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It's Your Love Life: a new periodic survey on sexual health among young people in NSW

Report on heterosexually-identified participants in the 2016 survey

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BBV & STI RESEARCH, INTERVENTION AND STRATEGIC EVALUATION

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Acknowledgements

We thank all participants for the time they have spent responding to the survey.

The 'It's Your Love Life' periodic study was conducted by the Centre for Social Research in Health (UNSW Sydney) as part of the Blood Borne Virus & STI Research, Intervention and Strategic Evaluation (BRISE) program funded by the Centre for Population Health (NSW Ministry of Health), with additional funding from the Australian Government Department of Health. We would like to thank the Centre for Population Health and the Australian Government for their support.

Special thanks also to Tony Tang and Maks Smits for their contribution to developing the survey branding and the survey recruitment strategy.

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Suggested citation:

Adam, P. C. G., Schippers, M., Schmidt, H., Modderman, K., Slattery, C., Estoesta, J., Murray, C., Hearnshaw, G., Murphy, D., & de Wit, J. B. F. (2017). It's Your Love Life: a new periodic survey on sexual health among young people in NSW. Sydney: Centre for Social Research in Health, UNSW Sydney. http://doi.org/10.4225/53/5971450a427b9

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Glossary

CSRH	Centre for Social Research in Health
GP	general practitioner
HIV	human immunodeficiency virus
IYLL	It's Your Love Life; the periodic survey on sexual health among young people
M	mean
SD	standard deviation
STI	sexually transmissible infection

Statistics

The report uses advanced statistical methodology. For further details of these methods, we recommend the following online resource: http://statistics.berkeley.edu/~stark/SticiGui/Text/gloss.htm

Report symbols

The following symbol is used throughout the report to indicate a section summary: 

Executive summary

Between December 2015 and March 2016, the 'It's Your Love Life' periodic survey recruited 2,120 heterosexually-identified young people aged 15–29 years and living in New South Wales (NSW). The data collected through the survey contributes new knowledge on the attitudes and practices of heterosexual young people and their exposure to sexual health promotion initiatives.

While knowledge of sexually transmissible infections (STIs) was found to be fair among heterosexual participants, young men were generally less knowledgeable about STIs than young women. Some gaps in STI knowledge also existed, with only half of young people (53.9%) knowing that STIs are often symptom free. While young people in this sample, and in particular young women, had a high perception of the severity of STIs, most felt it was unlikely that they would contract an STI.

Most participants had been on a date in the past 12 months but carrying condoms (consistently) while going on a date was found to be infrequent among young men and rare in young women. Overall, a majority of young people (62.2%) had condomless vaginal or anal intercourse at least once with partners in the 12 months prior to the survey. Condomless sexual intercourse was found to be frequent with both regular and casual partners. Of the participants who had regular partners in the past year, 75% had had vaginal or anal intercourse without condoms with them in that period. Of the participants who had casual partners in the past year, 63.2% had vaginal or anal intercourse without condoms.

Despite the high frequency of condomless sexual intercourse, only 42.8% of sexually active participants had been tested for STIs or human immunodeficiency virus (HIV). The proportion of participants who had been tested differed by gender, with only 36.4% of male participants being tested compared to 46.1% of female participants. Among participants who had been tested for STIs or HIV, 56.6% had been tested in the past 12 months. This corresponds to approximately one quarter of sexually active young people (24.4%) testing in the 12 months prior to the survey. This proportion was significantly lower among young men than among young women (17.0% versus 28.1%).

A range of factors were found to shape young people's condom use and STI testing. Using condoms was positively associated with holding positive attitudes towards condom use, perceiving supportive norms towards using condoms and considering that using condoms is easy and negatively associated with considering that condoms reduce pleasure and are a sign of distrust. Having tested for STIs was positively associated with considering that testing for STIs is easy, knowing where to go to get tested and perceiving supportive norms towards testing for STIs, and negatively associated with being worried about testing and considering that testing is expensive. These results indicates that a range of individual, social, service-related or structural barriers and facilitators can be addressed by sexual health promotion campaigns and other activities to increase uptake of condoms and STI testing among young people.

The survey also provides new data on heterosexual young people's levels of exposure to sexual health promotion. While most participants had noticed messages promoting condom use or testing for STIs at least once in the past 12 months, most participants had only been rarely or occasionally exposed to sexual health promotion messages. Familiarity with and uptake of important sexual health promotion resources was also found to be limited. Only 9.9% of participants were aware of any websites providing sexual health information, and the proportion of participants who had received free condoms in the past 12 months was limited (16.8%). The survey also assessed engagement with sexual health services. Of the sexually active participants, 5.5% had visited a sexual health clinic in the past 12 months and 42.8% had been in contact with a General

Practitioner (GP) or a nurse in relation to sexual health in the same period. Contact with GPs or nurses in relation to sexual health were found to be significantly more frequent among young women than young men (52.2% versus 24.3%). These findings illustrate the importance of ensuring young people are aware of the (online) resources that are available to support their sexual health needs, and encouraging young people, especially young men, to engage more frequently with sexual health-related services providers, including GPs and nurses.

Together these results indicate that substantial effort is required to support heterosexual young people in ensuring their sexual health.

Introduction

Young people 15–29 years of age are at disproportionate risk for sexually transmissible infections (STIs) in Australia, and are a priority population identified in the NSW STI Strategy 2016–2020 (NSW Ministry of Health, 2016). There is currently little comprehensive evidence available regarding the sexual health knowledge, attitudes and practices of young people in Australia, and the coverage and impact of sexual health promotion activities in this population. This evidence is particularly lacking for young people who are not engaged in secondary education.

Building on previous online surveys on sexual health among young people, including 'Getting Down To It' (Adam et al., 2011) and 'Project1626' (Adam et al., 2014), a novel online periodic survey of sexual health among young people aged 15-29 years and living in New South Wales (NSW) was developed and implemented by Dr Adam and Professor de Wit at the Centre for Social Research in Health (UNSW Australia) (CSRH). The survey was conducted as part of the Blood Borne Virus & STI Research, Intervention and Strategic Evaluation (BRISE) program, funded by the Centre for Population Health (NSW Ministry of Health), with additional funding from the Australian Government Department of Health.

The new periodic survey was called 'It's Your Love Life' (IYLL) and its first round of data collection aimed to:

- Assess levels of STI knowledge and perceived threat among young people
- Identify young people's views regarding condom use and testing for STIs, including HIV
- Establish estimates of condom use and testing for STIs
- Assess young people's level of familiarity with, and exposure to, sexual health promotion resources, activities and services.

In addition to establishing overall indicators of sexual health-related knowledge, attitudes and behaviour, and sexual health promotion coverage, the survey explored potential variations between:

1. sexually active and non-sexually active participants
2. male and female participants, and
3. participants of different age groups (15–19 years, 20–24 years and 25–29 years).

It is anticipated that the results presented in this report may provide guidance for priority actions regarding the STI response for heterosexual young people, in particular with respect to the strengthening of STI prevention and testing.

Methods

Design

IYLL is an online cross-sectional survey that will be repeated annually. A first round of data collection was completed between December 2015 and March 2016. The self-completed survey was hosted through the IYLL website (http://itsyourlovelife.csrh.org/) and participants were recruited from targeted advertisements on Facebook, Instagram, and Google.

Sample

A total of 4,008 visitors accessed the introduction page of the survey. A fifth of these visitors (20.4%) did not start the questionnaire or dropped out after responding to a few questions. The IYLL sample consists of 3,190 participants 15–29 years of age and living in NSW. Of the sample, 2,120 self-identified as heterosexual and 1,070 as lesbian, gay, bisexual or transgender (LGBT). Data presented in this report are based on the answers provided by the 2,120 participants who identified as heterosexual. LGBT data will be published separately.

Table 1 details the characteristics of the sample. Participants were on average 20.78 years old (SD=4.82, range: 15–29) with half of the sample aged 15-19 years. More female than male participants responded to the survey (64.7% versus 35.3%). Most participants (66.6%) reported to be students and large numbers of students had either a part-time (64.0%) or a full-time job (16.7%). Most non-students were employed in either full-time (69.7%) or part-time work (22.7%).

A majority of participants resided in Sydney (55.3%), 21.2% in major regional centres or cities in NSW, 15.7% in smaller cities or towns and 7.9% in rural areas.

Most participants were born in Australia (88.5%) and 2.6% identified as Aboriginal or Torres Strait Islander.

Of the 2,120 participants, 65.9% had oral, vaginal or anal sex with someone in the past 12 months, 5.5% had oral, vaginal or anal sex more than 12 months ago, 26.1% had never had oral, vaginal or anal sex with someone, and 2.5% preferred not to report on this information. Overall, 71.4% of the participants had had oral, vaginal or anal sex with someone and will be referred to as ‘sexually active participants’.

Table 1 Sample characteristics

Age (continuous)	
Mean age	20.78
Median age	19.00
Standard deviation	4.82
Range	15–29
Age groups	
15–19 years	1085 (51.2%)
20–24 years	357 (16.8%)
25–29 years	678 (32.0%)
Gender	
Male	749 (35.3%)
Female	1371 (64.7%)
Currently a student	
Yes	1411 (66.6%)
No	709 (33.4%)
Area of residence in NSW	
Capital city (Sydney)	1173 (55.3%)
Major regional centre or city (e.g. Newcastle, Wollongong)	450 (21.2%)
Smaller city or town (e.g. Ballarat, Ulladulla, Young)	332 (15.7%)
Rural area	165 (7.9%)
Born in Australia	
Yes	1876 (88.5%)
No	244 (11.5%)
Aboriginal or Torres Strait Islander origin	
No	2064 (97.4%)
Yes, Aboriginal	53 (2.5%)
Yes, Torres Strait Islander	1 (0.0%)
Yes, both Aboriginal and Torres Strait Islander	2 (0.1%)
Sexual activity	
Never had oral, vaginal or anal sex	554 (26.1%)
Had sex but not in the past 12 months	116 (5.5%)
Had sex in the past 12 months	1398 (65.9%)
Prefer not to report on this information	52 (2.5%)

Measures

The extended survey instrument consisted of questions adapted from previous online research of sexual health among young people (Adam et al., 2011; Adam et al., 2014), and was developed in collaboration with stakeholders delivering sexual health information and services to young people.

