

Australian Longitudinal Study on Women's Health

1989-95 COHORT SUMMARY

SURVEYS 1 – 5 (2013-2017)

October 2019

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1989 – 95 cohort summary

1 EXECUTIVE SUMMARY

The Australian Longitudinal Study on Women’s Health (ALSWH) is a longitudinal population-based survey of over 57,000 Australian women in four cohorts. This report is a summary of the first five surveys of the youngest cohort, (born 1989-95), using data from women who completed all five surveys. These women completed their first survey in 2013 at age 19-23 years, and their fifth survey in 2017 at age 22-27 years. The survey schedule is shown in Table 1-1.

Table 1-1 Schedule of Surveys 1 -5 for the ALSWH 1989-95 cohort.

	Survey	Age of women
2013	1	18-23 years
2014	2	19-24 years
2015	3	20-25 years
2016	4	21-26 years
2017	5	22-27 years

Sociodemographic characteristics:

The women in the 1989-95 cohort experienced considerable change in their socio-demographic circumstances as they aged from Survey 1 (18 to 23 years) in 2013 to Survey 5 (22 to 27 years) in 2017, apart from their area of residence which remained essentially unchanged. These included attaining higher educational qualifications, beginning employment, leaving the family home, forming relationships, and the changes in their ability to manage on their income.

- There was a clear pattern of higher educational attainment over time, with the percentage of women with only Year 12 or equivalent as their highest education level declining from 46% to 12% from Survey 1 to 5, and the percentage who had obtained university level qualifications increasing to 63% by Survey 5.
- The completion of education qualifications is reflected in the increased percentage of women in full time work, which increased from 33% at Survey 2 to almost 60% at Survey 5, while those not in the labour force (including those studying or unemployed) declined from 13% to 7%.
- At Survey 5, over half of the women (53%) were employed in professional or management occupations, and 25% were in semi-skilled positions.
- The prevalence of women married or in a de facto relationship increased from around 22% at Survey 1 to 42% at Survey 5.

- The percentage of women living with a partner (with or without other adults) more than doubled from Survey 1 (22.3%) to Survey 5 (42.3%), while those living with their parents halved from 47% to 22%.
- At Survey 1, more than half the women (55%) reported some difficulty or it being impossible to manage on their income; by Survey 5 this had declined to 44%, with the remaining 56% reporting it was easy or not too bad.

Health behaviours and bodyweight:

There were some positive changes in women's health behaviour including a decrease in smoking, better adherence to alcohol guidelines to limit alcohol to less than two glasses per day, and maintenance of high levels of physical activity for most of the cohort. However, many women continue to drink above this recommended level. The small improvement in smoking may also be offset by use of e-cigarettes. The use of other drugs remained steady, or increased, over the five surveys. There was also a large increase in women's weight, with over 40% of women in the overweight or obese range by Survey 5.

- From Survey 2 to Survey 5, the percentage of women who were current smokers declined slightly from 14% to 12%, while ex-smokers rose from 6% to 10% over the same time period.
- Alcohol consumption showed a slow trend towards safer drinking over time, with 1 in 4 women (25%) within NHMRC guidelines for alcohol consumption by Survey 5. The percentage of women who engaged in alcohol consumption that posed long-term risk, however, was still 44% at Survey 5, down from 57% at Survey 1.
- The proportion of women who reported using marijuana in the last 12 months remained steady at 26% from Survey 1 to Survey 3 (aged 20-25 years), while those who had never used it declined from 53% to 46% over the same period.
- Use of other illicit drugs (such as Ice, LSD, cocaine) increased from 13% of the women at Survey 1 to 15% at Survey 3 (aged 20-25 years), while those who reported they had never used illicit drugs declined from 77% to 71% over the same period.
- Body Mass Index (BMI) increased progressively across surveys, with the percentage of women categorised as overweight or obese rising from 31% at Survey 1 to 44% at Survey 5 – this included a rise in the prevalence of obesity from 12% to 19%. The proportion of women in the acceptable BMI range declined from 62% to 54%.
- Levels of physical activity remained steady across surveys. At Survey 5, just under half the women (48%) reported high levels of physical activity, whereas 25% had low levels and 6% were inactive.

Diet:

There was a small improvement in fruit and vegetable intakes, however the majority of women do not conform to the dietary guidelines for fruits and vegetables. Consumption of cola and other carbonated beverages declined, while coffee and herbal tea consumption increased.

- The proportion of women meeting dietary guidelines for fruit consumption (two or more pieces per day) increased from 35% at Survey 2 to 39% at Survey 5; 29% did not eat fruit or reported that they usually had less than one piece per day (down from 33% at Survey 2).
- Consumption of vegetables increased across Surveys 2 to 5, with more than half (57%) of the women at Survey 5 reporting that they had three or more serves of vegetables per day (up from 46% at Survey 2). Although an improvement from Survey 2, only 12% at Survey 5 met the dietary guidelines of five or more serves of vegetables per day (up from 8% at Survey 2).
- Consumption of cola and other carbonated (but not diet) drinks declined from Survey 2 to 4, with a small group at Survey 4 (aged 21 to 26 years) still having one or more of these drinks every day (3% for cola and 1% for other carbonated drinks); in addition, consumption of diet cola and other diet carbonated drinks has tended to decline (or remained steady for those consuming daily or more).
- At least daily consumption of milk or soy milk increased from 36% of women at Survey 2 to 43% at Survey 4. In contrast, the frequency of fruit or vegetable juice consumption tended to decline, from half of the women (51%) drinking these juices at least once a week at Survey 1, down to 39% at Survey 4.
- The consumption of tea varied little across the age range, with a third of women at Survey 4 reporting that they drank tea at least once per day. In contrast, coffee and herbal tea consumption increased across Surveys 2 to 4: from 28% to 39% for women who had coffee at least once per day, and 16 to 19% for at least daily herbal tea consumption.

Mental health:

The prevalence of having ever reported anxiety, depression, or other mental health conditions increased across the five surveys. However, the presence of current psychological distress decreased, as measured on the Kessler psychological distress scale (K-10) which is based on questions about the women's recent experience of anxiety and depressive symptoms. At Survey 5, 13% of women had very high scores and 24% of women had high scores indicating psychological distress. Almost 1 in 4 women thought life wasn't worth living at some point in the previous 12 months, and this proportion remained consistent across the five surveys. Almost 1 in 10 women had harmed themselves in the 12 months before Survey 5, although this percentage was slightly decreased from Survey 1.

- The proportion of women reporting diagnosis or treatment of anxiety increased across surveys, from one in four (27%) in Survey 1 to 38% in Survey 5.
- The proportion of women reporting a diagnosis or treatment of depression increased across surveys, from one in three (33%) in Survey 1 to 40% in Survey 5.
- The Kessler Psychological Distress Scale (K-10) showed a general decline across surveys, with scores indicating high or very high psychological distress declining from 43% at Survey 1 to 37% at Survey 5. One in three women (32%) at Survey 5 had scores that showed little or no signs of psychological distress (up from 25% at Survey 1).
- Suicidal ideation in the previous 12 months was reported by 29% of women at Survey 5, a small increase on the 27% at Survey 1.
- In contrast, the proportion of women reporting self harm in the previous 12 months declined across surveys, from 14% at Survey 1 to 11% at Survey 5.
- The proportion of women who reported ever having been diagnosed or treated with eating disorders remained unchanged from Survey 2 to Survey 5, with 3% of women reporting anorexia and 2% bulimia at Survey 5.
- The prevalence of women reporting ever having a diagnosis or treatment of post-traumatic stress disorder (PTSD) increased from 5% (Survey 2) to 7% (Survey 5). The reported prevalence of ever having bipolar disorder, obsessive compulsive disorder (survey 3), and borderline personality remained steady at around 3%.

Reproductive and sexual health:

Most women (89%) identified as being sexually attracted to males. Around 6% of women were bisexual, and around 4% identified as homosexual. Over time, there were large changes in the use of contraception, with a reduction in the use of barrier methods. These changes may correspond to the establishment of stable relationships, and with plans to have children. However, the prevalence of having ever had a sexually transmitted infection continued to rise with each survey.

- Although by Survey 5 almost all women report that they have had vaginal sex, their pattern of contraceptive use changed across surveys. The use of the pill by women declined from 60% at Survey 1 to 50% at Survey 5, condom use declined from 41% to 31% (with 12% of women at Survey 5 reporting that they using both these methods), while the use of Mirena (a hormone-releasing IUD) increased from 2% to 9%.
- The proportion of women who had one or more live births more than doubled across surveys, from 4% at Survey 1 to 9% at Survey 5. By Survey 5, 4.5% of the women had experienced one or more miscarriages, up from 2.6% at Survey 1.

- The proportion of women who reported having had one or more termination (for personal rather than medical reasons) rose from 3.5% at Survey 1 to 6% by Survey 5, with 0.5% at Survey 5 having had a termination for medical reasons.
- By Survey 5, women reported that approximately 42.5% of their first or single children were breastfed for more than six months, almost 52% were breastfed for less than six months, and 5.5% were not breastfed.
- Diagnosed or treated sexually transmitted infections (STIs) showed a consistent rising cumulative prevalence across surveys. Similarly, reports of ever having had thrush or yeast infection rose from 42% at Survey 2 to 51% at Survey 5. The proportion of women at Survey 5 who reported ever having had chlamydia rose to 11%, almost double that reported at Survey 1 (6%). Also by Survey 5, 3% of women reported ever having been diagnosed or treated for genital herpes, up from 1.7% at Survey 1.
- The prevalence of often experiencing menstrual problems generally showed a slight decrease across Surveys 1 to 5: vaginal discharge (10% to 8% of women), premenstrual tension (16% to 14%), heavy periods (14% to 12%). The prevalence of women who reported they often experienced irregular periods was essentially steady (18% at Survey 1 and 19% at Survey 5).
- In terms of other gynaecological conditions, the proportion of women who reported that they had ever been diagnosed or treated with endometriosis rose from 4% at Survey 1 to 7% at Survey 5; similarly the cumulative prevalence of polycystic ovarian syndrome rose from 6% to 10% over the same period.

Physical health:

Women reported a range of physical symptoms and conditions. Where conditions had been asked at each survey, the prevalence continued to rise with each survey.

- At Survey 5, more than 15% of the cohort reported often having allergies, back pain, skin problems, or headaches/migraine in the previous 12 months.
- The extent of sleeping difficulties remained largely unchanged across surveys, with 1 in 5 women (22%) at Survey 5 reporting that they often had difficulty sleeping. The proportion of women from Survey 1 to 5 reporting that they *often experienced severe tiredness* declined slightly from 25% to 23%.
- One third of women (34%) reported that they had ever had anaemia (low iron) in Survey 1, rising to 47% by Survey 5. Asthma was a common chronic condition, with more than one quarter of women (27% at Survey 5) reporting that they had ever been diagnosed or treated for asthma. Less than 4% reported that they ever had a thyroid condition.

- The prevalence of women who often or sometimes experienced urine problems showed a slight decline from 12% at Survey 1 to 10% at Survey 5 for burning or stinging urine, and conversely an increase in the prevalence of leaking urine from 10% to 12% over the same period.
- More than half (55%) of women at Survey 5 reported that they ever had a urinary tract infection, compared with 41% of women at Survey 1.
- In terms of the prevalence of bowel conditions that were reported as occurring “often or sometimes”, 30% of women at Survey 5 experienced constipation – up from 26% at Survey 1; the prevalence of haemorrhoids increased from 6% to 9%; while 19% of women reported other unspecified bowel problems at Survey 5.

Abuse:

Many women report having been in an abusive relationship with a violent partner, and the prevalence of having ever been in such a relationship increased over time.

- The proportion of women who reported they had ever been in a violent relationship with a partner/spouse increased from 12% at Survey 2 to 16% at Survey 5.
- At Survey 5, over 10% of women reported that they had been followed or harassed around their neighbourhood or work, by their partner; 17.1% reported their partner had tried to keep them from seeing or talking to their family, friends or children, or didn’t want them to socialise; 9% reported being kicked, bit, slapped or being hit with a fist or an attempt at being hit with something over the previous 12 months.
- The proportion of women whose partner had forced them to take part in unwanted sexual activity increased from 12% at Survey 2 to 17.8% at Survey 5.

Women also reported a high prevalence of adverse childhood experiences (before age 18):

- One in four women (24%) reported they had experience abusive behaviour by a parent or other adult; 10% reported sexual abuse by an adult or person at least 5 years older; 9% reported that their mother or stepmother had been abused, 4% reported their father or step father had been abused; 23% lived with a person who was a problem drinker or alcoholic, or who used street drugs;
- 40.6% reported that a member of their household was depressed or mentally ill, with 8% reporting that a member of their family had attempted suicide

Sources of health information:

Women's sources of health information were asked from Survey 1 to 3. Only doctors were identified as a more popular source of information than using the Internet, while family sources and using traditional media sources have declined since Survey 1.

- At Survey 3 the principal sources of information about health were Doctors (used by 86% of women), the Internet (81%), family (57%, down from 66% at Survey 1), friends (45%), workplace and educational institutions (41%), traditional media such as TV/radio and posters/leaflets (24% down from 33%), and the use of journal articles, textbooks and books (unchanged at 37%).

Health services use:

- The proportion of women who had a Health Care Card almost halved from almost 31% at Survey 1 to 17% at Survey 5.
- Women overwhelmingly preferred to see a female doctor, with this rising from 63% at Survey 1 (age 18-23) to 68.5% at Survey 3 (age 20-25).
- Screening – the proportion of women reporting screening tests or checks generally increased by Survey 2 (age 19-24):
 - 56% reported that they had a pap test in the last two years, up from 50% at Survey 1 (age 18-23).
 - 89% of women reported having had their blood pressure checked in the last 2 years.
 - one third (33%) of women reported having their skin checked in the last two years.
 - 44% of women had had their body weight measured by a professional.
 - Over 88% of women reported they had ever had a vaccination for HPV.
- At Survey 3, 30% of the women had consulted a counsellor or other mental health worker in the previous 12 months; 17% a community nurse, practice nurse, or nurse practitioner; 27% a physiotherapist; 9% a dietician; and 60% had consulted a dentist.

Complementary and Alternative Medicines:

- The use of different complementary and alternative medicines was common among women at Survey 3: 65% often or sometimes took vitamin/mineral supplements; 15% herbal medicines; 3% Chinese medicines; 9% often or sometimes used aromatherapy oils; 31% did yoga (10% often); 7% used other alternative therapies of medicines.

Aspirations:

The women were asked about their future aspirations for employment, education, relationships and children when they were aged 40.

- In terms of employment at Survey 2 (aged 19 to 24 years), 69% of women aspired to be undertaking full time paid work and about 15% aspired to self-employment. Less than 2% of women aspired to fulltime unpaid work in the home. In addition, 85% wanted to have more educational qualifications.
- At Survey 2, more than 86% of women aspired to be married at age 40, 13% to be in a stable relationship but not married, and less than 1% to be single.
- The percentage of women who wanted three or more children by age 40 declined from 34% at Survey 2 to 28% at Survey 5; over the same period the proportion of women who wanted no children rose from 9% to 15%.

CURRENT ACTIVITY

There are currently 54 approved projects that make use of the 1989-95 cohort data. These include projects to establish the methods for the surveys, and to provide a basis for other publications. Other projects are examining the differences in health and health behaviours between the 1989-95 cohort and the 1973-78 cohort when they were of a similar age. Several projects are investigating young women's use of health services, and how these meet their needs, particularly for those who are experiencing, or have experienced, violence. Projects are examining women's diet, and the effects of diet on physical and mental health. Other projects are investigating other health behaviours such as smoking, alcohol and other drugs.

