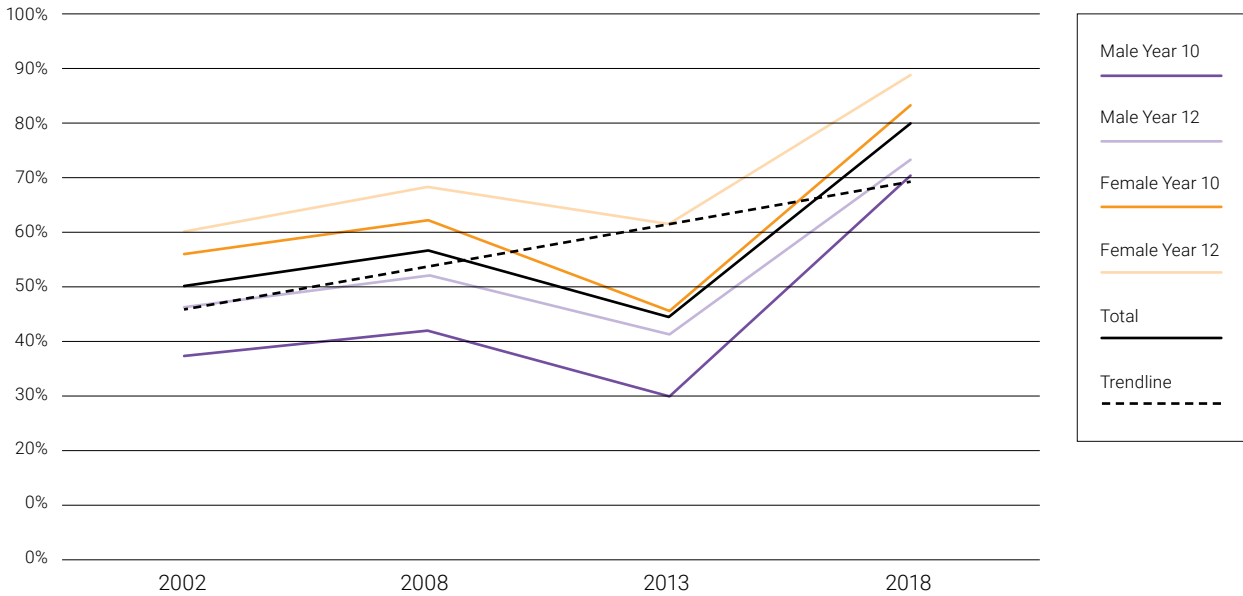
Since 2002, the survey has asked students to indicate sources of information they have ever used to learn more about sexual health. The list comprised 12 sources including GPs, parents/guardians (female and male), friends (male and female), school-based sources (counsellor, nurse, teacher, and program), community-based sources (health services and youth workers), and internet websites. Older siblings were added in 2008. Table 6.2 presents percentages for each source used by the students. Observable increases in the use of friends as a source of information can be seen, particularly for the 2018 cohort. Conversely, observable decreases in the use of teachers and school programs are noted, particularly starting with the 2008 cohort.

Figures 6.1–6.2 display results for the percentages for the distinct information sources with a statistically significant difference over time: friends (female and male) and internet websites. Binary logistic regression analysis for each domain suggests there was a small but significant increase in students using female friends for sexual health information, with female students and Year 12s more likely to use female friends for sexual health information ($p < 0.01$). This model explains 10.3% of the variance. Logistic regression analysis also found a small significant increase in students using the internet for sexual health information, with Year 12 students more likely to use the internet for sexual health information ($p < 0.01$). This model explains 11.7% of the variance. There were no differences between genders on use of the internet. No other differences were found for the other domains.