STI knowledge

Participants were asked seven STI knowledge questions relating to severity of STIs, prevalence of STIs among young people, symptoms, transmission, and treatment of STIs. For each question, participants could answer '*true*', '*false*', or '*unsure*'. To calculate an overall count of correct answers, each correct answer was scored 1 whilst unsure or incorrect answers were scored 0. The overall score ranged 0–7 with a higher count indicating a higher level of STI knowledge.

Perceived severity and perceived risk

Perceived severity of STIs was measured using two statements: *'Contracting an STI could seriously affect my health'* and *'Contracting an STI is no big deal'*. Perceived risk of contracting an STI was similarly measured using two statements: *'I believe I could contract an STI'* and *'I feel that I'm unlikely to get an STI'*. Answers to all questions were provided on a 5-point scale (from 1-'*Totally disagree*' to 5-'*Totally agree*'), and for each dimension of perceived severity and perceived risk, scores were averaged after recoding the reverse items. Higher scores in these analyses indicated higher levels of perceived severity or perceived risk.

Condom use related views

Participants' positive and negative views of condom use were assessed with a list of 14 indicators (e.g. *'Using condoms is a good thing'*, *'Condoms reduce pleasure'*). Participants provided their answers to each question on a 5-point scale (from 1-'*Totally disagree*' to 5-'*Totally agree*') and responses to each question were analysed individually to provide detailed information on condom use-related views.

Contraception

Sexually active female participants were asked whether they had used any form of contraception in the 12 months prior to the survey. Eight forms of contraception were presented and multiple items could be selected: condoms, birth control pill, emergency contraception, contraceptive implant, intrauterine device, rhythm method, contraceptive injection, and withdrawal.

Carrying condoms while being on a date

Participants who had been on a date in the 12 months prior to the survey were asked how frequently they carried condoms with them while on dates. Participants answered using a 5-point scale (from 1-'*Never*' to 5-'*Always*'). A score (range: 1–5) reflecting the frequency of carrying condoms was calculated with a higher score indicating a higher frequency of carrying condoms while being on a date.

Condom use

Participants were asked at the beginning of the survey how often they had used condoms during vaginal or anal intercourse with any partner/s in the past 12 months. Additional questions on the frequency of condom use with regular and/or casual partner/s were included later in the questionnaire, and answered by a smaller number of participants. Four response options were provided for all three questions on the frequency of condom use with any partner/s, regular partner/s or casual partner/s: 1) *'No vaginal or anal sex in the past 12 months'*, 2) *'Condoms always used for vaginal or anal sex'*, 3) *'Condoms used sometimes'*, and 4) *'Condoms never used'*. Participants who reported using condoms *'sometimes'* or *'never'* were categorised as having engaged in vaginal or anal intercourse without condoms in the past 12 months.

STI testing related views

Participants' positive and negative views of testing for STIs were assessed with a list of 12 indicators (e.g. *'Testing for STIs a good thing'*, *'Testing for STIs is embarrassing'*). Participants provided their answers to each question on a 5-point scale (from 1-'*Totally disagree*' to 5-'*Totally agree*') and responses to each question were analysed individually.

Testing for STIs, including HIV

To reduce the impact that selective attrition could have on data, participants were asked whether they had ever been tested for STIs and/or HIV at the beginning of the survey. Additional questions aimed at characterising participants' testing practices were included later in the questionnaire, and therefore answered by a smaller number of participants. In these latter questions, participants were asked when they were last tested, who provided the test, and whether their last check-up included testing for STI and/or HIV. The percentage of participants who had been tested for STIs and/or HIV in the past 12 months was estimated by multiplying the percentage of participants who reported ever being tested (overall and within gender and age subgroups) by the proportion of tested participants who reported being tested in the past 12 months.

Exposure to sexual health promotion messaging

In two successive questions, participants were asked whether they had been exposed to messages promoting condom use (*'How often in the past 12 months did you notice health messages telling young people to use condoms?'*) and/or messages promoting testing for STIs (*'How often in the past 12 months did you notice health messages telling young people to test for STIs?'*). Frequency of exposure was reported on a 4-point scale with options ranging from 1-*'Never'* to 4-*'Often'*. To estimate the overall exposure to sexual promotion messaging regarding condom use and/or testing for STIs, a mean score of exposure (range: 1-4) was calculated across the two questions, with a higher score indicating a higher frequency of exposure to sexual health promotion messaging.

Familiarity and engagement with sexual health promotion resources, activities and services

Participants were asked whether they knew the 'Play Safe' brand, were aware of any sexual health promotion websites for people their age, or had received free condoms in the 12 months prior to the survey. Participants were also asked whether they had been in contact with GPs or nurses, sexual health clinics, youth services or youth workers in relation to sexual health in the past 12 months.

Sexual health education in secondary schools

Students in Years 10–12 were asked to report on the type of information they received as part of their sexual health education curriculum from a list of 11 topics (e.g. condom use, contraception, sexual practices). Students also indicated whether sexual health education had increased their knowledge. Perceived contribution of sexual health education to increased knowledge was measured on a 5-point scale (from 1–*'Totally disagree'* to 5–*'Totally agree'*) with a higher score indicating a higher perceived contribution of sexual health education to knowledge.

Statistical analyses

Descriptive analyses (frequency, mean scores and standard deviation) were used to calculate key indicator data of knowledge, attitude, behaviour and sexual health promotion coverage.

Univariate and multivariate analyses were conducted among the full sample of participants to assess associations between each indicator variable investigated (e.g. STI knowledge, condom use, STI testing) and three potential correlates: having ever had oral, vaginal or anal sex (yes/no), gender (male/female) and age groups (15–19 years/20–24 years/25–29 years). Similar analyses were conducted among participants

stratified as non-sexually active and sexually active, to identify potential associations between the indicator variable investigated and gender or age groups. Numbers of participants who ever had sex were largely sufficient to investigate gender and age variations in key indicators. Age-related variations among participants who never had sex presented in this report should be used with caution as the number of non-sexually active participants becomes very low in the oldest age group.

Univariate and multivariate analyses were also conducted among sexually active participants to empirically assess the contribution of a range of individual, social, service-related and structural barriers and facilitators to having engaged in condomless sexual intercourse and having tested for STIs. Age and gender were included as control variables in multivariate analyses and Nagelkerke R squares were calculate to provide an indication of the percentage of variance explained by the models.

Results

Knowledge of sexually transmissible infections (STIs)

On average, participants provided correct answers to 5.4 (SD = 1.41, range: 0–7) of the seven questions on STI knowledge.

State of STI knowledge

Analyses of responses to individual STI knowledge questions indicate that while knowledge of STIs was good on most topics, some gaps in STI-related knowledge existed (see Table 2).

Table 2 Proportion of participants holding correct knowledge of STIs*

	True	False	Don't know
STIs can affect anyone who is sexually active (True)	1585 (94.6%)	57 (3.4%)	34 (2.0%)
STIs are rare among young people (False)	67 (4.0%)	1380 (82.3%)	229 (13.7%)
The number of young people with STIs is increasing (True)	1192 (71.1%)	36 (2.1%)	448 (26.7%)
Chlamydia is the most common STI among young people (True)	859 (51.3%)	73 (4.4%)	744 (44.4%)
STIs often have no symptoms (True)	903 (53.9%)	489 (29.2%)	284 (16.9%)
If left untreated, STIs can affect your health (True)	1626 (97.0%)	8 (0.5%)	42 (2.5%)
Common STIs can often be treated (True)	1442 (86.0%)	36 (2.1%)	198 (11.8%)

Note: *Among sexually active and non-sexually active participants.

Almost all participants (94.6%) knew that STIs can affect anyone who is sexually active. Participants' knowledge of the epidemiology of STIs was also good. Most participants (82.3%) knew that it is incorrect to think that STIs are rare among young people, and 71.1% knew that the number of young people with STIs is increasing. Participants' knowledge of the management of STIs was also very satisfactory as almost all participants (97.0%) knew that STIs can affect people's health if they are left untreated, and 86.0% of participants knew that common STIs can often be treated.

A few gaps in knowledge of STIs could however be identified. Only 51.3% of participants knew that Chlamydia is the most common STI among young people, and only 53.9% of participants knew that STIs often have no symptoms.

Correlates of being knowledgeable about STIs

Among all participants, higher level of STI knowledge was found to be significantly independently associated with having ever had oral, vaginal or anal sex, female and belonging to the two older age groups (see Table 3, column 'all participants'). This indicates that, all things being equal, sexually active participants, female participants, and participants in the oldest age groups were more knowledgeable about STIs compared to their counterparts.

These results were confirmed among sexually active participants where both being female and belonging

to the two oldest age groups were significantly associated with higher levels of STI knowledge (see Table 2, column 'sexually active participants'. Among non-sexually active participants, higher levels of STI knowledge were found to be associated with being female but not with belonging to any specific age group (see Table 2, column 'non-sexually active participants'). The absence of association between level of knowledge and age group could however be due to fact that being non-sexually active was infrequent in the two oldest age groups.

Table 3 Correlates of holding correct knowledge of STIs

	All participants			Non sexually active participants			Sexually active participants		
	Mean (SD)	Univ. Beta	Multiv. Beta	Mean (SD)	Univ Beta	Multiv. Beta	Mean (SD)	Univ. Beta	Multiv. Beta
Having ever had sex									
No	4.80 (1.50)	Ref.	Ref.	---	---	---	---	---	---
Yes	5.61 (1.32)	.251***	.178***	---	---	---	---	---	---
Gender									
Male	5.14 (1.47)	Ref.	Ref.	4.53 (1.55)	Ref.	Ref.	5.39 (1.37)	Ref.	Ref.
Female	5.55 (1.36)	.137***	.153***	4.97 (1.49)	.142**	.145**	5.73 (1.28)	.123***	.165***
Age groups									
15–19	5.09 (1.43)	Ref.	Ref.	4.80	Ref.		5.33 (1.36)	Ref.	Ref.
20–24	5.57 (1.39)	.133***	.084***	4.65	-.029^{ns}	-.023^{ns}	5.70 (1.27)	.118***	.129***
25–29	5.74 (1.31)	.218***	.171***	4.98	.035^{ns}	.046^{ns}	5.94 (1.27)	.175***	.218***

Note: Univ. = Univariate. Multiv. = multivariate. * $p<.05$, ** $p<.01$, *** $p<.001$, ^{ns} = non-significant.

In summary, while knowledge of STIs was very satisfactory for most topics, some gaps in STI-related knowledge exist, with only half of the participants knowing that STIs often have no symptoms. Knowledge of STIs was higher among sexually active than non-sexually active participants, higher among female than male participants, and higher among older than younger participants.