A number of projects are examining the women's use of contraception, fertility, and menstruation problems. Also, as the women increase the likelihood of having children, many projects are investigating pregnancy outcomes.

One project is examining the spatial distribution of family, domestic and sexual violence.

FUTURE DIRECTIONS

The women will soon enter their third decade, having provided a large amount of data across their early adult years. They are establishing their careers and relationships, and many will begin to have children. The next several years are a critical period in understanding the transitions that will affect the women's health now, their future health, and the health of their children.

The ages of the women in this cohort overlap with the ages of the women in the 1973-78 cohort, but with around 25 years between them. Comparing the cohorts we are able to assess how women's health has changed in a quarter of a century; and we can project whether this current cohort of young women are likely to enter their middle years in better (or worse) health than their predecessors. Areas of particular interest going forward include trends in the rates of obesity (and related health conditions), mental health (and the use of treatments), as well as conditions such as endometriosis which have come under increased national focus in recent years.

Moreover, as health policy changes, this cohort provides a ready panel to detect the impacts of these changes on the health of Australian women at a critical life stage.

2 INTRODUCTION

The Australian Longitudinal Study on Women's Health (ALSWH) assesses the physical and mental health of Australian women, as well as psychosocial aspects of their health (such as lifestyle and socio-demographic factors) and their use of health services. ALSWH is funded by the Australian Government Department of Health and has been collecting data since 1996 from the Study's original three cohorts, born 1973-78, 1946-51 and 1921-2. These women were recruited via random sampling of the Health Insurance Commission (now Medicare Australia) database, with deliberate oversampling of women in rural and remote areas.

By 2010, ALSWH participants were aged 32 to 37 (1973-78 cohort), 59 to 64 (1946-51 cohort) and 84 to 89 (1921-26 cohort). Since women in the youngest cohort were no longer young adults, in 2011 the Department of Health and Ageing (now the Department of Health) provided ALSWH with funding to establish a new, fourth cohort of young women aged 18 to 23 (born 1989-95). It is important to ensure young women are represented in national longitudinal studies as they are at a key stage in their lifespan with respect to reproductive and lifestyle decisions that will affect future demographic trends and demand for health services.

2.1 Objectives

The broad objectives of data collection from the youngest ALSWH cohort are:

- To collect scientifically valid information about the current health and health service use of young women, which will provide an evidence base for the development and evaluation of health policy and practice relevant to a new generation of Australian women;
- To add health information from young women to the information from existing cohorts, in order to create a dataset which can be used to examine the health and health service use of Australian women across the lifespan.

The specific aims are:

- To examine health risk factors including weight, physical activity, and use of tobacco and alcohol;
- To examine risk taking behaviour, such as use of illicit drugs, and sexual behaviour;
- To gather information about social experiences and environmental influences on young women, including information about families of origin, traumatic or stressful events, neighbourhood characteristics, and social inclusion;
- To examine patterns of contraceptive use, experiences of pregnancy and childbirth, and other reproductive health issues;

- To examine young women's access to sources of information about, and use of health services and preventive health activities;
- To record the aspirations for the future and life goals of young women in relation to education, travel, area of residence, work, family and children.

Eligibility criteria at recruitment included living in Australia, being a female aged 18-23, and possessing a Medicare number (Australian and New Zealand citizens and permanent residents living in Australia are eligible for a Medicare number). Consenting to have survey data linked with administrative data (e.g., records of health service use) was also required for inclusion in the cohort. More details about the recruitment process can be found in [Health and wellbeing of women aged 18 to 23 in 2013 and 1996: Findings from the Australian Longitudinal Study on Women's Health](#) (2015, Report prepared for the Australian Government) and a paper by Loxton and colleagues, '[Online and offline recruitment of young women for a longitudinal health survey: Findings from the Australian Longitudinal Study on Women's Health 1989-95 cohort](#)' (2015, *Journal of Medical Internet Research*, 17; e109).

2.2 Participants

A total of 17,567 women met the inclusion criteria – that is, they completed survey information, provided a valid and verified Medicare number, and consented to linkage of survey data with administrative databases. A pilot study group of 498 women was formed, leaving a total of 17,069 women in the 1989-95 main cohort at Survey 1 in 2013. Since then, 58 of these women have been deemed ineligible, due to birthdates outside the 1989-95 period, or having duplicate records, and the number of women included in the cohort is now 17,010.

2.3 Representativeness

Representativeness of the cohort enables generalisation of findings from the study to support the development of national health policy and healthcare planning. Compared to the Australian Census data, at recruitment study participants were broadly representative in terms of geographical distribution across Australia, marital status (96% had never been married), and age distribution. A higher percentage had attained university (22%) and trade/certificate/diploma qualifications (26%) compared with this age group of women in the national population (9% and 22% respectively). Among study participants, 22% were not in paid employment with 35% studying 16 or more hours a week. A higher percentage of study participants rated their health in the online survey as fair or poor (rather than good, very good, or excellent) compared with those participating in face-to-face interviews in the AHS (18% vs 10%). A higher percentage of study participants were current smokers (22% in ALSWH vs 16% in AHS) and physically active (59% in ALSWH were classified as sufficiently active vs 48% in AHS) but alcohol consumption was lower (60% in ALSWH reported drinking alcohol at least once per month vs 66% in the AHS).

While some overrepresentation in tertiary-educated women is apparent and was unable to be fully mitigated by the multiple techniques employed, the sample is broadly representative across other demographic measures and has sufficient size and diversity to allow for subgroup comparisons (Loxton et al, 2015).

2.4 Retention

Surveys were conducted annually from 2013 to 2017. There was a steep decline in response at the cohort's second survey in 2014 (down to 70% of respondents from the baseline survey), but the response rate appears to have plateaued at around 55%-60% for subsequent surveys (Table 2-1).

Table 2-1 Participation and retention of 17,010 women in the 1989-95 cohort of women who were aged 18-23 years at Survey 1 in 2013*

	2014 Survey 2 (age 19-24)	2015 Survey 3 (age 20-25)	2016 Survey 4 (age 21-26)	2017 Survey 5 (age 22-27)
Deceased	1	6	8	13
Frail	1	1	1	1
Withdrawn	681	694	1,744	1,943
TOTAL INELIGIBLE	683	701	1,753	1,957
Did not do survey	2,362	3,879	1,850	1,813
No contact	2,621	3,469	4,400	4,745
Respondent	11,344	8,961	9,007	8,495
TOTAL ELIGIBLE	16,327	16,309	15,257	15,053
RESPONSE RATE (%)	69.5%	54.9%	59.0%	56.4%

*Data known as at 27th June 2019

2.5 Procedure

Standard validated questions from Australian and overseas sources have been used in the surveys, to allow findings to be compared directly with information from other studies. All surveys are pilot tested with the 1989-95 cohort pilot group, approximately five months before the main survey is deployed. All surveys of the 1989-95 cohort have been conducted online. Full details of survey development are available in the ALSWH annual technical reports that are available on the ALSWH website.

3 RESPONSE DATA FROM SURVEYS 2013-2017

Figures in this section show responses to questions asked on Surveys 1-5 (which were conducted annually from 2013 to 2017) by members of the cohort who have completed all five surveys (N = 5,538).

For each figure, an example survey question has been included. Some questions were asked at every survey, others were asked at less frequently – these details are noted on each figure.

Complete data for every survey, including questions and responses, are available in the ALSWH databooks, available at: www.alsw.org.au

3.1 Sociodemographic characteristics.

3.1.1 Area of residence

Participants in the cohort are located across Australia in all States and Territories. The Modified Monash Model (MMM) classification of area associates postcode with area of residence defined by remoteness and population size. Area of residence is determined from the latitudes and longitudes of participants' residential addresses, which are linked with geographical information (geocoded). In those few cases where address information is unreliable, postcode information gathered in the survey is used. The MMM classification for this cohort is based on 2011 census data for Surveys 1-4, and 2016 Census data for Survey 5.

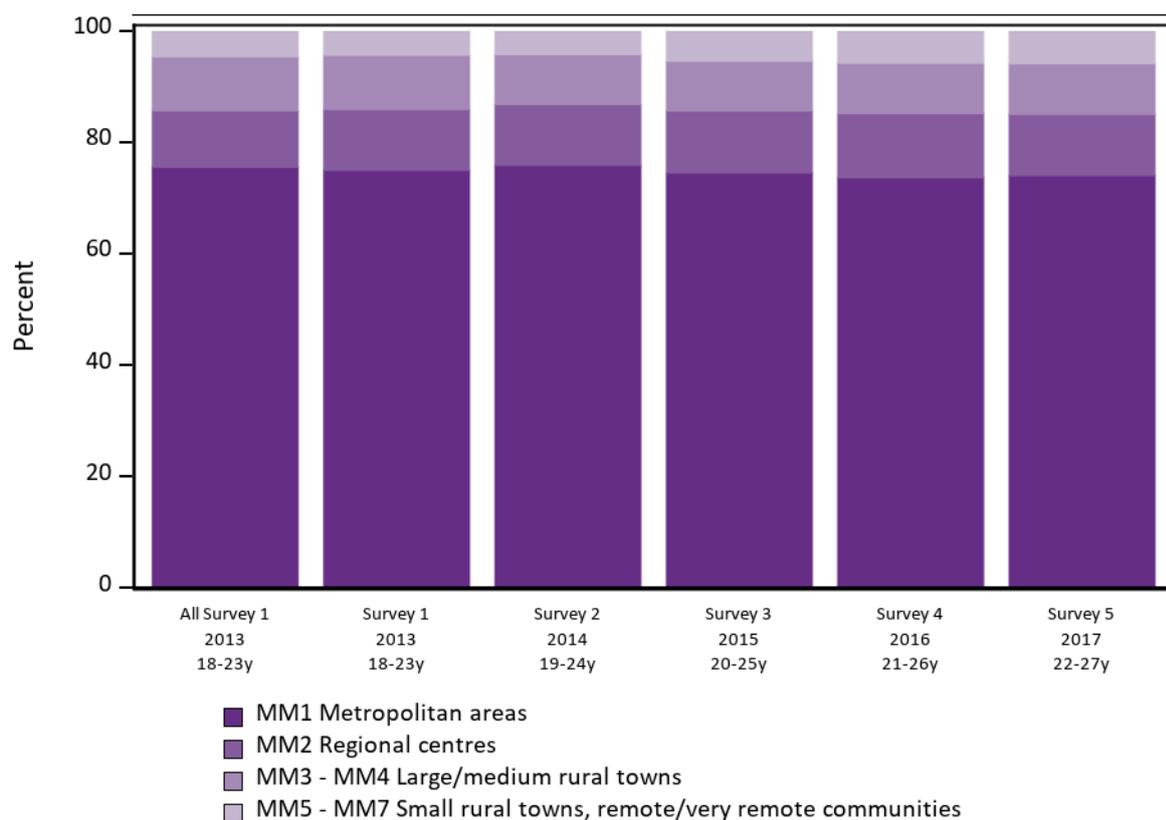


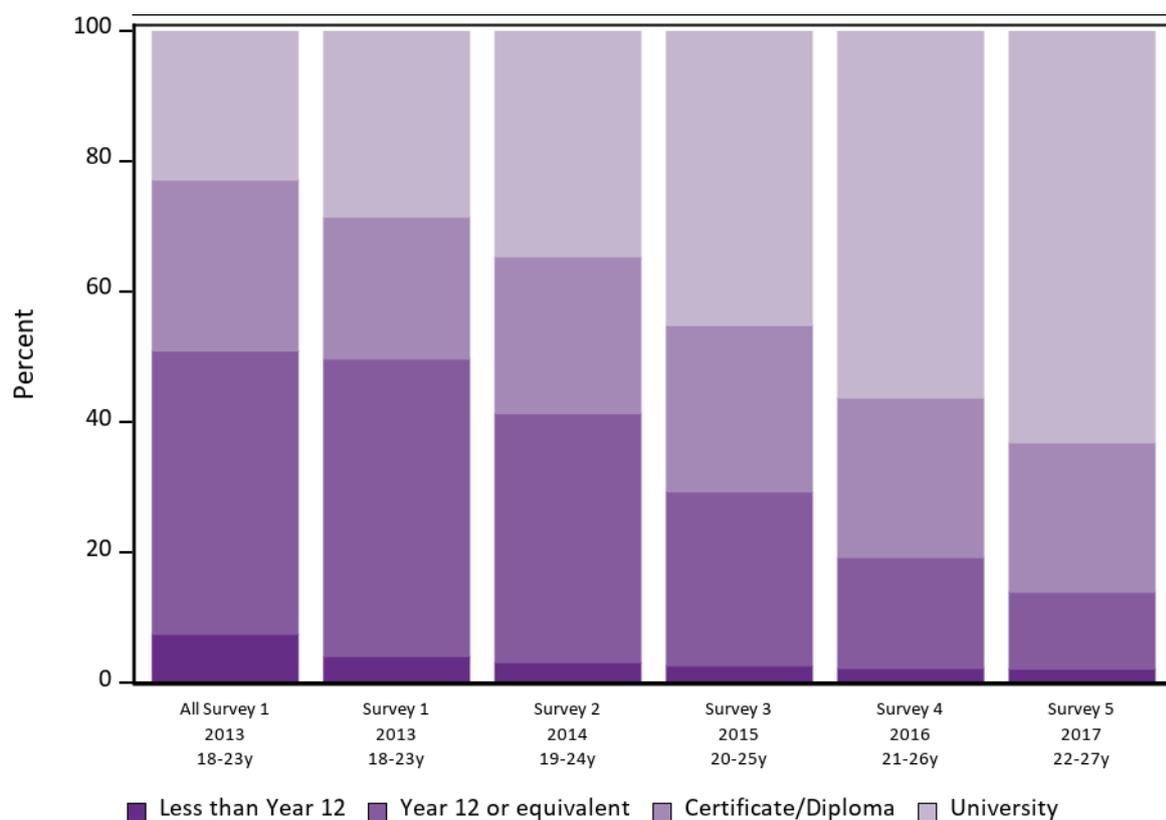
Figure 3-1 Participant area of residence at time of survey at Survey 1 (All, N=16,938); and from Survey 1 to Survey 5 (N = 5,232).

The percentage of women living in all areas remained stable, with over 70% living in metropolitan areas. The areas of residence of all women who completed Survey 1 (the first bar in Figure 3-1) were similar to the areas of residence of women who completed this question in all five surveys.

3.1.2 Education

QUESTION: What is the highest level of education you have completed?

- Year 10 or below
- Year 11 or equivalent
- Year 12 or equivalent
- Certificate I / II
- Certificate III / IV
- Advanced Diploma / Diploma
- Bachelor degree
- Graduate diploma / Graduate certificate
- Postgraduate degree



	Survey 1 (All)*	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
University	22.8	28.5	34.6	45.1	56.2	63.1
Certificate/Diploma	26.2	21.8	24.1	25.5	24.5	22.9
Year 12 or equivalent	43.5	45.6	38.2	26.7	17.0	11.8
Less than Year 12	7.5	4.1	3.2	2.7	2.3	2.2

Figure 3-2 Highest educational qualification from Survey 1 (All, N = 16,827); and from Survey 1 to Survey 5 (N = 5,285).