Table 6.2 Students' use of sources for sexual health information

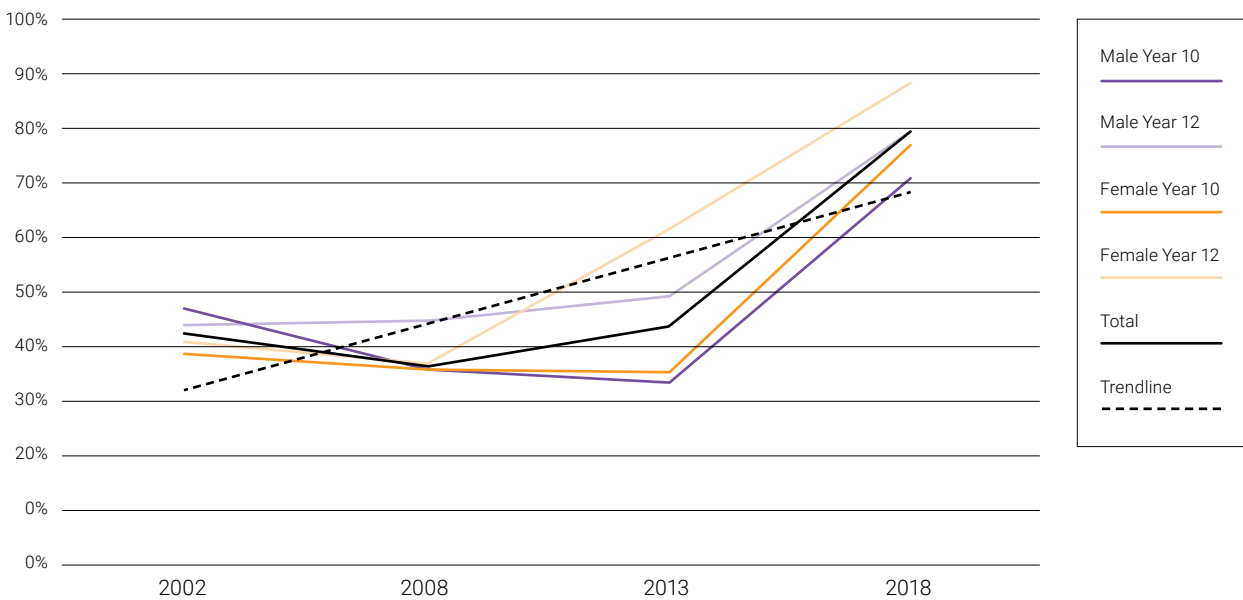
	2002		2008		2013		2018	
	%	n	%	n	%	n	%	n
Doctor/GP	41.7	842	32.6	790	29.0	442	32.8	1,113
Immediate family								
Father/male guardian	31.8	617	28.7	695	18.2	278	26.7	899
Mother/female guardian	52.7	1,071	50.1	1,213	35.8	547	53.0	1,792
Older sibling	–	–	24.2	587	13.6	207	20.8	671
Peers								
Female friend	49.1	991	50.5	1,224	39.6	604	74.6	2,525
Male friend	33.0	649	32.9	796	26.9	411	58.2	1,966
School-based resources								
School program	75.4	1,563	46.4	1,124	42.5	649	54.0	1,824
School counsellor	13.9	265	12.8	310	10.6	161	9.6	324
School nurse	22.1	443	13.2	319	11.3	172	9.1	308
Teacher	46.0	914	31.1	754	28.9	441	30.3	1,022
Community-based resources								
Community health service	22.4	431	13.3	322	10.6	161	17.3	579
Youth worker	31.1	743	10.8	262	9.2	140	8.0	268
Internet websites	42.1	1,005	36.0	872	43.1	657	79.9	2,703

Figure 6.1 Percentage of students' use of friends as a source of sexual health information



Note: The temporary decrease observed in 2013 may be a result of a smaller sample size obtained through mixed methods

Figure 6.2 Percentage of students' use of internet websites as a source of sexual health information



Conclusion

Australia has sought to address the sexual health and wellbeing of its young people by providing a regularly updated national strategic framework and funding a national research effort to guide interventions and programs. The National Survey of Australian Secondary Students and Sexual Health has served a vital role in providing regular snapshots on the state of young people's sexual health knowledge and practices. This *Trends Over Time* report provides a unique opportunity to review changes over the last 25 years.

Across all comparable variables in the repeated cross-sectional survey, a few significant but statistically small changes over time were found. Accurate knowledge on STIs was seen to have significant improvements. Of particular note was the increase of accurate knowledge on chlamydia between 1997 and 2008; a concerted national effort to raise awareness and knowledge around chlamydia occurred during that time which may, in part, explain the increases observed. Overall, young people's awareness of HPV vaccination was uneven, despite a successful national vaccination program. There was a significant increase in the reporting of diverse sexual attractions. The age of young people's last sexual partners has steadily come more into alignment with their own age. Finally, and not surprisingly, more young people today are using the internet as a source of information than 10 years ago. Friends have also come to play a more dominant role as a source for sexual health information.

Most domains measured across three or more waves of the survey showed no statistically significant and meaningful changes over time. HIV transmission knowledge remains high. HPV and hepatitis knowledge also have not changed much;

continued low rates of correct knowledge indicate more work could be done to implement these domains into educational and health promotion activities with young people. While the rates of condom availability during the last sexual encounter remain high and relatively stable, the lack of increase in condom use during the last time students had sex indicate that more efforts, such as health promotion campaigns, may be needed to encourage greater condom use. While most sexually active students continued to report positive emotions after their last sexual experience, the overall sustained rates of ever having had unwanted sex, especially the more recent increased reports by younger female students, bolster arguments for skills-based education to assist young people in negotiating wanted and safer sexual activity.

The national strategies continue to call for action to improve young people's awareness and accurate knowledge of HIV, STIs, and viral hepatitis. While HIV knowledge has remained relatively high and small improvements were seen in STI knowledge, there continues to be room for improvement, particularly on knowledge about HPV and viral hepatitis. Given the shifts towards sexual health information-seeking via the internet and friends, future work may look to using a multi-faceted coordinated approach to improving knowledge through in-school curricula, community-based health promotion campaigns, as well as evidence-based peer educator programs and national public health messaging. The findings of the National Survey of Australian Secondary School Students and Sexual Health will continue to play a vital role in bringing the experiences and voices of young people into this discussion.

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La Trobe University acknowledges that our campuses are located on the lands of many traditional custodians in Victoria and New South Wales. We recognise their ongoing connection to the land and value their unique contribution to the University and wider Australian society.

La Trobe University is committed to providing opportunities for Aboriginal and Torres Strait Islander people, both as individuals and communities, through teaching and learning, research and community partnerships across all of our campuses.

The wedge-tailed eagle (*Aquila audax*) is one of the world's largest.

The Wurundjeri people – traditional owners of the land where our Melbourne campuses are located – know the wedge-tailed eagle as Bunjil, the creator spirit of the Kulin Nations.

There is a special synergy between Bunjil and the La Trobe University logo of an eagle. The symbolism and significance for both La Trobe and for Aboriginal people challenges us all to 'gamagoen yarrbat' – to soar.

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