Perceived severity of STIs

Perceived severity of STIs was very high among participants (M = 4.57, SD = .65, range: 1–5).

As can be seen in Table 4 almost all participants somewhat or strongly agreed with the statement that 'Contracting an STI could seriously affect their health' (93.3%) and only a few participants (5.2%) somewhat or strongly agreed with the statement '*Contracting an STI is no big deal*'.

Table 4 Young people' views of the severity of STIs*

	Strongly disagree	Somewhat disagree	Unsure	Somewhat agree	Strongly agree
Contracting an STI could seriously affect my health	25 (1.3%)	28 (1.5%)	70 (3.8%)	371 (20.0%)	1358 (73.3%)
Contracting an STI is no big deal	1287 (69.5%)	394 (21.3%)	74 (4.0%)	69 (3.7%)	28 (1.5%)

Note: *Among sexually active and non-sexually active participants.

Perceived severity did not differ between sexually active and non-sexually active participants (Table 5), but perceiving STIs as severe was positively independently associated with being female and negatively independently associated with older age. All other things being equal, young women perceived STIs as more serious than young men, and older participants perceived STIs as less serious than younger participants. Results were similar when analyses were restricted to sexually active participants only. Among non-sexually active participants there was no association between perceived severity and gender.

Table 5 Correlates of perceived severity of STIs

	All participants			Non sexually active participants			Sexually active participants		
	Mean (SD)	Univ. Beta	Multiv. Beta	Mean (SD)	Univ Beta	Multiv. Beta	Mean (SD)	Univ. Beta	Multiv. Beta
Ever had sex									
No	4.57 (.70)	Ref.	Ref.	---	---	---	---	---	---
Yes	4.58 (.62)	.011^{ns}	.048^{ns}	---	---	---	---	---	---
Gender									
Male	4.50 (.72)	Ref.	Ref.	4.56 (.76)	Ref.	Ref.	4.47 (.71)	Ref.	Ref.
Female	4.62 (.59)	.090***	.073**	4.72 (.66)	.008^{ns}	.002^{ns}	4.64 (.57)	.125***	.105***
Age groups									
15–19	4.64 (.61)	Ref.	Ref.	4.60 (.69)	Ref.	Ref.	4.66 (.55)	Ref.	Ref.
20–24	5.57 (.63)	-.040^{ns}	-.053*	4.37 (.78)	-.089*	-.089*	4.60 (.60)	-.045^{ns}	-.039^{ns}
25–29	4.50 (.69)	-.097***	-.104***	4.43 (.70)	-.074^{ns}	-.074^{ns}	4.51 .69)	-.122***	-.095**

Note: Univ. = Univariate. Multiv. = multivariate. * $p<.05$, ** $p<.01$, *** $p<.001$, ^{ns} = non-significant.

In summary, most participants perceived having an STI as a severe condition. Female participants generally perceived STIs as more severe than male participants, and older participants generally perceived STIs as less severe than younger participants.

Perceived risk of contracting an STI

Perceived risk of contracting an STI was low among participants (M = 2.40, SD = 1.09, range: 1–5).

Table 6 indicates that only a third of participants (34.1%) somewhat or strongly agreed with the idea that they '*could contract an STI*' and a majority of participants (69.9%) somewhat or strongly agreed that they felt they were '*unlikely to get an STI*'.

Table 6 Young people' views on their risk of contracting an STI*

	Strongly disagree	Somewhat disagree	Unsure	Somewhat agree	Strongly agree
I believe I could contract an STI	528 (28.5%)	371 (20.0%)	320 (17.3%)	462 (24.9%)	171 (9.2%)
I feel that I'm unlikely to get an STI	110 (5.9%)	182 (9.8%)	265 (14.3%)	606 (32.7%)	689 (37.2%)

Note: *Among sexually active and non-sexually active participants.

As can be seen in Table 7 perceived risk of contracting an STI was significantly associated with being sexually active. No associations were found with gender or age groups.

Table 7 Correlates of perceived risk of contracting an STI

	All participants			Non sexually active participants			Sexually active participants		
	Mean (SD)	Univ. Beta	Multiv. Beta	Mean (SD)	Univ Beta	Multiv. Beta	Mean (SD)	Univ. Beta	Multiv. Beta
Ever had sex									
No	2.30 (.1.03)	Ref.	Ref.	---	---	---	---	---	---
Yes	2.44 (1.10)	.057*	.075**	---	---	---	---	---	---
Gender									
Male	2.36 (1.07)	Ref.	Ref.	2.24 (.99)	Ref.	Ref.	2.41 (1.10)	Ref.	Ref.
Female	2.43 (1.09)	.031^{ns}	.019^{ns}	2.35 (1.06)	.052^{ns}	.048^{ns}	2.46 (1.11)	.020^{ns}	.009^{ns}
Age groups									
15–19	2.42 (1.02)	Ref.	Ref.	2.34 (1.02)	Ref.	Ref.	2.49 (1.02)	Ref.	Ref.
20–24	2.45 (1.10)	.009^{ns}	-.012^{ns}	2.13 (1.07)	-.054^{ns}	-.053^{ns}	2.49 (1.10)	.000^{ns}	.000^{ns}
25–29	2.36 (1.16)	-.025^{ns}	-.052^{ns}	2.15 (1.11)	-.054^{ns}	-.051^{ns}	2.38 (1.16)	-.050^{ns}	-.047^{ns}

Note: Univ. = Univariate. Multiv. = multivariate. * $p<.05$, ** $p<.01$, *** $p<.001$, ^{ns} = non-significant.

In summary, most participants perceived themselves at low risk of contracting an STI. Perceived risk was found to be lower in non-sexually active participants compared to sexually active participants, and in the oldest participants compared to the youngest. No gender difference in perceived risk could be observed.

Condom use-related views

Positive views of condom use

Positive views of condom use were highly prevalent among participants (see Table 8). Most participants believed that using condoms is a good thing (93.8% somewhat strongly agree with the statement) and has many advantages (91.2%). Similar proportions of participants indicated that they knew where to get condoms (93.0%) or were confident that they could use condoms when they wanted (84.4%). Additionally, 72.8% agreed that using condoms is easy and 55.3% felt supported by their peers in their condom usage.

Table 8 Extent of positive views of condom use*

	Totally disagree	Somewhat disagree	Unsure	Somewhat agree	Totally agree
Using condoms has many advantages	27 (1.4%)	54 (2.8%)	90 (4.6%)	564 (28.9%)	1215 (62.3%)
Using condoms is a good thing	25 (1.3%)	28 (1.4%)	67 (3.4%)	416 (21.3%)	1414 (72.5%)
I'm confident I can use condoms when I want to	46 (2.4%)	75 (3.8%)	182 (9.3%)	387 (19.8%)	1260 (64.6%)
Using condoms is easy	41 (2.1%)	140 (7.2%)	350 (17.9%)	590 (30.3%)	829 (42.5%)
I know where to get condoms	53 (2.7%)	25 (1.3%)	59 (3.0%)	179 (9.2%)	1634 (83.8%)
My best friends believe I should use condoms	117 (6.2%)	116 (6.1%)	613 (32.3%)	315 (16.6%)	734 (38.7%)

Note: *Among sexually active and non-sexually active participants.

Table 9 indicates that there were some variations in the extent of positive views of condom use based on sexual activity. Compared to non-sexually active participants, sexually active participants significantly more frequently reported that using condoms has many advantages, or that using condoms is easy. Sexually active participants also reported significantly more often than non-sexually active participants that they were confident in using condoms, and that they knew where to go to get condoms.

Slight differences in the extent of positive views of condom use were also found based on gender (see Table 9). Among non-sexually active participants, young men, more often than young women, thought that using condoms is easy but they were less likely to report that their friends would support their condom use, compared to young women. Among sexually active participants also, young women perceived more support from their friends in using condoms than young men and more often than young men reported that using condoms is a good thing.

Table 9 Differences in positive views of condom use according to sexual activity and gender

	All participants	Non-sexually active participants			Sexually active participants			Pearson Chi-square		
		All (a)	Males (b)	Females (c)	All (d)	Males (e)	Females (f)	(a) versus (d)	(b) versus (c)	(e) versus (f)
Using condoms has many advantages	91.2%	89.1%	87.4%	90.1%	92.1%	90.7%	92.8%	<.05	ns	ns
Using condoms is a good thing	93.8%	92.7%	91.1%	93.7%	94.3%	91.8%	95.6%	ns	ns	<.01
I'm confident I can use condoms when I want to	84.5%	71.2%	68.7%	72.8%	89.7%	89.5%	89.7%	<.001	ns	ns
Using condoms is easy	72.8%	48.8%	54.2%	45.4%	82.2%	83.4%	81.5%	<.001	<.05	ns
I know where to get condoms	93.0%	85.4%	84.1%	86.3%	95.9%	96.6%	95.6%	<.001	ns	ns
My best friends believe I should use condoms	55.4%	57.3%	52.4%	60.5%	54.6%	47.9%	58.0%	ns	ns	<.001

Note: This table presents the percentage of participants who somewhat or totally agree with each statement. ns = non-significant.

Negative views of condom use

Some young people also held negative views about condom use (see Table 10). More than half of the participants (52.3%) believed that condoms reduce pleasure, 35.2% were worried about confidentiality when getting condoms, 31.1% considered that condoms were expensive, and 21.2% considered condoms as unreliable. Conversely, some other negative views of using condoms were infrequent, including reporting that using condoms was embarrassing (8.2%), was a sign of distrust (5.0%), or thinking that people would think less of them for using condoms (3.2%).

Table 10 Extent of negative views of condom use*

	Totally disagree	Somewhat disagree	Unsure	Somewhat agree	Totally agree
Using condoms has many disadvantages	541 (27.7%)	600 (30.8%)	257 (13.2%)	457 (23.4%)	95 (4.9%)
I'm worried about confidentiality when getting condoms	725 (37.2%)	282 (14.5%)	258 (13.2%)	473 (24.3%)	212 (10.9%)
Condoms are expensive	359 (18.9%)	393 (20.7%)	552 (29.1%)	448 (23.6%)	143 (7.5%)
Condoms are unreliable	538 (28.4%)	679 (35.8%)	277 (14.6%)	360 (19.0%)	41 (2.2%)
Condoms reduce pleasure	192 (10.1%)	170 (9.0%)	543 (28.7%)	619 (32.7%)	371 (19.6%)
Condoms are a sign of distrust	1352 (71.3%)	304 (16.0%)	145 (7.7%)	74 (3.9%)	20 (1.1%)
Using condoms is embarrassing	1123 (59.3%)	415 (21.9%)	201 (10.6%)	137 (7.2%)	19 (1.0%)
People will think less of me if they know I use condoms	1381 (72.9%)	258 (13.6%)	196 (10.3%)	38 (2.0%)	22 (1.2%)

Note: *Among sexually active and non-sexually active participants.