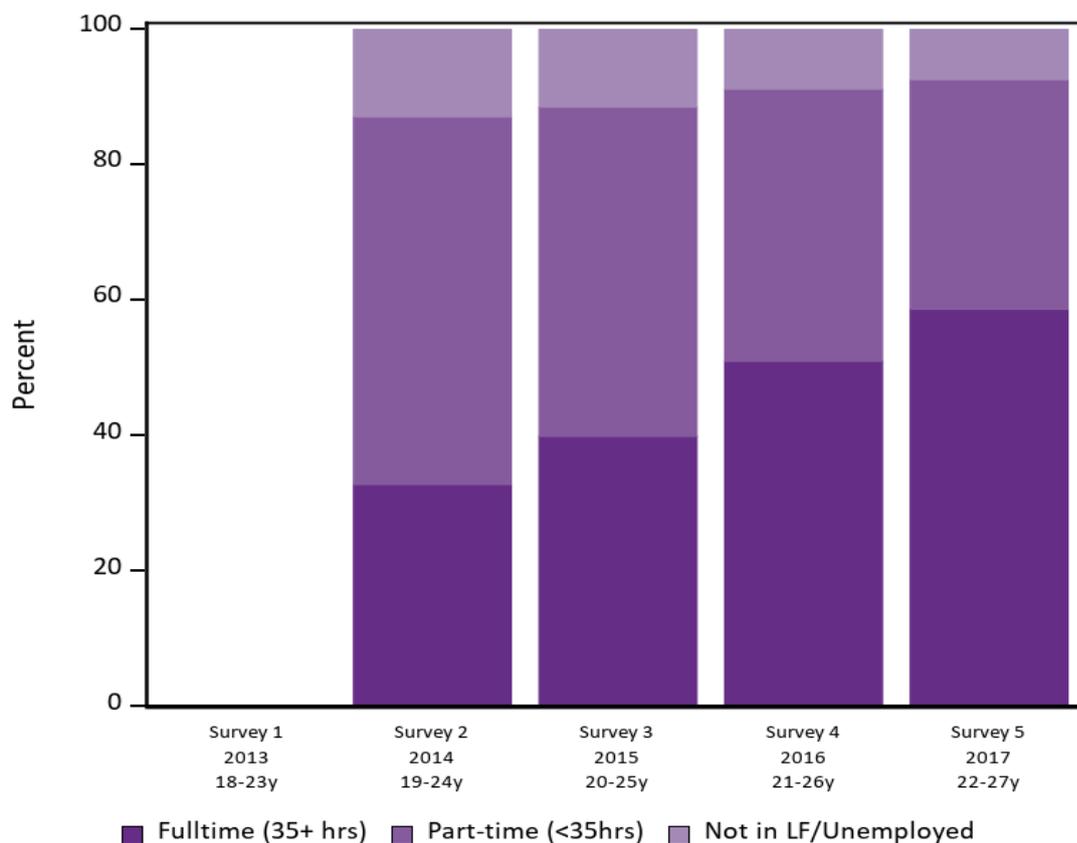
There was a clear pattern of higher educational attainment over time, with the percentage of women with a highest education level of Year 12 or equivalent declining from 46% to 12% from Survey 1 to Survey 5, while 63% had obtained university level qualifications by Survey 5.

3.1.3 Employment/job seeking

QUESTION: In a usual week, how many hours do you spend doing paid work / studying / doing work without pay? 0 hours; 1 - 15 hours; 16 - 29 hours; 30 - 34 hours; 35 - 40 hours; 41 - 49 hours; 50 or more hours.

QUESTION: Are you currently unemployed and actively seeking work? No; Yes, unemployed for less than 6 months; Yes, unemployed for 6 months or more.

Participation in the labour force (LF) is calculated from responses to each question. Women who are not in paid or unpaid work but are not looking for work, and women who are studying and not doing paid or unpaid work, are regarded as not being in the labour force.



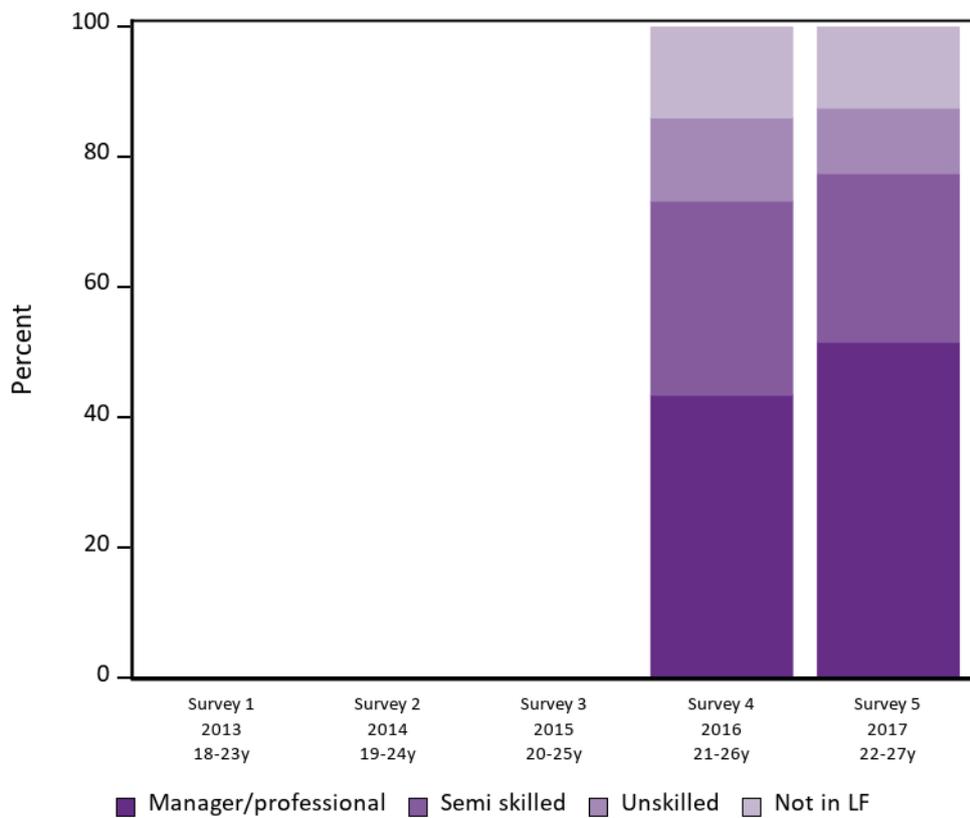
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Not in LF/Unemployed		12.9	11.5	8.8	7.4
Part-time (<35 hrs)		54.3	48.6	40.2	33.9
Fulltime (35+ hrs)		32.8	39.9	51.0	58.7

Figure 3-3 Participation in the labour force from Survey 2 to Survey 5 (N = 5,310).

The number of women in full time work increased from less than one third to almost 60% between Survey 2 and Survey 5. This trend most likely reflects women finishing study, with or without part-time work, and moving on to fulltime work.

3.1.4 Occupation

QUESTION: We would like to know your main occupation now:



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Not in labour force				13.9	12.4
Unskilled				12.8	10.1
Semi skilled				29.8	25.9
Manager/professional				43.5	51.6

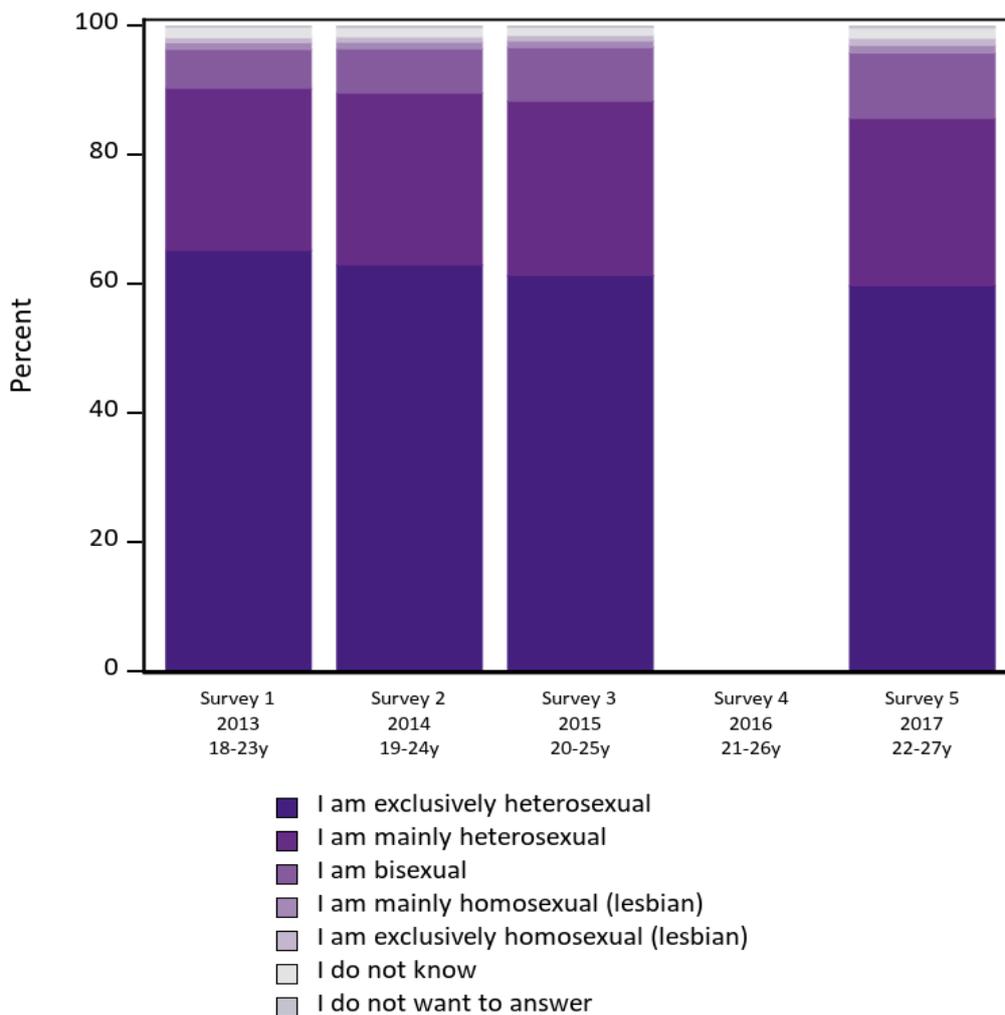
Figure 3-4 Occupation reported at Surveys 4 and 5 (N = 5,361).

This question was first asked at Survey 4. Most women had an occupation in the manager/professional category. Between Survey 4 and Survey 5 the proportion of women working in manager/professional occupations increased by 8%.

3.1.5 Sexual orientation

QUESTION: Which of these most closely describes your sexual orientation?

- I am exclusively heterosexual
- I am mainly heterosexual
- I am bisexual
- I am mainly homosexual (lesbian)
- I am exclusively homosexual (lesbian)
- I don't know
- I don't want to answer



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Don't want to answer	0.2	0.2	0.2		0.3
Don't know	1.7	1.4	1.2		1.6
Exclusively homosexual (lesbian)	0.8	0.8	0.9		1.1
Mainly homosexual (lesbian)	1.0	1.0	1.0		1.2
Bisexual	6.0	6.9	8.3		10.1
Mainly heterosexual	24.1	26.6	27.0		25.9
Exclusively heterosexual	65.3	63.0	61.4		59.8

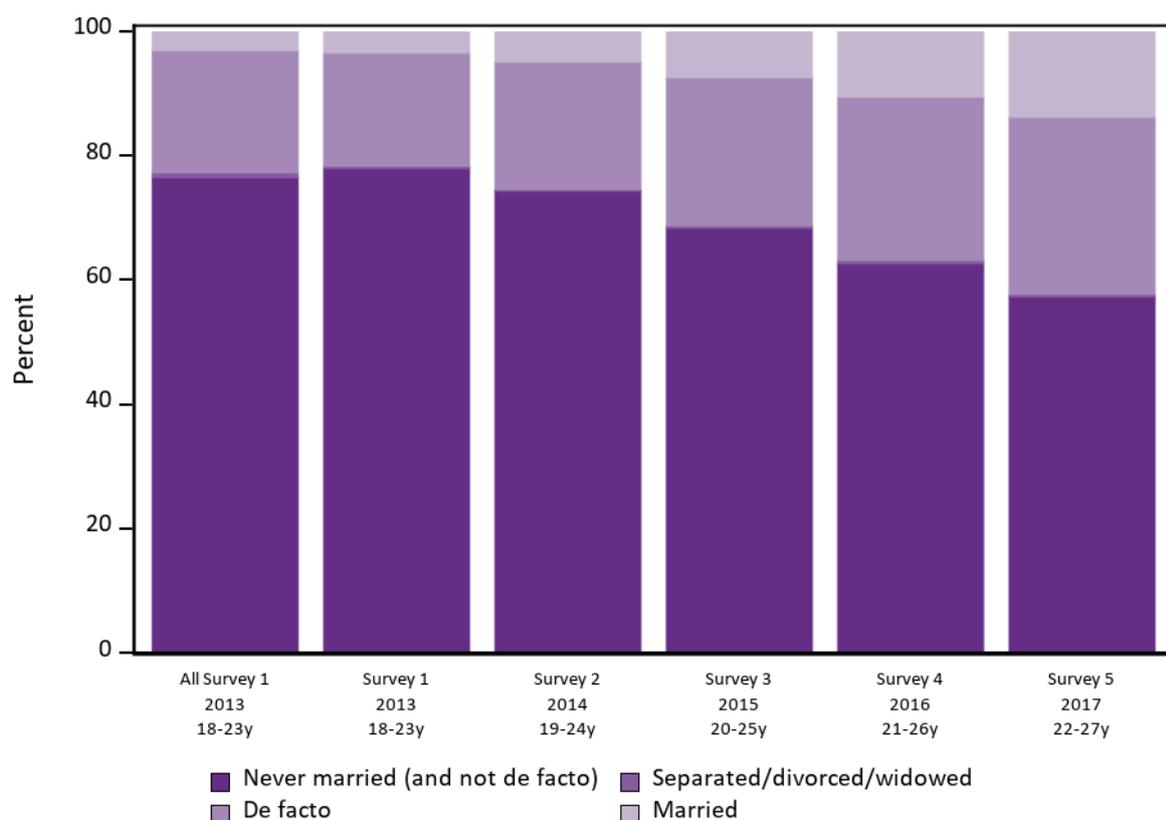
Figure 3-5 Sexual orientation, Survey 5 (N = 5,255).

The proportion of women who described their orientation as exclusively heterosexual decreased from 65% to 60% between Survey 1 and Survey 5.

3.1.6 Relationship Status

QUESTION: What is your current relationship status?

- I am single
- I am in a relationship (not living together)
- I am living with a partner
- I am engaged
- I am married
- I am divorced
- I am separated
- I am widowed



	Survey 1 (All*)	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Married	3.0	3.4	4.8	7.3	10.5	13.7
De facto	19.7	18.2	20.5	23.8	26.3	28.5
Separated/divorced/widowed	0.8	0.4	0.2	0.4	0.5	0.4
Never married (and not de facto)	76.5	78.0	74.4	68.4	62.7	57.4

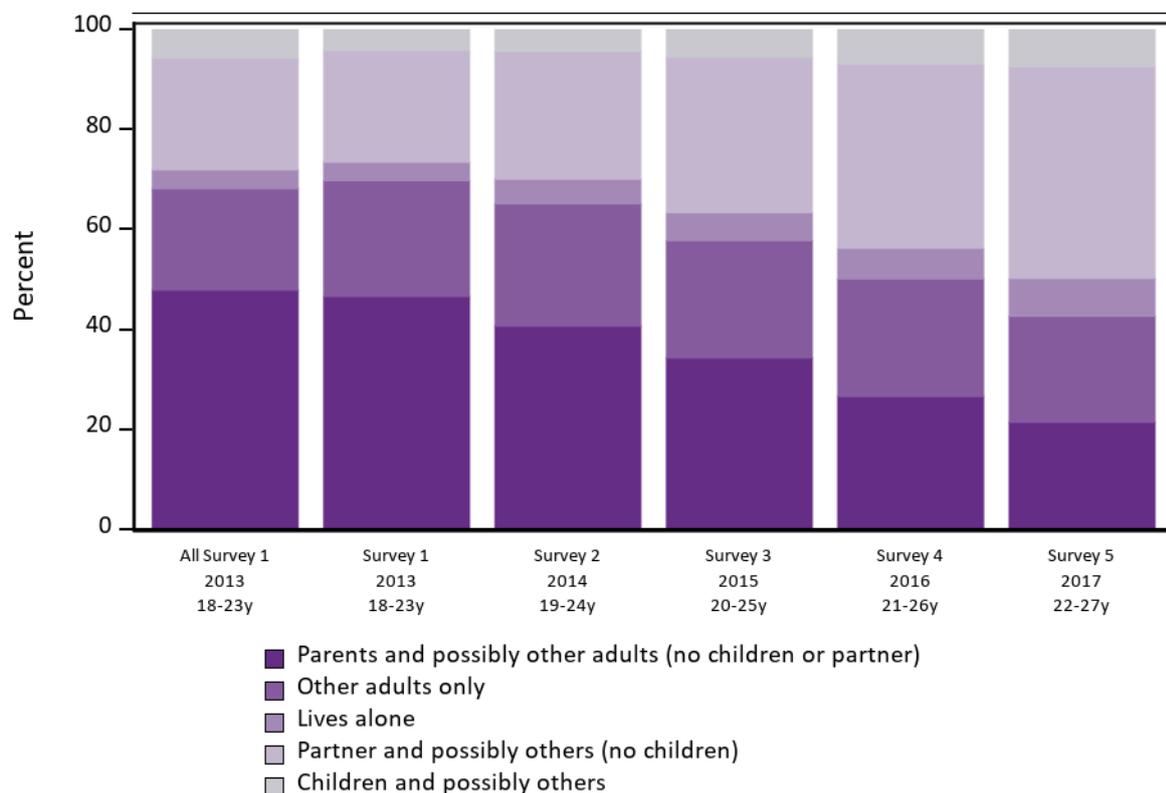
Figure 3-6 Marital status at Survey 1 (All, N = 16,827); and from Survey 1 to Survey 5 (N = 5,269).

The proportion who were married or in a de facto relationship almost doubled from 21.6% at Survey 1 to 42.2% at Survey 5. Separation or divorce remains rare in this cohort.

3.1.7 Living arrangements

QUESTION: What are your living arrangements?

- I live alone
- I live with one or both parents
- I live with other adults
- I live with my male partner
- I live with my female partner
- I live with children



	Survey 1 (All*)	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Children and possibly others	5.7	4.2	4.4	5.5	6.9	7.4
Partner, possibly others (no children)	22.3	22.3	25.5	31.1	36.8	42.3
Lives alone	3.8	3.7	4.9	5.6	6.2	7.6
Other adults only	20.3	23.1	24.4	23.4	23.5	21.2
Parents, possibly other adults (no children or partner)	47.9	46.7	40.8	34.4	26.7	21.5

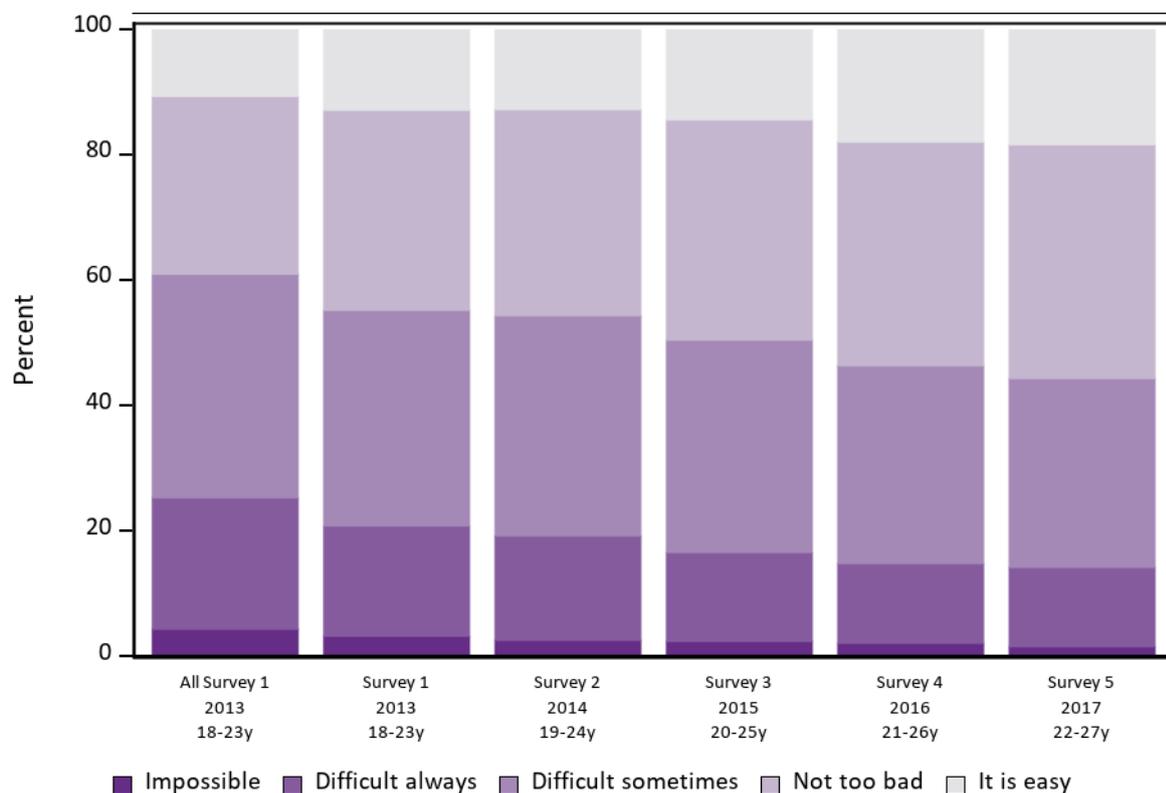
Figure 3-7 Living arrangements at Survey 1 (All, N = 16,466); and from Survey 1 to Survey 5 (N = 5,200).

The proportion of women living with a partner (with or without other adults) increased from 22.3% at Survey 1 to 42.3% at Survey 5. Women living with their parents halved over the same period, from 46.7% to 21.5%.

3.1.8 Ability to manage on income

QUESTION: How do you manage on the income you have available?

- It is impossible
- It is difficult all of the time
- It is difficult some of the time
- It is not bad
- It is easy



	Survey 1 (All)*	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
It is easy	10.6	12.8	12.7	14.4	17.9	18.3
Not too bad	28.4	31.9	32.9	35.1	35.7	37.3
Difficult sometimes	35.7	34.4	35.1	33.9	31.6	30.1
Difficult always	21.0	17.6	16.7	14.2	12.7	12.6
Impossible	4.4	3.2	2.6	2.4	2.1	1.6

Figure 3-8 Ability to manage on income at Survey 1 (All, N = 16,822); and from Survey 1 to Survey 5 (N = 5,266).

The number of women who found it easy or not too bad managing on their income increased from Survey 1 to Survey 5, probably reflecting their beginning fulltime work. 25.4% of all women who completed Survey 1 found it difficult always or impossible to manage on their income, which is higher than the proportion, 20.8%, for women who completed all 5 surveys.

3.2 Health behaviours and bodyweight

3.2.1 Alcohol

The 2009 NHMRC guidelines are current until 2020. Guidelines 1 and 2 are:

Guideline 1: For healthy women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.

Guideline 2: For healthy women, drinking no more than four standard drinks on a single occasion reduces the risk of alcohol-related injury arising from that occasion.

The following questions are used to determine the proportion of women who fall within these guidelines.

QUESTION: On a day when you drink alcohol, how many standard drinks do you usually have?

- Never drink
- 1 or 2 drinks per day
- 3 or 4 drinks per day
- 5 to 8 drinks per day
- 9 or more drinks per day

A response of 3 or more drinks per day is not within Guideline 1.

QUESTION: How often do you have 5 or more drinks on one occasion?

- Never
- Less than once a month
- About once a month
- About once a week
- More than once a week

Any response other than "Never" is not within Guideline 2.

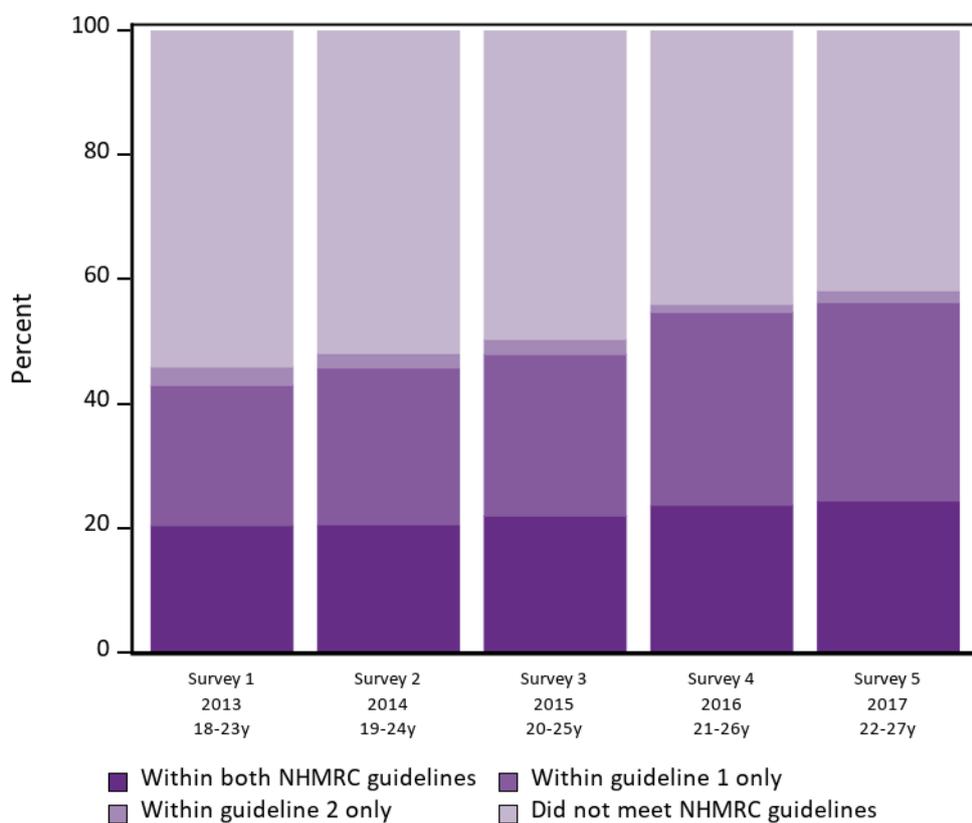


Figure 3-9 2009 NHMRC alcohol consumption guidelines (N = 5,423).

Between Survey 1 and Survey 5 the proportion of women who did not drink alcohol within either NHMRC guidelines 1 or 2 decreased from 54% to 41.7%. Over time, more women were drinking within Guideline 1 and there was also an increase in the number of women who met both Guidelines 1 and 2.

3.2.2 Smoking

QUESTION: How often do you currently smoke cigarettes or any tobacco products? (Response options: daily; at least weekly (but not daily); less often than weekly; not at all)

QUESTION: In your lifetime, would you have smoked at least 100 cigarettes (or equivalent)? Yes/No

Responses to each question are used to classify women as having never smoked, or being an ex-smoker, or a current smoker. (Note: The survey question was phrased differently in Survey 1).

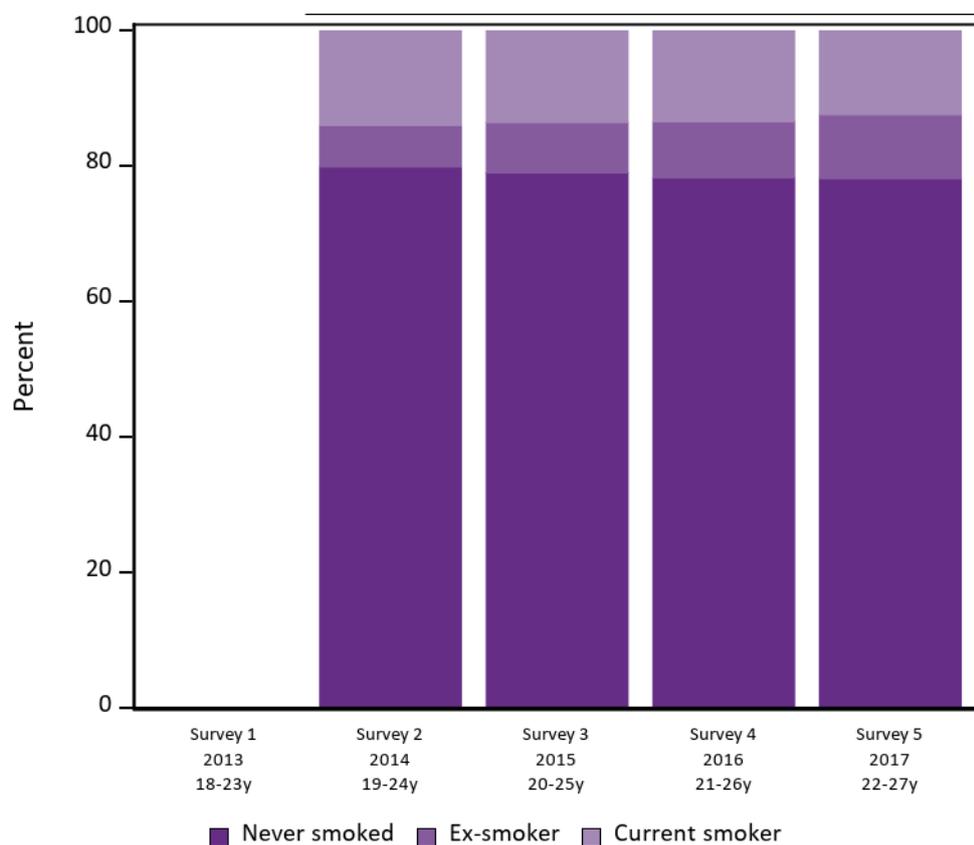


Figure 3-10 Smoking prevalence from Survey 2 to Survey 5 (N = 5,431).

The proportions of women who were current smokers declined slightly from 14% at Survey 2 to to 12% at Survey 5. Correspondingly, more women became ex-smokers.

When asked at Survey 3 (age 20-25), 9.5% of women reported they had used battery operated electronic cigarettes (e-cigarettes).