Some differences in the extent of negative views of condom use were observed based on sexual activity and gender (see Table 11).

Sexually active participants perceived more disadvantages in using condoms than non-sexually active participants, and perceiving disadvantages in using condoms was more frequent in young men than in young women. As a result, perceiving more disadvantages in using condoms was found to be the most frequent in sexually active young men (40%).

Being worried about confidentiality when getting condoms was less frequent among sexually active participants than non-sexually active participants. This concern was also associated with being male, with non-sexually active young men being the most concerned about confidentiality when getting condoms (54.7%).

Perceiving condoms as expensive was more frequent in sexually active (36.6%) than non-sexually active participants (16.9%), and gender differences were also observed.

The proportion of participants who perceived condoms as unreliable was identical in non-sexually active and sexually active participants (21.2%), but in both groups, young women more often than young men perceived condoms as unreliable, a perception that could also relate to contraception concerns.

Perceiving that condoms reduce pleasure was more frequent in sexually active than non-sexually active participants and reached 77.4% among sexually active young men.

Among the majority of participants who perceived condoms as a sign of distrust, there were more young men than young women.

Finally, non-sexually active young men, more often than non-sexually active young women, considered that using condoms is embarrassing.

Table 11 Differences in negative views of condom use according to sexual activity and gender

	All participants	Non-sexually active participants			Sexually active participants			Pearson Chi-square		
		All (a)	Males (b)	Females (c)	All (d)	Males (e)	Females (f)	(a) versus (d)	(b) versus (c)	(e) versus (f)
Using condoms has many disadvantages	28.3%	17.3%	22.9%	13.7%	32.6%	40.0%	28.8%	<.001	<.01	<.001
I'm worried about confidentiality when getting condoms	35.1%	49.4%	54.7%	46.0%	29.6%	24.2%	32.3%	<.001	<.05	<.01
Condoms are expensive	31.2%	16.9%	21.4%	14.0%	36.6%	33.0%	38.4%	<.001	<.05	<.05
Condoms are unreliable	21.2%	21.2%	16.5%	24.2%	21.2%	16.3%	23.6%	ns	<.05	<.01
Condoms reduce pleasure	52.2%	21.7%	28.6%	17.2%	63.8%	77.4%	56.9%	<.001	<.01	<.001
Condoms are a sign of distrust	5.0%	4.2%	7.3%	2.2%	5.2%	6.9%	4.4%	ns	<.01	<.05
Using condoms is embarrassing	8.2%	7.7%	13.6%	3.8%	8.4%	9.3%	8.0%	ns	<.001	ns
People will think less of me if they know I use condoms	3.2%	4.2%	5.8%	3.2%	2.8%	2.6%	2.8%	ns	ns	ns

Note: This table presents the percentage of participants who somewhat or totally agree with each statement. ns = non-significant.

In summary, while positive views about condoms were highly frequent among young people, a number of young people also saw negative aspects of using condoms. Half of the participants considered that condoms reduce pleasure, while 38.2% were worried about confidentiality when getting condoms, or considered them as expensive (31.1%) or unreliable (21.2%).

Carrying condoms while being on a date

Most participants (72.6%) went on a date in the past 12 months and 63.2% of them had sex with their dates in the same period.

Among all participants who went on a date, only 33.9% reported that they had carried condoms with them while being on a date (Table 12) and most of these participants did not carry condoms consistently.

As a consequence, the score reflecting the frequency of carrying condoms while being on a date was low (M = 1.83, SD = 1.34, range: 1–5).

Table 12 Frequency of carrying condoms while being on a date

	n (%)
Never	963 (66.1%)
Rarely	131 (9.0%)
Sometimes	133 (9.1%)
Often	102 (7.0%)
Always	128 (8.8%)
Total	1457 (100%)

Note: Among all participants who went on a date in the past 12 months.

Table 13 shows that carrying condoms (more frequently) while being on a date was related to sexual activity and gender. Sexually active participants, more often than non-sexually active participants, went on a date with condoms. Furthermore, male participants, more frequently than female participants, carried condoms with them while on a date.

Table 13 Correlates of carrying condoms (more frequently) while being on a date in the past 12 months*

	All participants			Non sexually active participants			Sexually active participants		
	Mean (SD)	Univ. Beta	Multiv. Beta	Mean (SD)	Univ Beta	Multiv. Beta	Mean (SD)	Univ. Beta	Multiv. Beta
Ever had sex									
No	1.26 (.86)	Ref.	Ref.	---	---	---	---	---	---
Yes	2.03 (1.42)	.25***	.29***						
Gender									
Male	2.38 (1.55)	Ref.	Ref.	1.50 (1.17)	Ref.	Ref.	2.73 (1.55)	Ref.	Ref.
Female	1.55 (1.12)	-.29***	-.31***	1.13 (.58)	-.21***	-.21***	1.69 (1.21)	-.34***	-.36***
Age groups									
15-19	1.73 (1.27)	Ref.	Ref.	1.27 (.87)	Ref.		2.04 (1.41)	Ref.	Ref.
20-24	1.80 (1.27)	.02^{ns}	-.05*	1.00 (.00)	-.08^{ns}	-.08^{ns}	1.89 (1.31)	-.05^{ns}	-.06^{ns}
25-29	2.06 (1.48)	.11***	-.05^{ns}	1.36 (1.10)	.03^{ns}	.01^{ns}	2.11 (1.49)	.02^{ns}	-.07*

Note: Among participants who went on a date in the past 12 months. Univ. = Univariate. Multiv. = multivariate. * $p<.05$, ** $p<.01$, *** $p<.001$, ^{ns} = non-significant.

In summary, carrying condoms while going/being on a date was found to be infrequent among heterosexual young people, including among those who (generally) have sex with their dates. Young women carry condoms with them less often than young men.

Sexual intercourse with and without condoms

Condom use with any partner

Participants who reported ever having oral, vaginal or anal sex were asked how frequently condoms were used during vaginal or anal intercourse, with any partners in the 12 months prior to the survey (see Table 14).

Table 14 Condom use during vaginal or anal intercourse with any partner in the past 12 months*

	n (%)
No vaginal or anal intercourse in the past 12 months	164 (10.8%)
Condoms always used for sexual intercourse	408 (26.9%)
Condoms used sometimes	569 (37.6%)
Condoms never used	373 (24.6%)

Note: *Among participants who ever had oral, vaginal or anal sex.

Of the 1,514 participants who reported ever having oral, vaginal or anal sex. 62.2% reported vaginal or anal intercourse without consistent condom use in the past 12 months.

Correlates of reporting vaginal or anal intercourse without condoms with any partners in the past 12 months were explored (see Table 15). In univariate analyses, there was a slight difference in reports of condomless intercourse between male and female participants (59.9% versus 63.5%), but the difference was not statistically significant. Gender became however significantly associated with reporting condomless intercourse in multivariate analyses, with female participants reporting condomless intercourse more often than male participants. Reports of intercourse without condoms also strongly increased with age, with female participants in each age group slightly more likely to report condomless intercourse than men. These gender differences could however reflect a tendency in female participants to report episodes of unprotected intercourse more accurately than male participants, because of the direct consequences in terms of pregnancy that condomless intercourse can have for women who do not use other forms of contraception.

Table 15 Correlates of reporting vaginal or anal intercourse without condoms with any partners in the past 12 months

	All sexually active participants			Sexually active male participants		Sexually active female participants	
	%	OR	AOR	%	OR	%	OR
Gender							
Male	59.9%	Ref.	Ref.				
Female	63.5%	1.16^{ns}	1.56***				
Age groups							
15–19	45.2%	Ref.	Ref.	34.3%	Ref.	48.6%	Ref.
20–24	68.9%	2.68***	2.76***	61.6%	3.08***	71.7%	2.67***
25–29	74.6%	3.55***	3.99***	71.3%	4.76***	77.4%	3.62***

Note: OR = Odds ratio, AOR = Adjusted Odds ratio. * $p<.05$, ** $p<.01$, *** $p<.001$, ^{ns} = non-significant.

Individual and social correlates of reporting sexual intercourse without condoms in the past 12 months were assessed (see Table 16). In univariate analyses, no association was observed between perceived severity of STIs or perceived risk of contracting an STI and reporting condomless sexual intercourse. This behaviour was

however associated with knowledge of STIs and 8 of the 12 indicators of potential barriers to and facilitators of using condoms.

Table 16 Individual and social correlates of reporting sexual intercourse without condoms with any partners in the past 12 months*

	Univariate analyses		Multivariate analyses**	
	OR	*p*-value	Adj. OR	*p*-value
Knowledge of STIs	1.22	<.001	1.20	<.01
Perceived severity of STIs	.87	ns	1.07	ns
Perceived risk of contracting an STI	.94	ns	.98	ns
Potential faciliators of condom use				
Using condoms is a good thing	.45	<.001	.61	<.01
I'm confident I can use condoms when I want to	.83	<.01	.94	ns
Using condoms is easy	.73	<.001	.87	.09
I know where to get condoms	.95	ns	.93	ns
My best friends believe I should use condoms	.56	<.001	.64	<.001
Potential barriers of condom use				
I'm worried about confidentiality when getting condoms	.73	<.001	.77	<.001
Condoms are expensive	.99	ns	.98	ns
Condoms are unreliable	1.01	ns	.95	ns
Condoms reduce pleasure	1.61	<.001	1.57	<.001
Condoms are a sign of distrust	1.48	<.001	1.35	<.01
Using condoms is embarrassing	1.11	.07	1.00	ns
People will think less of me if they know I use condoms	.94	ns	.66	<.001

Note: *Among sexually active participants. ** Age and gender were included as control variables in the multivariate model. ns = non-significant. Nagelkerke R square for the multivariate model=.330

In multivariate analyses, after control for age and gender, having had condomless sexual intercourse was found to be positively associated with STI knowledge, considering that condoms reduce pleasure and are a sign of distrust. There were also negative associations between engaging in condomless sexual intercourse and holding positive attitudes towards condom use ('using condoms is a good thing'), perceiving supportive norms towards condom use ('my best friends believe I should use condoms'), being worried about confidentiality when using condoms and having stigma-related concerns ('people will think less of me if they know I use condoms'). Together the variables included in the multivariate model explained 33% of the variance in condomless sexual intercourse.