3.2.3 Illicit drugs

Marijuana

QUESTION: Have you tried marijuana (cannabis, pot, grass, weed, yandi, rope, mull, dope, skunk, bhang, ganja, hash, chronic, reefer, joint, cone or spliff)?

- In the last 12 months
- More than 12 months ago
- Never

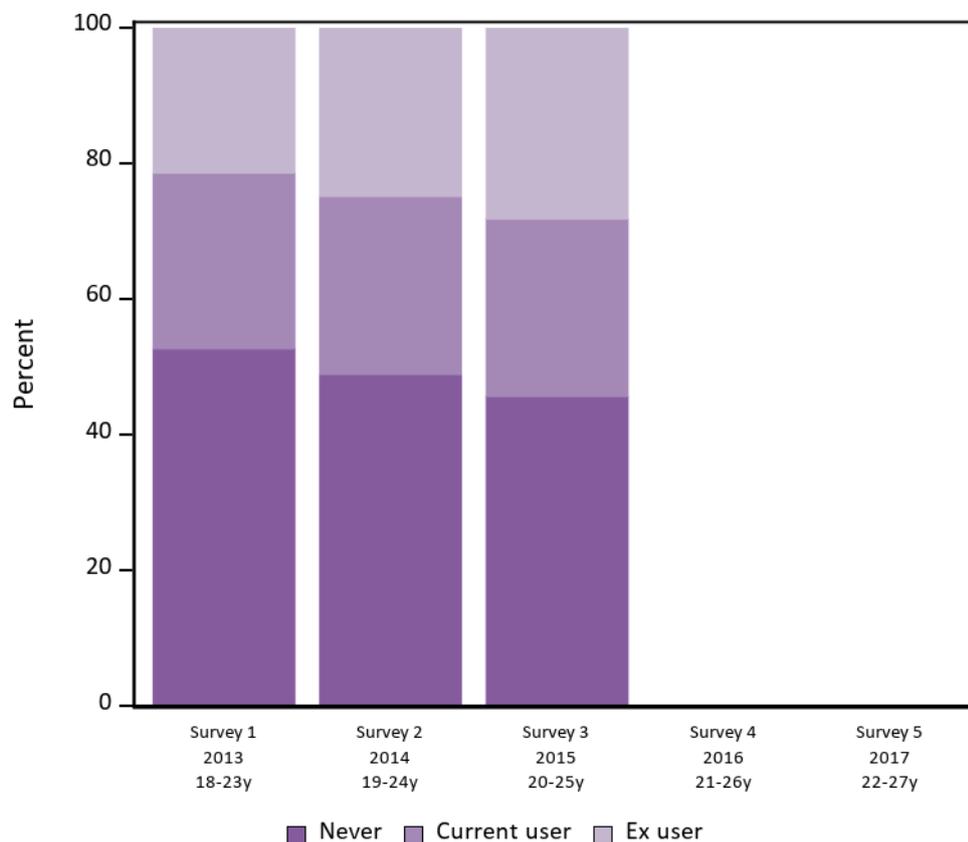


Figure 3-11 Marijuana use from Surveys 1, 2 and 3 (N= 5,486).

At age 18-23 (Survey 1), 53% of women had not tried marijuana. This had decreased to 46% by age 20-25 (Survey 3).

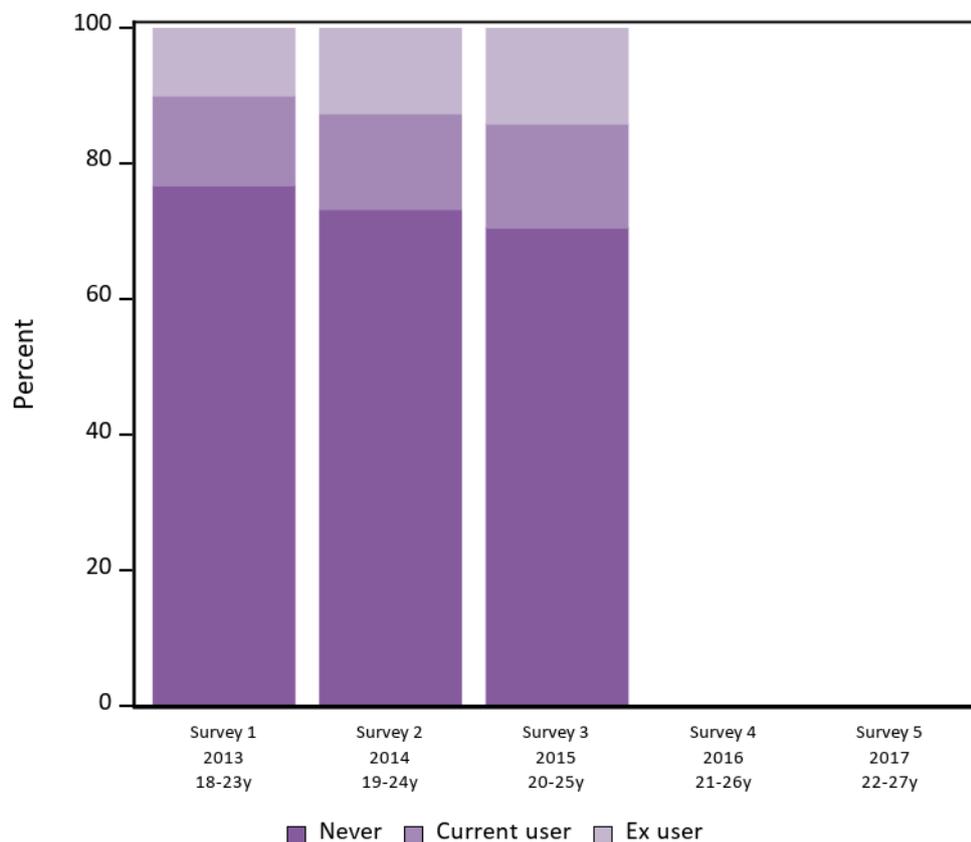
At Survey 5, women were asked about medicinal cannabis use in addition to recreational cannabis use. (QUESTION: In the last 12 months, how often did you use Marijuana / Cannabis? (For recreational use/ For medicinal use). Response options were: Every day; Once a week or more; About once a month; Every few months; Once or twice a year; Never).

When response categories were collapsed to 'Uses' or 'Never uses' in the last 12 months, 28.5% of women had used marijuana recreationally and 4.6% of women had used marijuana medicinally.

Other illicit drugs

QUESTION: Have you tried any other illicit drugs (Ice, Speed, GHB, Amphetamines, LSD, Natural Hallucinogens, Tranquilisers, Ketamine, Cocaine, Ecstasy, Inhalants, Heroin or Barbiturates)?

- In the last 12 months
- More than 12 months ago
- Never



	Survey 1	Survey 2	Survey 3
Ex user	10.0	12.6	14.1
Current user (In the last 12 months)	13.3	14.1	15.3
Never	76.8	73.3	70.6

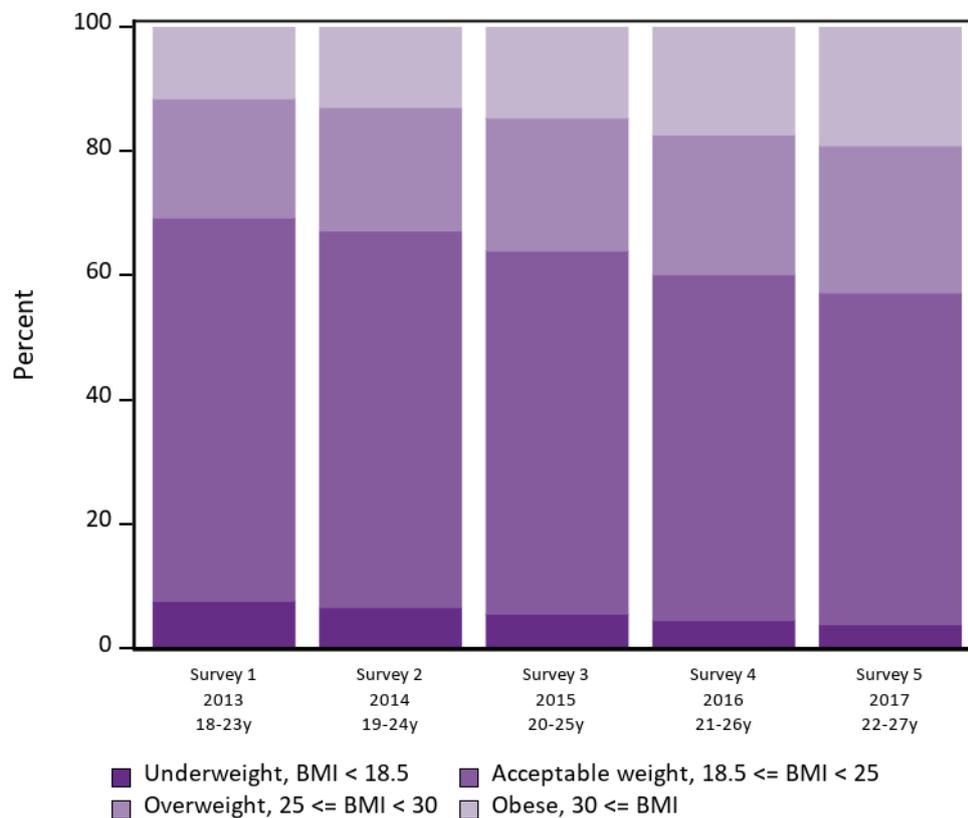
Figure 3-12 Other illicit drug use from Surveys 1, 2 and 3 (N= 5,486).

77% of women had never used illicit drugs at age 18-23, and this proportion decreased to 71% at age 20-25.

3.3 Body Mass Index

QUESTION: How tall are you without shoes? + QUESTION: How much do you weigh without clothes or shoes? If you are pregnant now, write in the weight you were in the month prior to pregnancy. (if you are not sure, please estimate)

BMI [weight (kg)/height (m)²] is calculated from responses to both questions.



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Obese	11.5	12.9	14.6	17.3	19.0
Overweight	19.2	19.9	21.4	22.5	23.7
Acceptable weight	61.7	60.6	58.5	55.6	53.4
Underweight	7.6	6.7	5.6	4.6	3.9

Figure 3-13 Body Mass Index (BMI) from Survey 1 to Survey 5 (N = 5,501)

The proportion of women of healthy weight decreased from 61.7% to 53.4% between Survey 1 and Survey 5. The proportion of women in the cohort who responded to all 5 surveys who were obese increased from 11.5% to 19%.

3.4 Physical activity

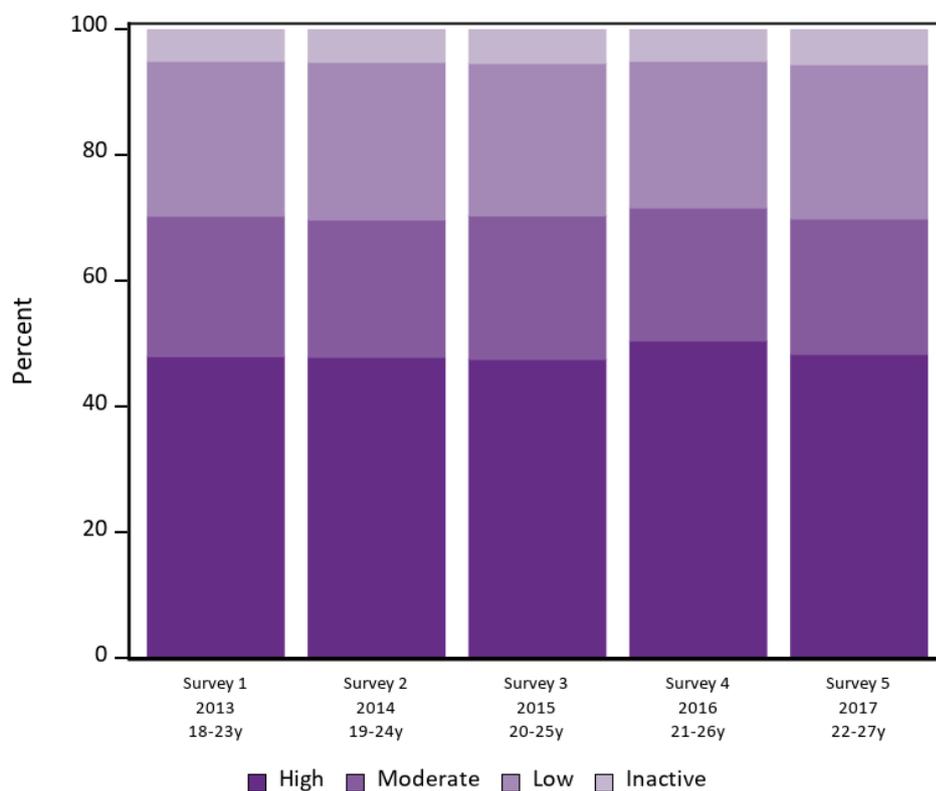
Women have been asked about their physical activity at every survey.

QUESTION: Please state the TOTAL TIME (Hours, minutes) you spent altogether doing each type of activity LAST WEEK:

- Walking briskly (for recreation or exercise, or to get from place to place)
- Moderate leisure activity (like social tennis, moderate exercise classes, recreational swimming)
- Vigorous leisure activity (that makes you breathe harder or puff and pant like aerobics, competitive sport, vigorous cycling, running, swimming).

From this question, the sum of times for each activity is calculated and categorised as:

- Inactive - physical activity equivalent to walking briskly less than 10 minutes a week.
- Low – physical activity between 10 minutes of brisk walking, for example, to 150 minutes of moderate leisure activity, for example.
- Moderate - physical activity between 150 and 300 minutes of brisk walking or between 75 and 150 minutes of vigorous leisure activity.
- High - physical activity the equivalent of over 300 minutes of brisk walking/moderate leisure activity or 150 minutes of vigorous leisure activity per week.



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Inactive	5.0	5.2	5.4	5.0	5.6
Low	24.6	25.1	24.2	23.3	24.5
Moderate	22.3	21.9	22.8	21.1	21.5
High	48.0	47.9	47.6	50.5	48.4

Figure 3-14 Physical activity from Survey 1 to Survey 5 (N = 5,111).