Condom use with regular partners

Among participants who were sexually active in the past 12 months, 94.0% had one or more regular partners in that period. These participants were asked how frequently condoms were used during vaginal or anal intercourse with their regular partners in the 12 months prior to the survey (see Table 17).

Table 17 Frequency of condom use during vaginal or anal intercourse with regular partners in the past 12 months*

	n (%)
No vaginal or anal sex in the past 12 months	50 (4.5%)
Condoms always used for sexual intercourse	230 (20.6%)
Condoms used sometimes	563 (50.3%)
Condoms never used	276 (24.7%)

Note: *Among participants who had regular sex partners in the past 12 months.

Of the participants who had regular partner/s in the past 12 months, 75% had vaginal or anal intercourse without consistent condom use in that period. Most of these participants (82.4%) had condomless sexual intercourse with one regular partner and 17.6% with several regular partners.

The proportion of participants who had condomless intercourse with regular partners did not differ according to gender but was strongly associated with age (Table 18). Among 15–19 year old participants who had regular partners in the past 12 months, 50.6% of young men and 61.0% of young women had condomless sexual intercourse with their regular partner/s. In both male and female participants this proportion reached 82–86% in the older age groups, a result that may relate to condom use becoming infrequent as relationships become steadier and other forms of contraception are used.

Table 18 Correlates of reporting vaginal or anal intercourse without condom with regular partners in the past 12 months

	All sexually active participants			Sexually active male participants		Sexually active female participants	
	%	OR	AOR	%	OR	%	OR
Gender							
Male	77.4%	Ref.	Ref.	---	---	---	---
Female	73.9%	.82^{ns}	1.10^{ns}	---	---	---	---
Age groups							
15–19	58.9%	Ref.	Ref.	50.6%	Ref.	61.0%	Ref.
20–24	82.4%	3.26***	3.27***	83.1%	4.78***	82.1%	2.94***
25–29	84.9%	3.92***	4.02***	86.2%	6.09***	83.9%	3.33***

Note: OR = Odds ratio, AOR = Adjusted Odds ratio. * $p<.05$, ** $p<.01$, *** $p<.001$, ^{ns} = non-significant.

Condom use with casual partners

Among participants who were sexually active in the 12 months prior to the survey, 26.3% had casual partner/s in the past 12 months. Of these participants, 63.2% had vaginal or anal intercourse without consistent condom use with casual partners in the past 12 months (Table 19).

Table 19 Frequency of condom use during vaginal or anal intercourse with casual partners in the past 12 months*

	n (%)
No vaginal or anal intercourse in the past 12 months	7 (2.3%)
Condoms always used for sexual intercourse	106 (34.5%)
Condoms used sometimes	133 (43.3%)
Condoms never used	61 (19.9%)

Note: *Among participants who had casual sex partners in the past 12 months.

While differences in the proportion of participants reporting sexual intercourse without condoms could be observed based on gender and age (Table 20), none of them were statistically significant, which may also be due to low numbers of participants in these analyses.

Table 20 Correlates of reporting vaginal or anal intercourse without condoms with casual partners in the past 12 months

	All sexually active participants			Sexually active male participants		Sexually active female participants	
	%	OR	AOR	%	OR	%	OR
Gender							
Male	58.6%	Ref.	Ref.	---	---	---	---
Female	66.7%	1.41^{ns}	1.36^{ns}	---	---	---	---
Age groups							
15-19	62.2%	Ref.	Ref.	50.0%	Ref.	66.7%	Ref.
20-24	70.9%	1.48^{ns}	1.52^{ns}	64.3%	1.80^{ns}	74.5%	1.46^{ns}
25-29	59.4%	.89^{ns}	.98^{ns}	59.3%	1.46^{ns}	59.6%	.74^{ns}

Note: OR = Odds ratio, AOR = Adjusted Odds ratio. * $p<.05$, ** $p<.01$, *** $p<.001$, ^{ns} = non-significant.

In summary, condom use during vaginal or anal intercourse was found to be infrequent among heterosexual young people. Three quarters (75%) of participants with regular partners in the past 12 months had condomless sexual intercourse with them. Condomless sexual intercourse was also found to be relatively frequent during casual sex. A strong majority (63.2%) of young people with casual partners in the past 12 months had sexual intercourse without condoms.

Contraception

Overall 94.1% of young women who were sexually active in the past 12 months reported that they had used at least one form of contraception in that period (Table 21). Condom use was the most frequently reported form of contraception (66.0%), followed by birth control pills (56.4%), emergency contraception (15.6%), and contraceptive implants (8.3%). Withdrawal was used by 31.5% of female participants.

Table 21 Forms of contraception used by female participants in the past 12 months*

(Multiple choice responses)	n (%)
Condoms	562 (66.0%)
Birth control pill ('the pill')	480 (56.4%)
Withdrawal	268 (31.5%)
Emergency contraception ('morning after pill')	133 (15.6%)
Contraceptive implant (e.g. Implanon)	71 (8.3%)
IUD (Intrauterine Device)	30 (3.5%)
Rhythm method	19 (2.2%)
Contraceptive injection ('birth control show', e.g. Depo Provera)	14 (1.6%)
Diaphragm	1 (0.1%)
Other	13 (1.5%)

Note: Among female participants who were sexually active in the past 12 months. ns = non-significant.

In summary, condom use and birth control pills were the most frequent forms of contraception reported by young women and the morning after pill was used by 15.6% of participants. Withdrawal was used by 31.5% of female participants.

STI testing-related views

Positive views of STI testing

Most participants held positive views of testing for STIs (Table 22) with 94.9% answering that testing for STIs was a good thing and had many advantages (89.7%). A majority of participants (66.9%) were also confident that they could test for STIs when they wanted; 59.6% indicated that they knew where to go to test for STIs. However, only 40.5% of participants considered that testing for STIs is easy and only a small minority (18.0%) believed that their best friends would support their testing for STIs. Subjective norms appear to be less supportive of testing for STIs than of condom use.

Table 22 Extent of positive views of testing for STIs*

	Totally disagree	Somewhat disagree	Unsure	Somewhat agree	Totally agree
STI testing has many advantages	25 (1.4%)	15 (0.8%)	148 (8.1%)	394 (21.7%)	1234 (68.0%)
STI testing is a good thing	16 (0.9%)	4 (0.2%)	71 (3.9%)	324 (17.8%)	1401 (77.1%)
I'm confident I can get tested for STIs when I want to	85 (4.7%)	177 (9.7%)	338 (18.6%)	433 (23.8%)	783 (43.1%)
STI testing is easy	71 (3.9%)	180 (9.9%)	831 (45.8%)	348 (19.2%)	386 (21.3%)
I know where to go if I want to get tested for STIs	203 (11.2%)	258 (14.2%)	272 (15.0%)	376 (20.7%)	707 (38.9%)
My best friends believe I should get tested for STIs	484 (27.3%)	191 (10.8%)	780 (44.0%)	182 (10.3%)	137 (7.7%)

Note: *Among sexually active and non-sexually active participants.

Some differences in the extent of testing for STIs based on sexual activity and gender were observed (Table 23). Sexually active participants held more positive views of STI testing than non-sexually active participants, and this was observed for the majority of factors listed in Table 23. In both non-sexually active and sexually active participants, young women, more often than young men, considered that testing is a good thing and has many advantages. Among sexually active participants, young women, more often than young men, knew where to go to test for STIs and perceived that their best friends would support their testing for STIs.

Table 23 Differences in the extent of positive views of testing for STIs according to sexual activity and gender

	All participants	Non-sexually active participants			Sexually active participants			Pearson Chi-square		
		All (a)	Males (b)	Females (c)	All (d)	Males (e)	Females (f)	(a) vs (d)	(b) vs (c)	(e) vs (f)
STI testing has many advantages	89.6%	84.4%	78.8%	88.1%	91.6%	88.5%	93.1%	<.001	<.01	<.01
STI testing is a good thing	95.0%	90.1%	83.9%	94.2%	96.8%	94.2%	98.1%	<.001	<.001	<.001
I'm confident I can get tested for STIs when I want to	67.0%	50.6%	48.2%	52.2%	72.9%	71.0%	73.9%	<.001	ns	ns
STI testing is easy	40.4%	22.4%	22.8%	22.2%	47.0%	46.1%	47.5%	<.001	ns	ns
I know where to go if I want to get tested for STIs	59.6%	36.4%	37.3%	35.8%	68.1%	64.3%	70.1%	<.001	ns	
My best friends believe I should get tested for STIs	18.0%	8.8%	6.5%	10.4%	21.3%	16.7%	23.6%	<.001	ns	<.01

Note: This table presents the percentage of participants who somewhat or totally agree with each statement.

Negative views of STI testing

While there was a clear perception of the advantages of testing, participants also held negative views of testing for STIs (Table 24). Some participants (45.2%) considered that testing for STIs is embarrassing; 34.4% were worried about testing for STIs, 26.8% have stigma-related concerns and believed that people would think less of them if they tested for STIs, and 26.1% were worried about the confidentiality of testing. Only a small minority of participants in this sample (9.2%) considered STI testing as expensive.

Table 24 Extent of negative views of testing for STIs*

	Strongly disagree	Somewhat disagree	Unsure	Somewhat agree	Totally agree
STI testing has many disadvantages	884 (48.7%)	403 (22.2%)	394 (21.7%)	75 (4.1%)	60 (3.3%)
I'm worried about the confidentiality of STI testing	636 (35.9%)	347 (19.6%)	329 (18.5%)	333 (18.8%)	129 (7.3%)
STI testing is expensive	286 (16.1%)	151 (8.5%)	1173 (66.1%)	117 (6.6%)	47 (2.6%)
I'm worried about STI testing	458 (25.2%)	385 (21.2%)	347 (19.1%)	469 (25.8%)	157 (8.6%)
STI testing is embarrassing	377 (21.3%)	308 (17.4%)	287 (16.2%)	595 (33.5%)	207 (11.7%)
People will think less of me if they knew I had been tested for STIs	580 (32.7%)	371 (20.9%)	346 (19.5%)	368 (20.7%)	109 (6.1%)

Note: *Among sexually active and non-sexually active participants.