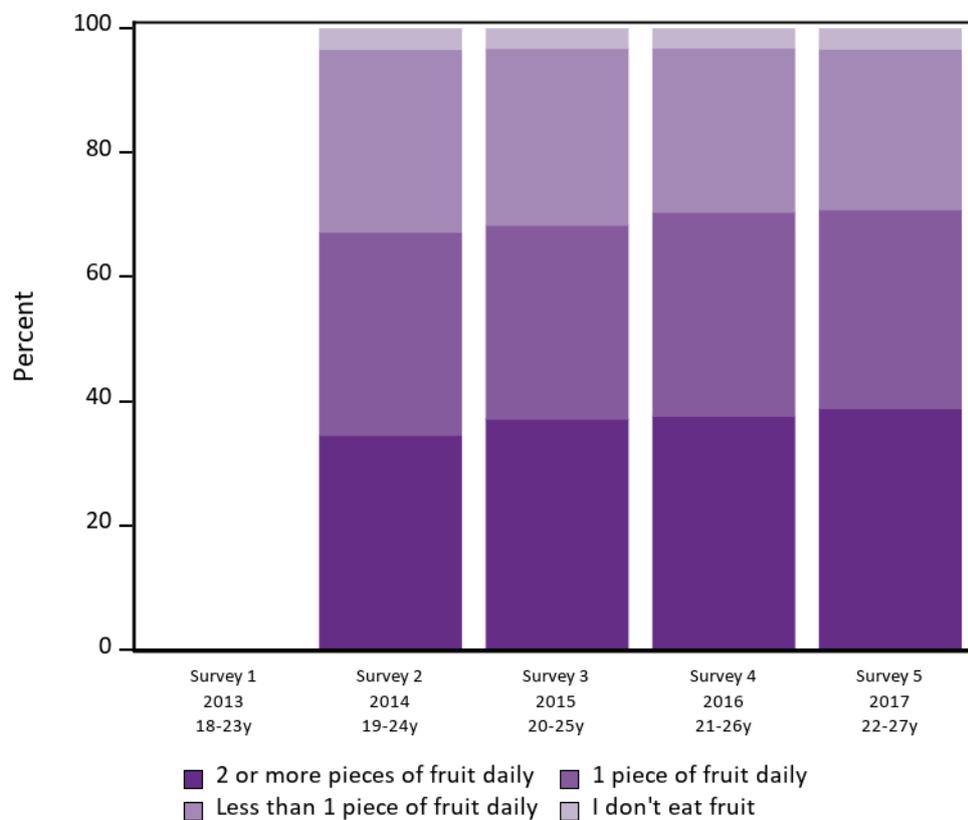
The amount of physical activity reported between Survey 1 and Survey 5 remained steady. About 70% of women had moderate or high levels of physical activity at each survey.

3.5 Diet

3.5.1 Fruit consumption

QUESTION: How many pieces of fresh fruit do you usually eat per day? (count ½ cup of diced fruit, berries or grapes as one piece)

- I do not eat fruit
- Less than 1 piece of fruit per day
- 1 piece of fruit per day
- 2 pieces of fruit per day
- 3 or more pieces of fruit per day.
- 4 or more pieces of fruit per day



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Don't eat fruit		3.3	3.1	3.1	3.3
Less than 1 piece daily		29.4	28.5	26.4	25.8
1 piece daily		32.7	31.2	32.8	32.0
2 or more pieces daily		34.6	37.2	37.7	38.9

Figure 3-15 Fruit consumption per day from Survey 2 to Survey 5 (N = 5,447).

The number of women eating at least two pieces of fruit a day increased by just under 5 %, from 34.6% at Survey 2 to 38.9% at Survey 5. At each survey, over two thirds of women reported they ate at least one piece of fruit a day.

3.5.2 Vegetable consumption

QUESTION: How many serves of vegetables do you usually eat per day? (A serve = half a cup of cooked vegetables or a cup of salad).

- None
- Less than one serve
- 1 serve
- 2 serves
- 3 serves
- 4 serves
- 5 serves or more

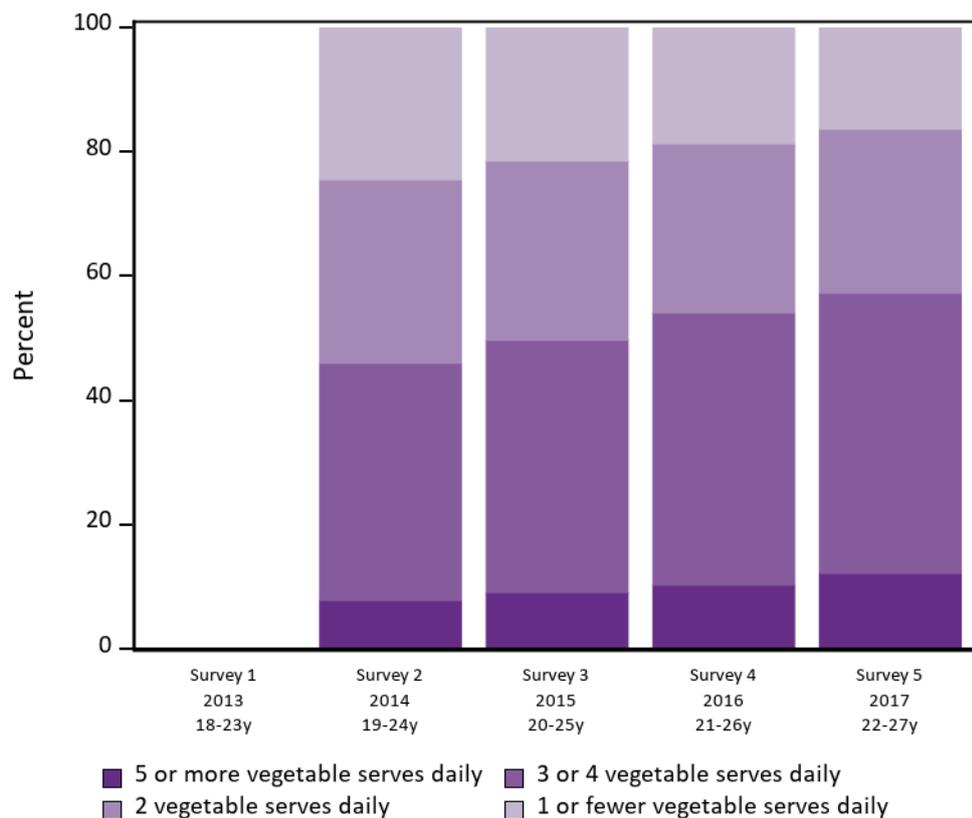
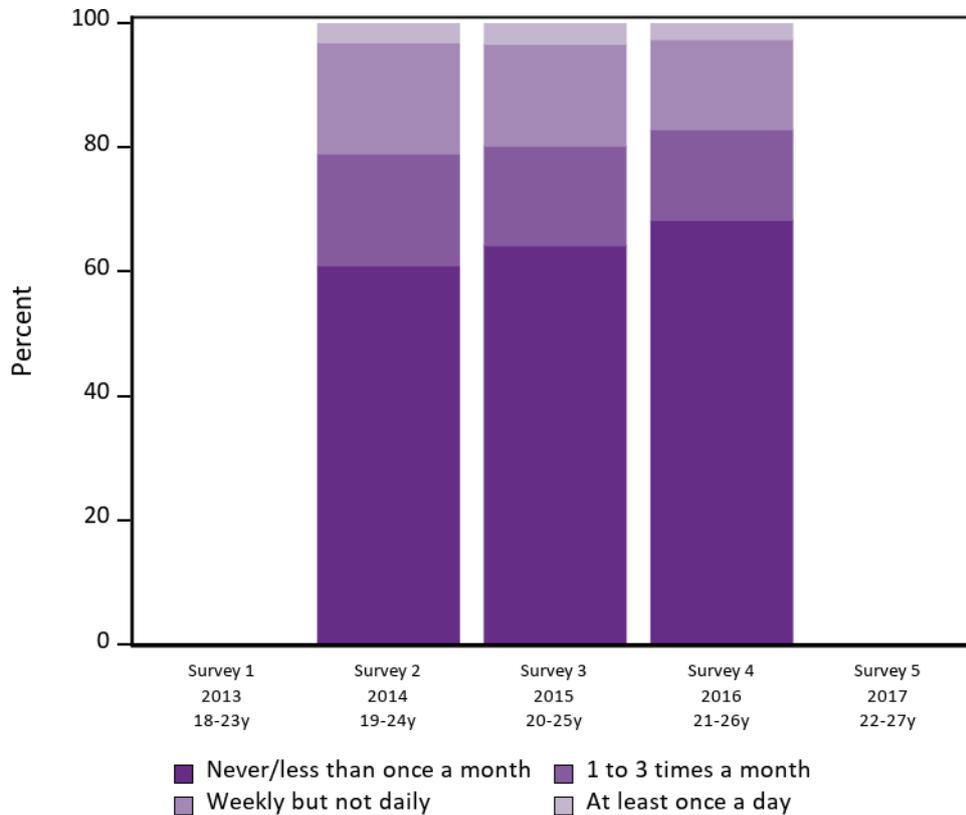


Figure 3-16 Vegetable consumption per day from Survey 2 to Survey 5 (N = 5,448).

Vegetable consumption increased steadily over Surveys 2 to 5. There was a greater than 50% increase in the number of women who ate 5 or more serves of vegetables per day, from 7.9% of women to 12.2% of women.

3.5.3 Cola drinks

QUESTION: Over the last 12 months, on average, how often did you drink Cola drinks – not diet (e.g. Coke™)? (Response options: never, less than once per month, 1 to 3 times per month, 1 time per week, 2 times per week, 3 to 4 times per week, 5 to 6 times per week, 1 time per day, 2 times per day, 3 or more times per day).



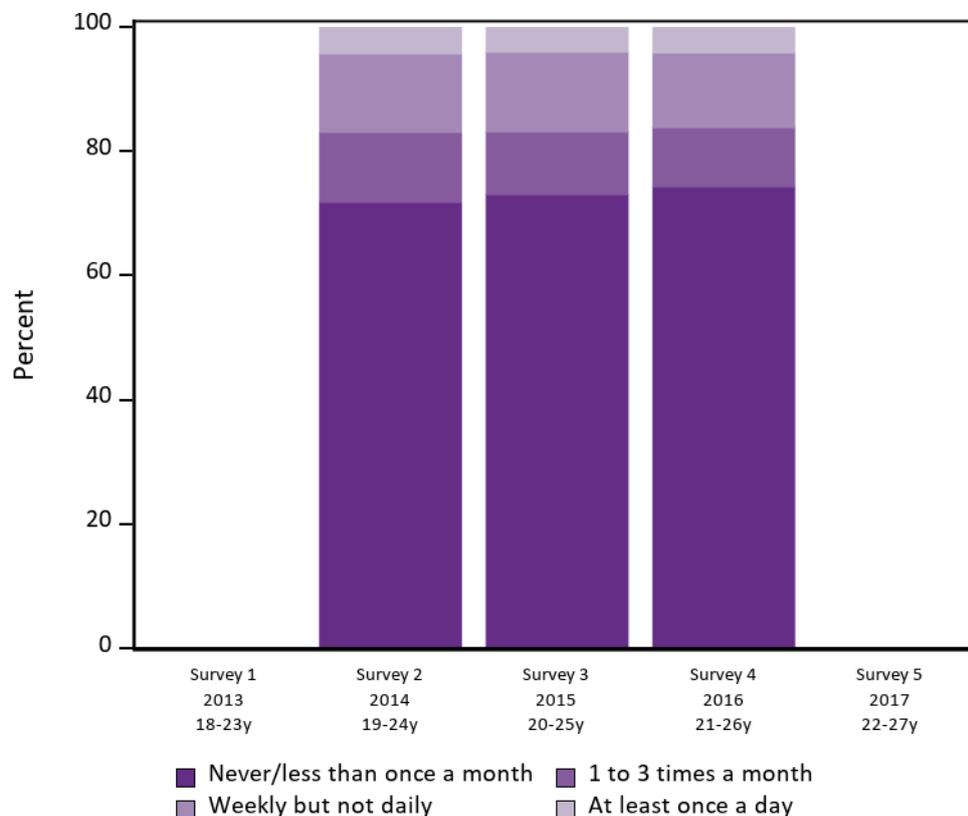
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
At least once a day		3.1	3.3	2.6	
Weekly, but not daily		17.9	16.4	14.5	
1 to 3 times a month		18.0	16.0	14.6	
Never/less than once a month		61.0	64.3	68.3	

Figure 3-17 Cola drink consumption from Survey 2 to Survey 4 (N = 5,464).

The frequency of cola drink consumption decreased between Survey 2 and Survey 4, with the proportion of women who drank cola drinks "less than once a month" or "never" increasing from 61% to 68.3%.

3.5.4 Diet cola drinks

QUESTION: Over the last 12 months, on average, how often did you drink diet cola drinks (e.g., Diet Coke™)? (Response options: never, less than once per month, 1 to 3 times per month, 1 time per week, 2 times per week, 3 to 4 times per week, 5 to 6 times per week, 1 time per day, 2 times per day, 3 or more times per day).



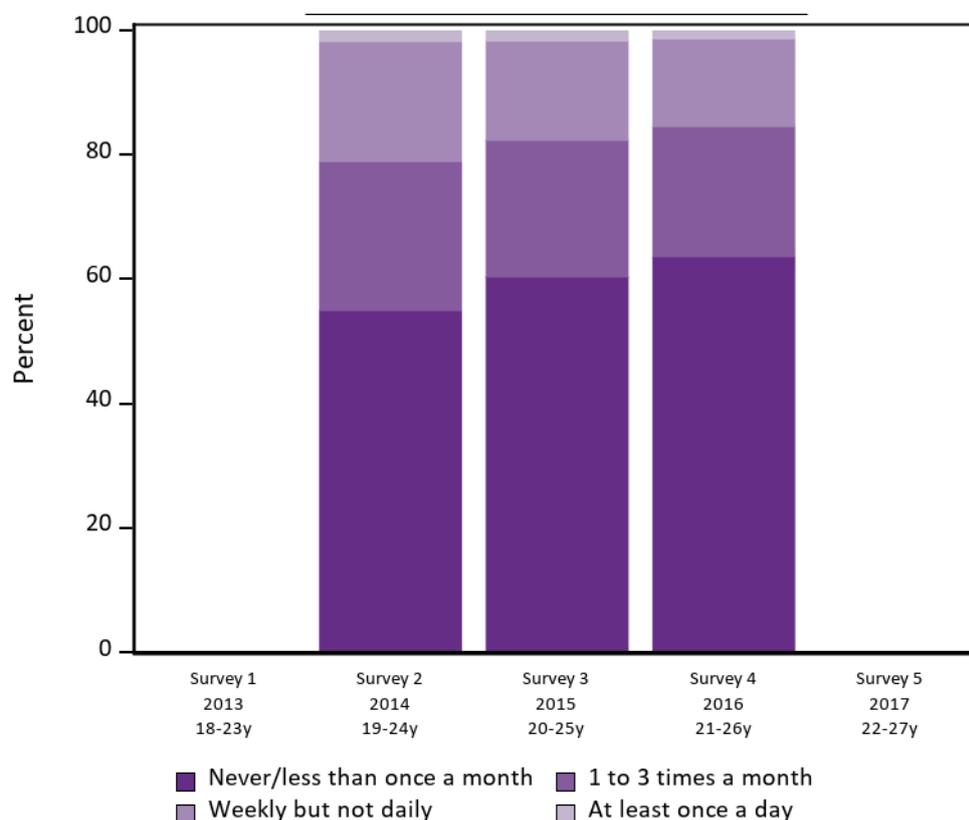
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
At least once a day		4.2	4.0	4.1	
Weekly, but not daily		12.6	12.8	12.0	
1 to 3 times a month		11.3	10.1	9.5	
Never/less than once a month		71.9	73.1	74.4	

Figure 3-18 Diet cola drink consumption from Survey 2 to Survey 4 (N = 5,463).

The frequency of diet cola drink consumption decreased slightly between Survey 2 and Survey 4, though the proportion of women who drank diet cola drinks "at least once a day" remained steady at 4%.

3.5.5 Other carbonated drinks - not diet

QUESTION: Over the last 12 months, on average, how often did you drink other carbonated drinks – not diet (i.e., fizzy /soft drinks)? (Response options: never, less than once per month, 1 to 3 times per month, 1 time per week, 2 times per week, 3 to 4 times per week, 5 to 6 times per week, 1 time per day, 2 times per day, 3 or more times per day).



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
At least once a day		1.7	1.6	1.3	
Weekly, but not daily		19.3	16.0	14.1	
1 to 3 times a month		24.0	22.0	20.9	
Never/less than once a month		55.0	60.4	63.7	

Figure 3-19 Other carbonated drink, non-diet, consumption from Survey 2 to Survey 4 (N = 5,461).

The frequency of consumption of other carbonated drinks, not diet, decreased between Survey 2 and Survey 4.

3.5.6 Other carbonated drinks – diet

QUESTION: Over the last 12 months, on average, how often did you drink other diet carbonated drinks (e.g., diet lemonade)? (Response options: never, less than once per month, 1 to 3 times per month, 1 time per week, 2 times per week, 3 to 4 times per week, 5 to 6 times per week, 1 time per day, 2 times per day, 3 or more times per day).

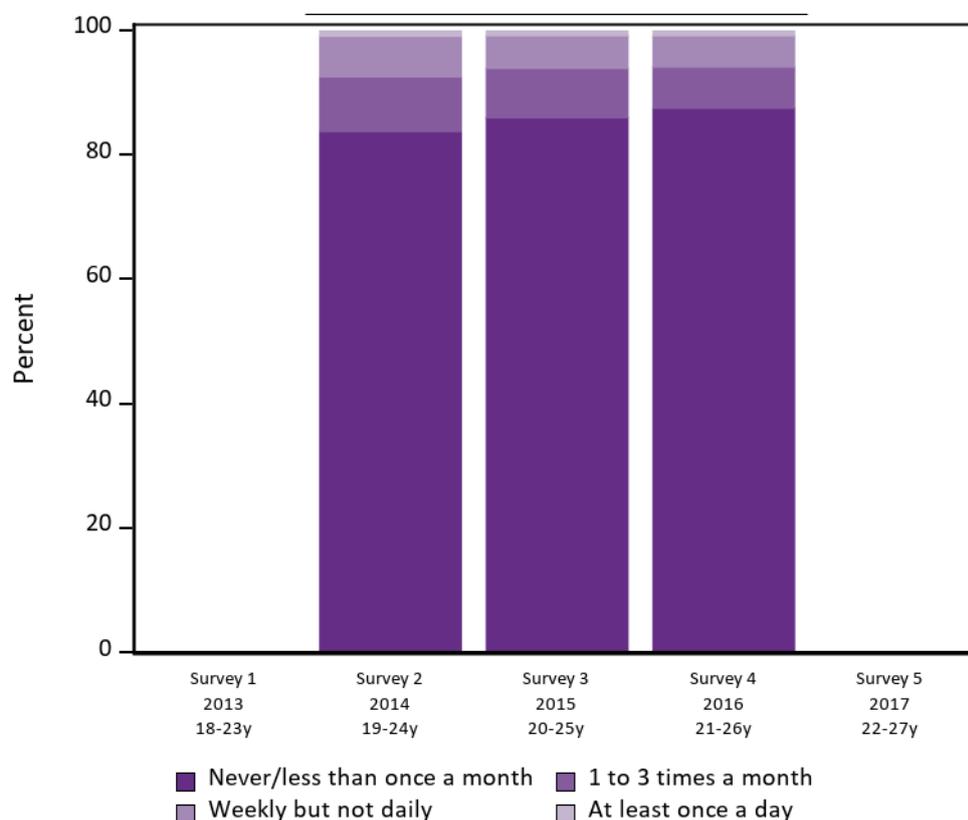


Figure 3-20 Other carbonated drink, diet, consumption from Survey 2 to Survey 4 (N = 5,455).

Frequency of consumption of other carbonated diet drinks decreased between Survey 2 and Survey 4. Consumption at least once a week decreased from 7.4% at Survey 2 (age 19-24) to 5.9% at Survey 4 (age 21-26). By Survey 4, almost 88% of women either never consumed these beverages, or did so less than once a month.

3.5.7 Non-carbonated drinks - not diet

QUESTION: Over the last 12 months, on average, how often did you drink non-carbonated cordials, fruit or sports drinks – not diet? (Response options: never, less than once per month, 1 to 3 times per month, 1 time per week, 2 times per week, 3 to 4 times per week, 5 to 6 times per week, 1 time per day, 2 times per day, 3 or more times per day)

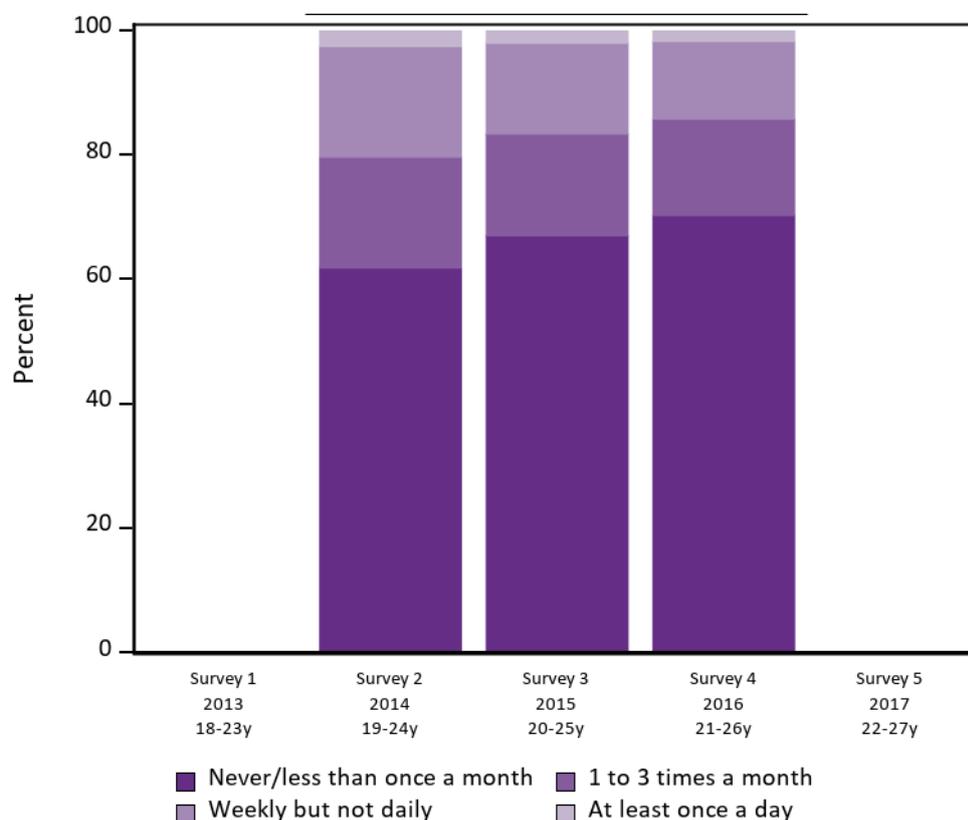
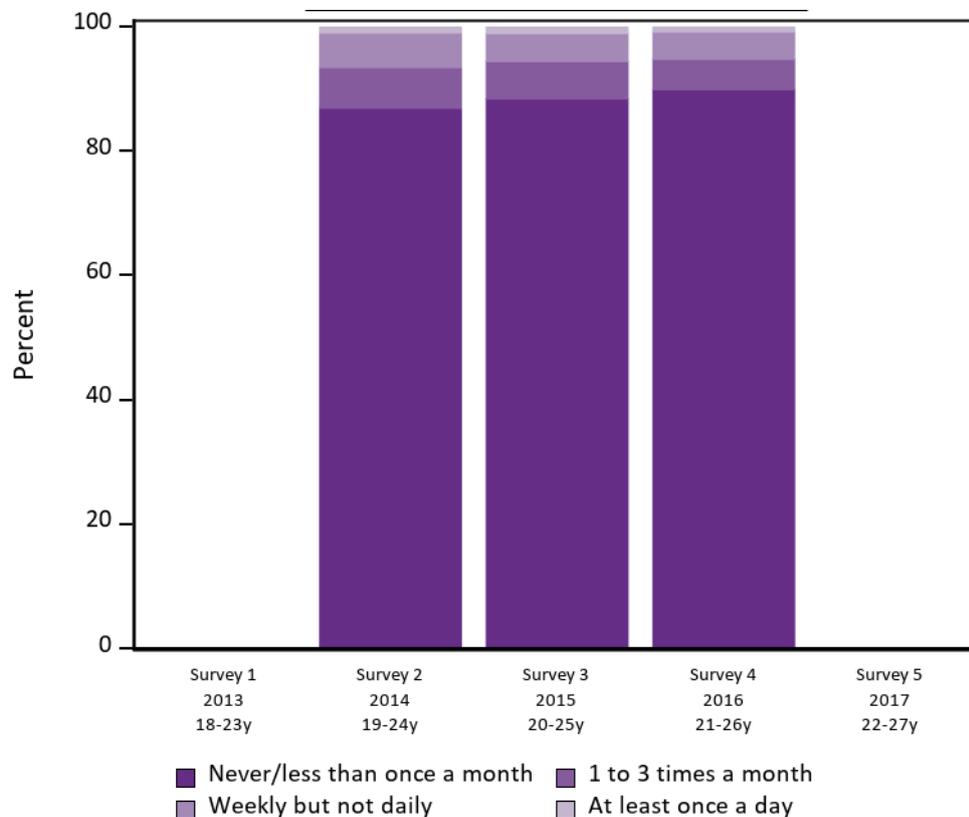


Figure 3-21 Non-carbonate drink, non-diet, consumption from Survey 2 to Survey 4 (N = 5,452).

The frequency of consumption of non-diet, non-carbonated drinks also decreased between Survey 2 and Survey 4. By Survey 4, just over 70% of women either never consumed these beverages, or did so less than once a month.

3.5.8 Non-carbonated drinks – diet

QUESTION: Over the last 12 months, on average, how often did you drink non-carbonated diet cordials, fruit or sports drinks? (Response options: never, less than once per month, 1 to 3 times per month, 1 time per week, 2 times per week, 3 to 4 times per week, 5 to 6 times per week, 1 time per day, 2 times per day, 3 or more times per day).



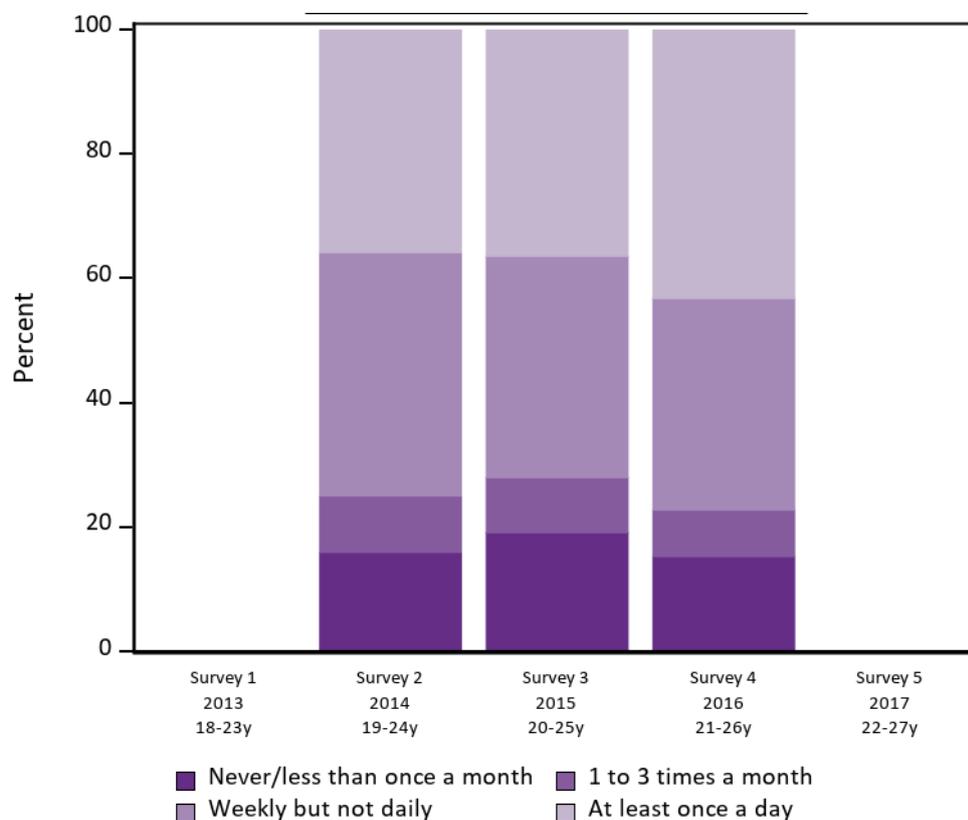
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
At least once a day		0.9	1.0	0.8	
Weekly, but not daily		5.6	4.5	4.4	
1 to 3 times a month		6.5	6.0	4.9	
Never/less than once a month		86.9	88.4	89.9	

Figure 3-22 Non-carbonated drink, diet, consumption from Survey 2 to Survey 4 (N = 5,439).

The frequency of consumption of non-carbonated diet drinks decreased between Survey 2 and Survey 4. At Survey 4, almost 90% of women either never consumed these beverages, or did so less than once a month.

3.5.9 Milk and soya milk

QUESTION: Over the last 12 months, on average, how often did you drink milk or soya milk (including flavoured varieties)? (Response options: never, less than once per month, 1 to 3 times per month, 1 time per week, 2 times per week, 3 to 4 times per week, 5 to 6 times per week, 1 time per day, 2 times per day, 3 or more times per day).



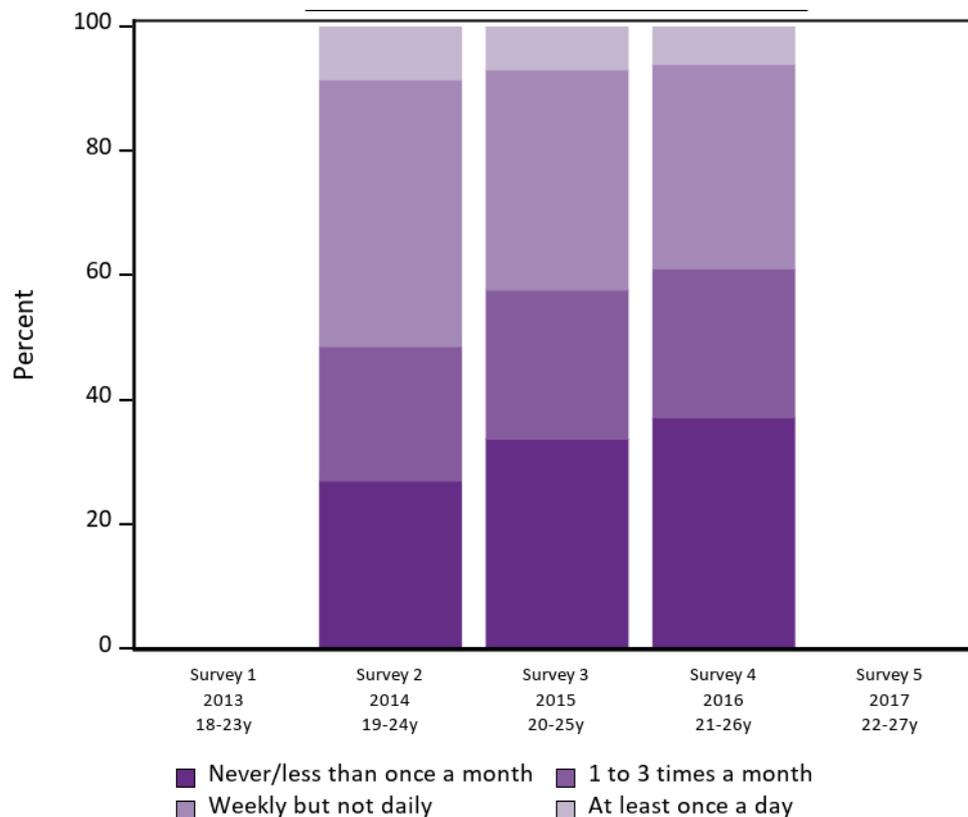
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
At least once a day		35.8	36.4	43.2	
Weekly, but not daily		39.1	35.6	34.0	
1 to 3 times a month		9.1	8.8	7.5	
Never/less than once a month		16.0	19.2	15.3	

Figure 3-23 Milk and soya milk consumption from Survey 2 to Survey 4 (N = 5,454).