There were some variations in the extent of negative views of testing for STIs based on sexual activity and gender (see Table 25). Non-sexually active participants, especially young men, were more worried about the confidentiality of testing than sexually active participants. Among both non-sexually active and sexually active participants, young women were more worried about testing than young men. Sexually active young women found testing more embarrassing than sexually active young men. Non-sexually active participants were more concerned with potential stigma associated with testing than sexually active participants.

Table 25 Differences in the extent of negative views of testing for STIs according to sexual activity and gender

	All participants	Non-sexually active participants			Sexually active participants			Pearson Chi-square		
		All (a)	Males (b)	Females (c)	All (d)	Males (e)	Females (f)	(a) vs (d)	(b) vs (c)	(e) vs (f)
STI testing has many disadvantages	7.4%	8.6%	10.9%	8.6%	7.0%	7.4%	6.8%	ns	ns	ns
I'm worried about the confidentiality of STI testing	26.0%	33.0%	38.2%	29.6%	23.5%	21.5%	24.6%	<.001	ns	ns
STI testing is expensive	9.2%	7.7%	8.1%	7.5%	9.8%	8.0%	10.7%	ns	ns	ns
I'm worried about STI testing	34.5%	37.9%	32.1%	41.6%	33.2%	27.6%	36.0%	ns	<.05	<.01
STI testing is embarrassing	45.2%	45.3%	43.0%	46.8%	45.2%	39.3%	48.2%	ns	ns	<.01
People will think less of me if they knew I had been tested for STIs	26.9%	35.2%	34.9%	35.4%	23.9%	22.4%	24.7%	<.001	ns	ns

Note: This table presents the percentage of participants who somewhat or totally agree with each statement. ns = non-significant.

In summary, most participants considered that testing for STIs is a good thing and presents many advantages. However, a minority of participants (45.2%) considered testing as embarrassing, others were worried about testing (34.5%) or had stigma- (26.9%) or confidentiality-related (26.0%) concerns. Some variations according to sexual activity and gender were found in negative views of testing.

Testing for STIs and/or human immunodeficiency virus (HIV)

Of the 1,514 participants who ever had sex oral, vaginal or anal sex, 42.8% reported that they had ever been tested for STIs or HIV (see Table 26).

Table 26 Testing for STIs and/or HIV*

	n (%)
Never tested for STIs or HIV	836 (55.2%)
Ever tested for STIs and/or HIV	648 (42.8%)
Don't know/unsure	30 (2.0%)

Note: *Among participants who ever had oral, vaginal or anal sex.

Correlates of having tested for STIs

Correlates of having tested for STIs and/or HIV are presented in Table 27. In univariate analyses, young women were more likely to have tested for STIs and/or HIV than young men (46.1% versus 36.4%, p<.001) and the gender difference remained after controlling for age, with young women being 2.4 times more likely to have tested than young men. Testing was also found to increase with age in both male and female participants, with young men aged 15–19 years starting however at a lower rate of testing than young women in the same age group. The proportion of young men who ever tested for STIs and/or HIV increased from only 10.9% in participants aged 15–19 years, to 39.5% among participants aged 20–24 and 47.4% among participants aged 25–29 years. Among young women, testing rates ranged from 21.8% among those aged 15–19 years, to 57.1% among participants aged 20–24 years, to a maximum of 70.8% among women aged 25–29 years.

Table 27 Correlates of having tested for STIs and/or HIV*

	All sexually active participants			Sexually active male participants		Sexually active female participants	
	% tested	OR	AOR	% tested	OR	% tested	OR
Gender							
Male	36.4%	Ref.	Ref.				
Female	46.1%	1.49***	2.44***				
Age groups							
15–19	19.2%	Ref.	Ref.	10.9%	Ref.	21.8%	Ref.
20–24	52.2%	4.59***	4.95***	39.5%	5.32***	57.1%	4.77***
25–29	59.8%	6.26***	8.17***	47.4%	7.34***	70.8%	8.68***

Note: *Among participants who ever had oral, vaginal or anal sex. OR = Odds ratio, AOR = Adjusted Odds ratio. * $p<.05$, ** $p<.01$, *** $p<.001$.

Individual and social correlates of having tested for STIs were assessed (see Table 28). In univariate analyses, no association was observed between perceived severity of STIs and having tested for STIs. This behaviour was however associated with knowledge of STIs, perceived risk of contracting an STI and all of the 10 indicators of potential barriers to and facilitators of testing for STIs.

Table 28 Individual and social correlates of having tested for STIs*

	Univariate analyses		Multivariate analyses**	
	OR	*p*-value	Adj. OR	*p*-value
Knowledge of STIs	1.58	<.001	1.36	<.001
Perceived severity of STIs	.87	ns	.88	ns
Perceived risk of contracting an STI	1.17	<.01	1.24	<.001
Potential faciliators of condom use				
STI testing is a good thing	1.65	<.001	.90	ns
I'm confident I can get tested for STIs when I want to	2.10	<.001	1.09	ns
STI testing is easy	2.20	<.001	1.29	<.01
I know where to go if I want to get tested for STIs	2.24	<.001	1.62	<.001
My best friends believe I should get tested for STIs	1.30	<.001	1.19	<.01
Potential barriers of condom use				
I'm worried about STI testing	.67	<.001	.81	<.01
I'm worried about the confidentiality of STI testing	.69	<.001	.97	ns
STI testing is expensive	.41	<.001	.61	<.001
STI testing is embarrassing	.83	<.001	1.17	<.05
People will think less of me if they know I have tested for STIs	.73	<.001	.98	ns

Note: *Among sexually active participants. ** Age and gender have been included as control variables in the multivariate model. ns = non-significant. Nagelkerke R square for the multivariate model=.386

In univariate analyses, having tested for STIs was positively associated with STI knowledge, perceived risk, considering that testing for STI is easy, knowing where to go to get tested, and perceiving supportive norms towards testing ('my best friends believe I should get tested for STIs '), and there was also a positive association with considering that testing is embarrassing. Conversely, having tested for STIs was negatively associated with being worried about testing for STIs and considering testing as expensive. Together the variables included in the multivariate model explained 38.6% of the variance in having tested for STIs.

STI testing and condom use

Among participants who had regular partners in the 12 months prior to the survey a significant association was found between being tested for STIs and having had condomless sexual intercourse with regular partner/s. The percentage of participants who had tested for STIs was higher among those who engaged in condomless sexual intercourse with their regular partners in the past year compared to those who did not (53.2% versus 23.2%, p<.001). It remains however that 46.8% of the participants who had condomless sexual intercourse with their regular partner/s in the past year had never tested for STIs.

Among participants who had casual partners in the past 12 months, the percentage of youth who had tested for STIs was only marginally higher among those who engaged in condomless sexual intercourse with their casual partners in the past year compared to those who did not (61.9% versus 51.3%, p<.07). Also intention to test for STIs in the next months was only moderate among participants who had condomless sexual intercourse with casual partners in the year (M = 3.2, SD = 3.0, range: 1-5).

Number of times participants had tested for STIs and/or HIV

Participants who had tested for STIs and/or HIV were asked whether they had tested once or several times. Of the 548 participants who answered this question, 50.7% had only tested once and 49.3% had tested more than once. As can be seen in Table 29, the proportion of tested participants who had been tested more than once increased with age from 20.0% in participants aged 15–19 years, to 41.3% among participants aged 20–24 years, and 59.7% among participants aged 25–29 years. At the same age, the proportion of participants who had tested more than once was always higher in young women than in young men.

Table 29 Proportion of tested participants who had tested more than once*

	All (n=548)	Males (n=155)	Females (n=393)
Across age groups	49.3%	46.5%	50.4%
15–19	20.0%	12.5%	20.8%
20–24	41.3%	35.7%	42.7%
25–29	59.7%	51.3%	64.5%

Note: *Among sexually active participants who ever tested for STIs or HIV.

Recency of last test

Participants who had been tested for STIs and/or HIV were also asked about the recency of their last test. More than half (56.9%) of the 552 respondents to this question reported being tested in the past 12 months. Table 30 indicates that this proportion was however lower among male participants than female participants (46.8% versus 60.9%, p<.01) and it decreased with age from 84.1% among participants aged 15–19 years old, to 47.0% among participants aged 25–29 years old. Gender specific age differences were strong in the first two age groups (15–19 and 20–24 years old) and disappeared among participants aged 25–29 years.

Table 30 Proportion of participants who tested last in the past 12 months*

	All (n=552)	Males (n=158)	Females (n=394)
Across age groups	56.9%	46.8%	60.9%
15–19	84.1%	66.7%	86.3%
20–24	64.3%	46.7%	69.1%
25–29	47.0%	45.4%	47.9%

Note: *Among sexually active participants who ever tested for STIs or HIV.

The above data were used to estimate the percentage of participants who had tested for STIs and/or HIV in the past 12 months (Table 31). Less than a quarter (24.4%) of young people who ever had oral, vaginal or anal sex were estimated to have tested in the past 12 months, with only 17.0% of young men tested in the past 12 months, compared to 28.1% of young women. The proportion of young people who tested in the past 12 months increased with age from 16.1% among 15–19 year olds, to 33.6% among 20–24 year olds and 28.1% among 25–29 year olds. At the same age young women were always more often tested in the past 12 months than young men.

Table 31 Proportion of participants who tested for STIs and/or HIV in the past 12 months*

	All	Males	Females
Across age groups	24.4%	17.0%	28.1%
15–19	16.1%	7.3%	18.8%
20–24	33.6%	18.4%	39.5%
25–29	28.1%	21.5%	33.9%

Note: *Among participants who ever had oral, vaginal or anal sex.

STIs and/or HIV testing at the last sexual health check up

A majority (59.4%) of participants who reported ever having a sexual health check-up were last tested for both STIs and HIV, 25.5% were tested for STIs only,1.8% were tested for HIV only, and 13.3% were unsure or didn't know. The gender differences in the type of test performed at the last check up, are shown in Table 32, with young men being more often than young women tested for HIV, whether this was done in conjunction with an STI test or not.

Table 32 STIs and/or HIV testing at the last sexual health check-up*

Last tested for...	All (n=549)	Males (n=157)	Females (n=392)
Both STIs and HIV	59.4%	65.6%	56.9%
Other STIs only, not HIV	25.5%	18.5%	28.3%
HIV only	1.8%	4.5%	0.8%
Unsure/Don't know	13.3%	11.5%	14.0%

Note: *Among sexually active participants ever tested for HIV and/or STIs. Pearson chi square for gender differences <.01.

Service provider at last test

At their last test, 62.3% of participants were tested through their regular GP, 23.0% tested through another GP, 7.6% at an STI clinic and 7.1% reported other situations (e.g. hospital). Gender differences were observed in the type of provider used to test for STIs (Table 33). Most female participants (65.5%) were tested through their regular GP while 19.5% tested through another GP. Conversely, 54.4% of young men were tested through their regular GP and 31.6% through another GP.

Table 33 Service provider at last STI and/or HIV test

Last tested at...	All (n=552)	Males (n=158)	Females (n=394)
Participants' regular GP	62.3%	54.4%	65.5%
Another GP	23.0%	31.6%	19.5%
An STI clinic	7.6%	11.4%	6.1%
Other	7.1%	2.5%	8.9%

Note: *Among sexually active participants ever tested for HIV and/or STIs. Pearson Chi-Square for gender differences <.001.

In summary, of the participants who reported ever having oral, vaginal or anal sex, 42.8% reported being tested for STIs or HIV. Young women were found to be more likely to have been tested for STIs and/or HIV than young men (46.1% versus 36.4%). Among participants who had ever been tested for STIs or HIV, 56.6% reported being last tested in the past 12 months. As a consequence, it is estimated that only a quarter (24.4%) of sexually active young people had tested in the past 12 months, a proportion that was found to be significantly lower in young men than in young women (17.0% versus 28.1%).

Exposure to messages promoting condom use and testing for STIs

Participants were asked how often they had noticed sexual health promotion messages for young people in the past 12 months prior to the survey.

Most participants (87.5%) had noticed at least once messages promoting condom use in the past 12 months and 75.8% had noticed messages promoting STI testing (Table 34). There were however substantial proportions of participants who had only been exposed rarely or occasionally to sexual promotion messages.

Table 34 Frequency of exposure to message promoting condom use or testing for STIs*

Exposure to sexual health promotion messages telling young people…	Never	Rarely	Occasionally	Often
To use condoms	265 (12.5%)	747 (35.2%)	809 (38.2%)	299 (14.1%)
To test for STIs	511 (24.1%)	842 (39.7%)	603 (28.4%)	164 (7.7%)

Note: *Among sexually active and non-sexually active participants.

As a consequence, the overall score of exposure to sexual health promotion messages that was calculated across the two indicators was moderate (M = 2.37, SD = .77, range: 1–4), with age being inversely correlated with frequency of exposure (see Table 35).

Table 35 Correlates of exposure to sexual health promotion messages

	All participants			Non sexually active participants			Sexually active participants		
	Mean (SD)	Univ. Beta	Multiv. Beta	Mean (SD)	Univ Beta	Multiv. Beta	Mean (SD)	Univ. Beta	Multiv. Beta
Ever had sex									
No	2.45	Ref.	Ref.	---	---	---	---	---	---
Yes	2.34	-.06**	.01^{ns}						
Gender									
Male	2.33	Ref.	Ref.	2.44	Ref.	Ref.	2.28	Ref.	Ref.
Female	2.39	.04^{ns}	.01^{ns}	2.45	.00^{ns}	-.00^{ns}	2.37	.06*	.02^{ns}
Age groups									
15-19	2.50	Ref.	Ref.	2.50	Ref.		2.50	Ref.	Ref.
20-24	2.29	-.10***	-.10***	2.06	-.15***	-.15***	2.32	-.10**	-.10**
25-29	2.19	-.19***	-.19***	2.24	-.10*	-.10*	2.19	-.20***	-.20***

Note: Univ. = Univariate. Multiv. = multivariate. * $p<.05$, ** $p<.01$, *** $p<.001$, ^{ns} = non-significant.

In summary, most (87.5%) participants had noticed at least once messages promoting condom use in the past 12 months, and 75.8% had noticed messages promoting testing for STIs. Frequency of exposure to sexual health promotion messaging was however relatively low and significantly decreased with age.

Familiarity and engagement with sexual health promotion resources, activities and services

Knowing sexual health promotion websites

Only 9.9% of participants were aware of websites providing sexual health information for people their age.

No significant variations in the proportion of participants who knew sexual health websites were observed

based on sexual activity and age groups (see Table 36). Awareness of sexual health promotion websites was found to be significantly associated with gender among sexually active participants only, with sexually active young men being significantly less aware of sexual health promotion websites than sexually active young women (7.1% versus 11.1%).

Table 36 Correlates of knowing sexual health promotion websites

	All participants			Non sexually active participants			Sexually active participants		
	%	OR	AOR	%	OR	AOR	%	OR	AOR
Ever had sex									
No	10.4%	Ref.	Ref.						
Yes	9.8%	.93^{ns}	.98^{ns}						
Gender									
Male	8.0%	Ref.	Ref.	10.3%	Ref.	Ref.	7.1%	Ref.	Ref.
Female	11.0%	1.41^{ns}	1.39^{ns}	10.5%	1.03^{ns}	1.04^{ns}	11.1%	1.63*	1.58*
Age groups									
15-19	10.9%	Ref.	Ref.	10.8%	Ref.	Ref.	10.9%	Ref.	Ref.
20-24	9.2%	.83^{ns}	.84^{ns}	2.6%	.22^{ns}	.22^{ns}	10.1%	.92^{ns}	.95^{ns}
25-29	9.1%	.82^{ns}	.87^{ns}	14.0%	1.33^{ns}	1.34^{ns}	8.7%	.78^{ns}	.86^{ns}

Note: OR = Odds ratio, AOR = Adjusted Odds ratio. * p<.05, ** p<.01, *** p<.001, ^{ns} = non-significant.

Familiarity with the Play Safe initiative and its website

A minority of participants (10.4%) had heard of the sexual health promotion initiative 'Play Safe' and 4.1% of all participants had visited the Play Safe website. Two-thirds (66.6%) of visits to the Play Safe website occurred in the past 12 months.

Having received free condoms

Only 16.8% of participants reported having received free condoms in the 12 months prior to the survey.

In multivariate analyses conducted among all participants (Table 37), receiving free condoms was found to be positively associated with being sexually active, and negatively associated with being female and being aged 25–29 years. These associations suggest that non-sexually active participants, female participants, and participants aged 24–29 years received condoms less often than their counterparts. Results were similar among sexually active participants, where both female gender and older age were found to be independently associated with receiving condoms less frequently.

Table 37 Correlates of having received free condoms

	All participants			Non sexually active participants			Sexually active participants		
	%	OR	AOR	%	OR	AOR	%	OR	AOR
Ever had sex									
No	13.8%	Ref.	Ref.						
Yes	17.8%	1.35^{ns}	1.94***						
Gender									
Male	18.4%	Ref.	Ref.	14.4%	Ref.	Ref.	20.0%	Ref.	Ref.
Female	15.9%	.843^{ns}	.70*	13.5%	.93^{ns}	.95^{ns}	16.7%	.80^{ns}	.61**
Age groups									
15-19	20.0%	Ref.	Ref.	13.6%	Ref.	Ref.	25.2%	Ref.	Ref.
20-24	18.8%	.925^{ns}	.75^{ns}	8.1%	.56^{ns}	.56^{ns}	20.3%	.76^{ns}	.73^{ns}
25-29	11.3%	.510***	.38***	20.9%	1.68^{ns}	1.68^{ns}	10.6%	.35***	.31***

Note: OR = Odds ratio, AOR = Adjusted Odds ratio. * $p<.05$, ** $p<.01$, *** $p<.001$, ^{ns} = non-significant.

Contacts with GPs and nurses in relation to sexual health

A third of participants (34.5%) reported having been in contact with GPs or nurses in relation to sexual health in the 12 months prior to the survey.

As can be seen in the multivariate analyses presented in Table 38, having contacted GPs or nurses in relation to sexual health in the past 12 months was found to be independently associated with being sexually active, being female and belonging to the older age groups. Among sexually active participants, after control by age, females were 3.8 times more likely than men to have contacted GPs or nurses in relation to sexual health in the past 12 months.

Table 38 Correlates of contacting GPs or nurses in relation to sexual health

	All participants			Non sexually active participants			Sexually active participants		
	%	OR	AOR	%	OR	AOR	%	OR	AOR
Ever had sex									
No	10.6%	Ref.	Ref.						
Yes	42.8%	6.30***	5.35***						
Gender									
Male	19.0%	Ref.	Ref.	6.3%	Ref.	Ref.	24.3%	Ref.	Ref.
Female	42.9%	3.20***	3.59***	13.5%	2.31*	2.30*	52.2%	3.40***	3.84***
Age groups									
15-19	26.7%	Ref.	Ref.	11.0%	Ref.	Ref.	39.3%	Ref.	Ref.
20-24	41.3%	1.93***	1.37*	8.1%	.71^{ns}	.74^{ns}	45.9%	1.31^{ns}	1.46*
25-29	41.5%	1.95***	1.60***	9.3%	.83^{ns}	.91^{ns}	44.1%	1.22^{ns}	1.70***

Note: OR = Odds ratio, AOR = Adjusted Odds ratio. * $p<.05$, ** $p<.01$, *** $p<.001$, ^{ns} = non-significant.

Visiting sexual health clinics

Only 4.3% of participants reported having visited a sexual health clinic in the 12 months prior to the survey, and this proportion was similar in male and female participants (Table 39).

Among sexually active participants, visiting a sexual health clinic was significantly more likely among participants aged 20-24 years than their younger or older counterparts.

Table 39 Correlates of having visited a sexual health clinic

	All participants			Non sexually active participants			Sexually active participants		
	%	OR	AOR	%	OR	AOR	%	OR	AOR
Ever had sex									
No	1.2%	Ref.	Ref.						
Yes	5.5%	4.95***	4.37**						
Gender									
Male	3.9%	Ref.	Ref.	1.1%	Ref.	Ref.	5.0%	Ref.	Ref.
Female	4.6%	1.20^{ns}	1.12^{ns}	1.2%	1.00^{ns}	1.04^{ns}	5.7%	1.15^{ns}	1.13^{ns}
Age groups									
15-19	3.0%	Ref.	Ref.	1.1%	Ref.	Ref.	4.5%	Ref.	Ref.
20-24	7.3%	2.51**	1.82^{ns}	0.0%	.00^{ns}	.00^{ns}	8.3%	1.89*	1.19*
25-29	4.6%	1.56^{ns}	1.10^{ns}	2.3%	2.08^{ns}	2.09^{ns}	4.8%	1.06^{ns}	1.09^{ns}

Note: OR = Odds ratio, AOR = Adjusted Odds ratio. * p<.05, ** p<.01, *** p<.001, ^{ns} = non-significant.

Contacts with youth services or youth workers in relation to sexual health

Only 2.9% of the participants had had contact with youth services in relation to sexual health and a similar proportion (2.7%) of participants reported that they had been in contact with a youth worker in relation to sexual health.

In summary, knowledge of important sexual health promotion resources and engagement with specific activities or services was found to be limited among heterosexual young people. Only 9.9% of participants were aware of any websites providing sexual health information and the proportion of participants who had received free condoms in the past 12 months was limited (16.8%). Of the sexually active participants, 5.5% had visited a sexual health clinic in the past 12 months and 42.8% had been in contact with a GP or a nurse in relation to sexual health in the past 12 months. These contacts with GPs or nurses were more frequent among young women than young men (52.2% versus 24.3%).

Sexual health education in secondary schools

Of the 575 Year 10–12 students (mean age = 16 years, 69.3% female) who reported on the sexual health education they received, half (50.6%) were sexually active. On average, students reported having received information relating to 6.7 sexual health education-related topics out of a list of 11 topics (Table 40). Topics reported most frequently included STIs (88.9%), contraception (81.9%), condom use and safe sex (76.9%), and anatomy and sexual function (70.8%). Students reported receiving information less frequently about sexual practices (42.1%) and first time sex (29.6%). Overall, most participants (78.7%) considered that sexual health education increased their knowledge.

Table 40 Information received as part of sexual health education*

Topics	Yes	No
Sexting and social media	425 (73.9%)	150 (26.1%)
Relationship, dating and communication	400 (69.6%)	175 (30.4%)
Pornography and media representation of sex	241 (41.9%)	334 (58.1%)
Contraception (e.g. the pill, injection, implant, condoms)	471 (81.9%)	104 (18.1%)
Sexual practices	242 (42.1%)	333 (57.9%)
Sexual and gender diversity	260 (45.2%)	315 (54.8%)
Consent and sexual assault	398 (69.2%)	177 (30.8%)
STIs (sexually transmissible infections)	511 (88.9%)	64 (11.1%)
Condom use and safe sex practices	442 (76.9%)	133 (23.1%)
Anatomy and sexual function	407 (70.8%)	168 (29.2%)
First time sex	170 (29.6%)	405 (70.4%)

Note: *Among students in year 10–12.

In summary, sexual education in secondary school seems to be comprehensive but there is scope for further delivery of content around sexual practices and first-time sex, as well as gender and sexual diversity.

Discussion

The 'It's You Love Life' periodic survey contributes new knowledge on the attitudes and practices of heterosexually-identified young people 15–29 years of age, living in NSW, as well as their exposure to sexual health promotion.

A total of 2,120 heterosexual participants were recruited of which 71.4% reported having had oral, vaginal or anal sex, including 65.9% in the 12 months prior to the survey.

While knowledge of STIs was good for most topics, some gaps in STI-related knowledge existed, with only half of heterosexual young people knowing that STIs are often symptom free. Differences in levels of knowledge were also observed based on participants' sexual activity, gender and age. Knowledge of STIs was higher among sexually active than non-sexually active participants, among female than male participants, and among older than younger participants. Being more knowledgeable of STIs was found to be associated with having engaged in condomless sexual intercourse in the past 12 months and with having (ever) tested for STIs.

Most participants perceived having an STI as a severe condition. Female participants perceived STIs as more severe than male participants and older participants perceived STIs as less severe than younger participants. While the perception of the severity of STIs was high, most young people perceived themselves at low risk of contracting an STI. Perceived risk was found to be slightly lower in non-sexually active participants compared to sexually active participants, and in the oldest participants compared to the youngest. No association was found between perceived severity or perceived risk and reporting condomless sexual intercourse. Having tested for STIs was however positively associated with perceiving more risk of contracting an STI.

As they can influence behaviours, young people's views and beliefs regarding STI testing were assessed. Positive views of condom use were frequent among young people. Almost all participants believed that using condoms is a good thing and knew where to get condoms. Most participants were confident that they could use condoms when they wanted and agreed that using condoms is easy. However, only half of participants felt supported by their peers in their condoms usage and a similar proportion believed that condoms reduce pleasure. Around a third of participants were worried about confidentiality when getting condoms, a minority of participants considered condoms as expensive or saw them as a sign of distrust. Several of the above listed condom-related views were found to be independently associated with condom use in the past year. Among participants, holding positive attitudes towards condom use, perceiving supportive norms towards using condoms and considering that using condoms is easy seemed to promote condom use while considering that condoms reduce pleasure and are a sign of distrust may have prevented some young people from using condoms.

Many young people who went on a date in the past 12 months did not systematically carry condoms with them and were consequently unprepared for safer sex. Engaging in condomless sexual intercourse was frequently reported. Three quarters (75%) of the participants with regular partner/s had condomless sexual intercourse with them in the past year. Of these participants, only half (53.2%) had ever tested for STIs which indicates that large proportion of young people in relationships have not checked their STI status prior to engaging in condomless sex.

Similarly, most participants (63.2%) who had casual partner/s in the past 12 months engaged in condomless sexual intercourse with them. This could suggest that many young people did not clearly differentiate their condom usage according to types of partners (e.g. regular partners versus casual partners) which puts them

at higher risk of contracting STIs. Among participants who engaged in condomless sexual intercourse with casual partners in the past year, only 61.9% had ever tested for STIs and intention to test for STIs in the next few months was only moderate.

In regard to the numbers of young people who engaged in condomless sexual intercourse, the uptake of testing for STIs was found to insufficient. Of the participants who ever had sex, only 42.8% had been tested for STIs or HIV. Young women were more likely to have been tested for STIs and/or HIV than young men (46.1% versus 36.4%). Among participants who had ever been tested for STIs or HIV, a majority (56.6%) reported to have last tested in the past year. As a consequence, only a quarter (24.4%) of sexually active young people was estimated to have tested for STIs and/or HIV in the past 12 months and this proportion was significantly lower in young men than in young women (17.0% versus 28.1%). This indicates that levels of testing for STIs remain low among heterosexual young people, especially in young men, and that promoting testing for STIs in this population group is a priority.

An assessment of young people's views and beliefs of STI testing were assessed. Most participants perceived STI testing as a good thing that presents many advantages. A strong majority of participants were also confident that they could test for STIs when they wanted; knew where to go to test for STIs and cost was seen as a barrier in only a minority of participants. However only four participants out of ten considered that testing for STIs is easy. Lastly less than two participants out of ten believed that their best friends would support their testing for STIs, a result that suggests that norms were less supportive of STI testing than that of condom use. Several of the above listed dimensions were found to be independently associated with having ever tested for STIs. Considering that testing for STIs is easy, knowing where to go to get tested and perceiving supportive norms towards testing for STIs, all seemed to operate as facilitators of testing for STIs. Conversely, being worried about testing and considering that testing is expensive were identified as barriers to STI testing. These results indicates that a range of individual, social, service-related or structural barriers and facilitators shape young people's STI testing behaviours and would need to be addressed by sexual health promotion to increase uptake of condoms and STI testing in this population.

The survey provided new data on heterosexual young people's level of exposure to sexual health messaging. While most young people had noticed at least once messages promoting condom use or STI testing in the past 12 months, most participants had only been exposed rarely or occasionally to sexual health promotion messages in that period. This indicates that a substantial proportion of young people may not have been exposed to sexual health promotion messages to an extent that would suffice to influence their sexual health-related attitudes and behaviours. The assessment of young people's familiarity and engagement with sexual health promotion resources, activities and services also found important gaps. Only 9.9% of participants were aware of any websites providing sexual health information and the proportion of participants who had received free condoms in the past year was limited (16.8%). Of the sexually active participants, 5.5% had visited a sexual health clinic in the past 12 months and 42.8% had been in contact with a GP or a nurse in relation to sexual health in the past 12 months. These contacts with GPs or nurses were more frequent among young women than young men (52.2% versus 24.3%), a result that also reflects the low rates of young men accessing health services more broadly.

The study presented some limitations. These are self-reported data that can be affected by declaration bias. The sample cannot be considered as representative of the population of young heterosexual people aged 15-29 years old living in NSW, nor of the population of young people who used social media, including Facebook and Instagram. However, the sample recruited was large and sufficiently diverse to derive overall estimates of knowledge, attitudes, behaviours and sexual health promotion coverage among young people and analyse variations in these estimates according to sexual activity, gender and age groups.

Despite these limitations, the findings presented in this report contribute to clearly depict the sexual health-related situation and needs of heterosexual young people. Many appeared to be relatively unprepared for safer sex and large proportions engage in condomless sexual intercourse without being tested for STIs. The study contributed to identify the individual, social, service-related and structural barriers and facilitators that shape young people's condom use and testing for STIs and could be addressed by programs to further

promote sexual health in this population. Results indicate that young people's level of familiarity with sexual health resources as well as their engagement with some major sexual health promotion initiatives (e.g. Play Safe, condom use distribution) remains low. These findings provide important guidance for the strengthening of sexual health promotion initiatives among young people in NSW and a baseline to evaluate current and future efforts to strengthen young people's engagement with sexual health promotion and services. Substantial effort is required to support heterosexual young people in ensuring their sexual health.

Recommendations

A combination of national and state-based approaches will be needed to engage larger proportions of heterosexual young people with sexual health promotion and address the issues that were identified in this report.

Sexual health resources offered by statewide and local programs need to be more systematically and strategically promoted and, where possible, the provision of free condoms should be sustained.

Ensuring young people, including young men, consult GPs and other service providers in relation to sexual health is needed to increase STI testing in this population.

Sexual health promotion should continue to raise awareness on the fact that STIs are often symptom free and ensure young people have clear plans for carrying and using condoms as well as for testing for STIs.

Promoting sexual health among heterosexual young people necessitates comprehensively addressing a range of perceived barriers that prevent individuals from using condoms and testing for STIs:

Addressing perceived barriers to condom use requires communicating with young people that condom use during sex can be easy and pleasurable, is expected by peers and not antithetic to building trustful relationships.

Reducing perceived barriers to testing encompasses engaging with young people who are worried about STI testing and lack confidence in their ability to test, ensuring young people can easily locate convenient testing facilities, including those offering free testing, and communicating with young to strengthening positive norms about testing.

Tailoring of sexual health promotion messages and activities according to sexual activity, age and gender contributes to appropriately increasing engagement of young people with sexual health. Developing and implementing activities aimed at closing the existing 'gender gap' in knowledge, attitudes and behaviours related to sexual health is a priority.

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