The proportion of women drinking milk and/or soya milk at least once a day increased from 35.8% in Survey 2 to 43.2% in Survey 4. This may reflect increased milk consumption related to starting a family.

3.5.10 Fruit or vegetable drinks

QUESTION: Over the last 12 months, on average, how often did you drink fruit or vegetable juices? (Response options: never, less than once per month, 1 to 3 times per month, 1 time per week, 2 times per week, 3 to 4 times per week, 5 to 6 times per week, 1 time per day, 2 times per day, 3 or more times per day)



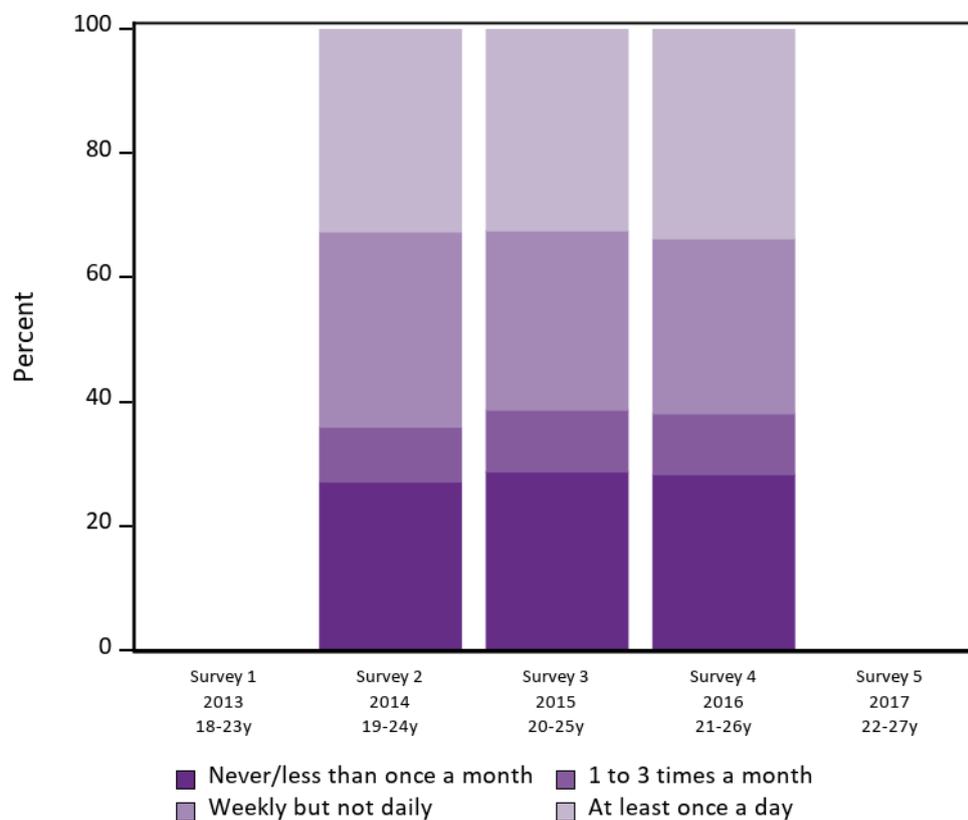
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
At least once a day		8.5	6.9	6.0	
Weekly, but not daily		42.9	35.4	32.9	
1 to 3 times a month		21.6	24.0	23.9	
Never/less than once a month		27.0	33.7	37.2	

Figure 3-24 Fruit or vegetable drink consumption from Survey 2 to Survey 4 (N = 5,453).

The frequency of consumption of fruit or vegetable drinks declined with age. Consumption at least once a week decreased by 10% between Survey 2 (age 19-24) and Survey 4 (age 21-26). The proportion of women never consuming these beverages, or consuming less than once a month, rose by 10% over the same period.

3.5.11 Tea

QUESTION: Over the last 12 months, on average, how often did you drink tea? (Response options: never, less than once per month, 1 to 3 times per month, 1 time per week, 2 times per week, 3 to 4 times per week, 5 to 6 times per week, 1 time per day, 2 times per day, 3 or more times per day).



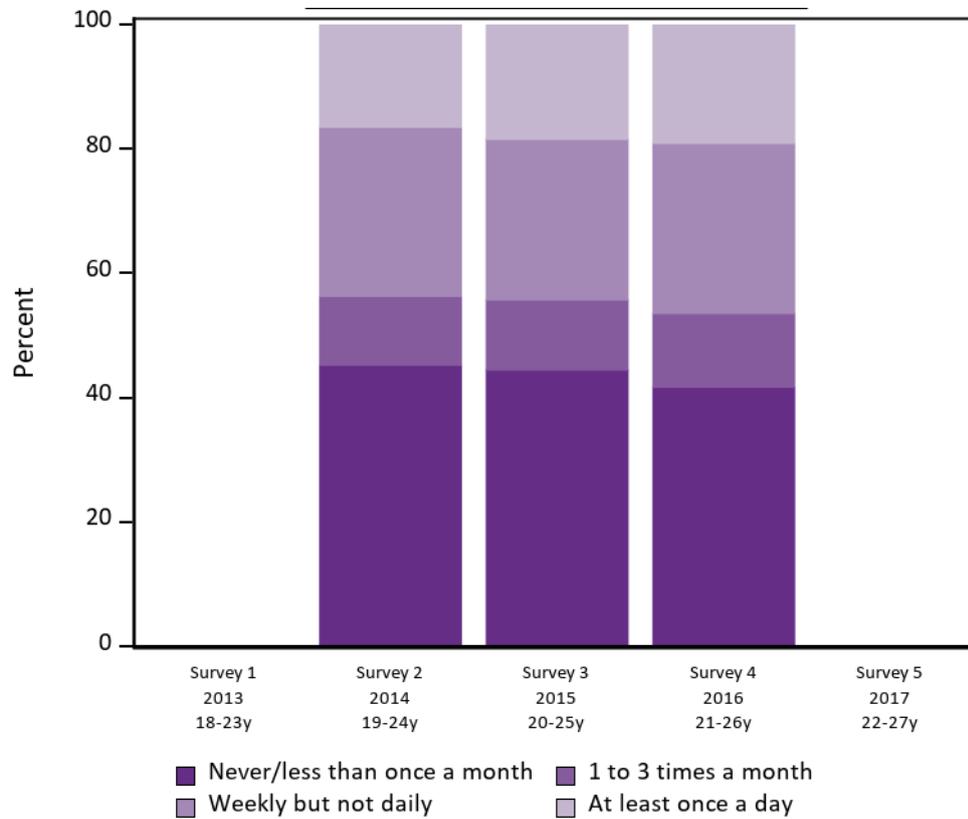
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
At least once a day		32.6	32.4	33.7	
Weekly, but not daily		31.4	28.8	28.2	
1 to 3 times a month		8.8	10.0	9.8	
Never/less than once a month		27.2	28.8	28.4	

Figure 3-25 Tea consumption from Survey 2 to Survey 4 (N = 5,462).

The frequency of tea consumption remained fairly steady between Survey 2 and Survey 4. Over this period, there was a slight decrease (3.2%) in the proportion of women drinking tea ‘weekly but not daily’, while drinking tea daily or ‘1 to 3 times per month’ increased very slightly, by about 1% each.

3.5.12 Herbal tea

QUESTION: Over the last 12 months, on average, how often did you drink herbal tea? (Response options: never, less than once per month, 1 to 3 times per month, 1 time per week, 2 times per week, 3 to 4 times per week, 5 to 6 times per week, 1 time per day, 2 times per day, 3 or more times per day)



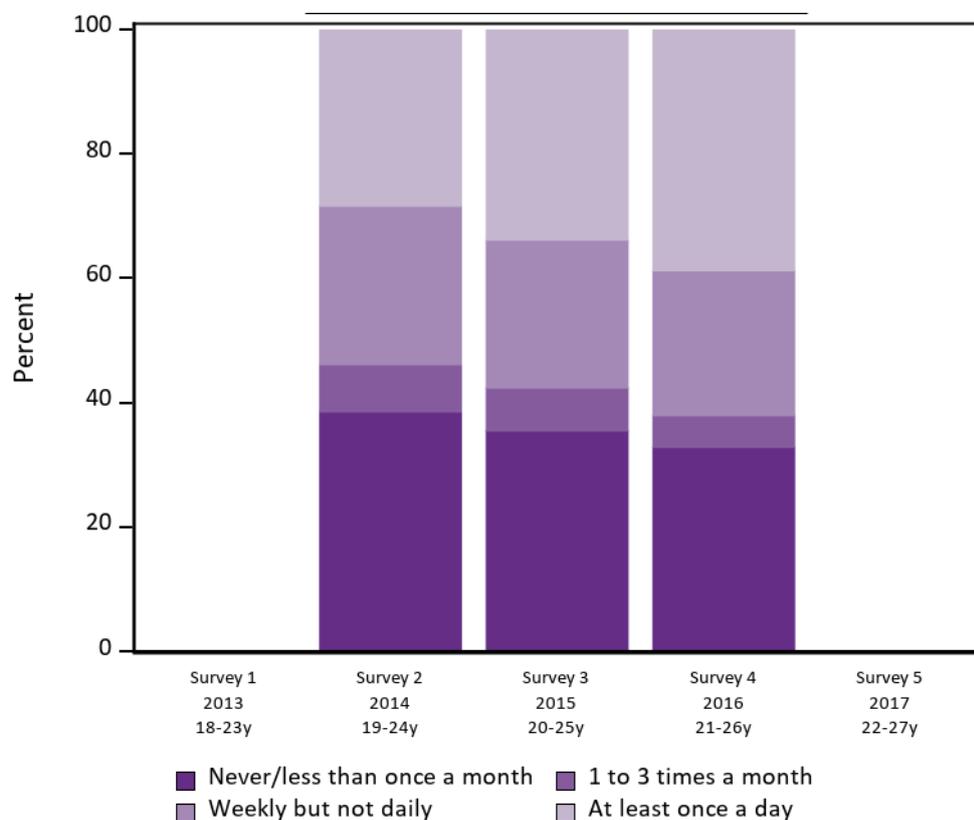
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
At least once a day		16.4	18.4	19.0	
Weekly, but not daily		27.2	25.8	27.4	
1 to 3 times a month		11.1	11.3	11.9	
Never/less than once a month		45.3	44.5	41.7	

Figure 3-26 Herbal tea consumption from Survey 2 to Survey 4 (N = 5,454).

There were increases in the frequencies of herbal tea consumption between Survey 2 and Survey 4.

3.5.13 Coffee

QUESTION: Over the last 12 months, on average, how often did you drink coffee? (Response options: never, less than once per month, 1 to 3 times per month, 1 time per week, 2 times per week, 3 to 4 times per week, 5 to 6 times per week, 1 time per day, 2 times per day, 3 or more times per day)



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
At least once a day		28.3	33.8	38.7	
Weekly, but not daily		25.5	23.8	23.8	
1 to 3 times a month		7.6	6.9	5.1	
Never/less than once a month		38.6	35.5	32.9	

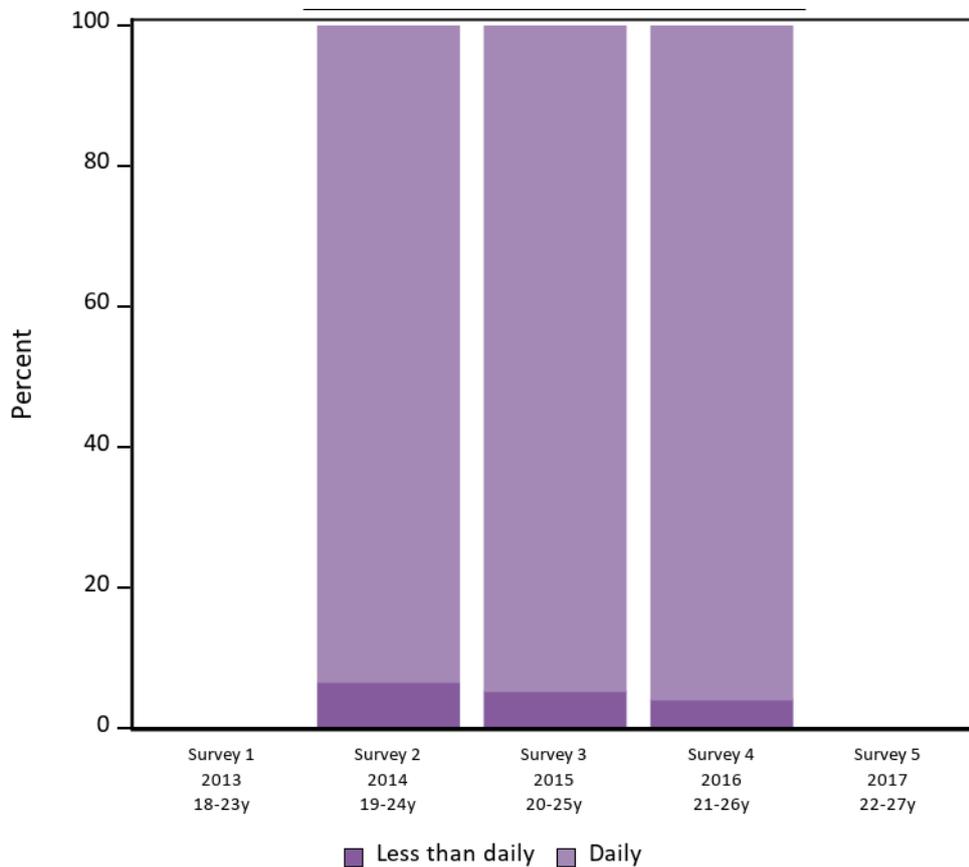
Figure 3-27 Coffee consumption from Survey 2 to Survey 4 (N = 5,458).

Between Survey 2 and Survey 4 the proportion of women drinking coffee at least once a day increased by just over 10%. There was a slight decrease in the proportion who never or rarely drank coffee.

3.5.14 Water

QUESTION: Over the last 12 months, on average, how often did you drink water (including soda or plain mineral water)?

- Never
- Less than once a month
- 1-3 times per month
- 1 time per week
- 2 times per week
- 5-6 times per week
- 1 time per day
- 2 times per day
- 3 times or more per day



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Daily		93.4	94.7	95.9	
Less than daily		6.6	5.3	4.1	

Figure 3-28 Water consumption from Survey 2 to Survey 4 (N= 5,466).

The vast majority of women drank water daily. At Survey 2, 93.4% of women drank water daily, at Survey 3, 94.7% drank water daily, and at Survey 4, 95.9% drank water daily.

3.6 Mental health

3.6.1 Anxiety

QUESTION: Have you ever been diagnosed or treated for anxiety disorder?

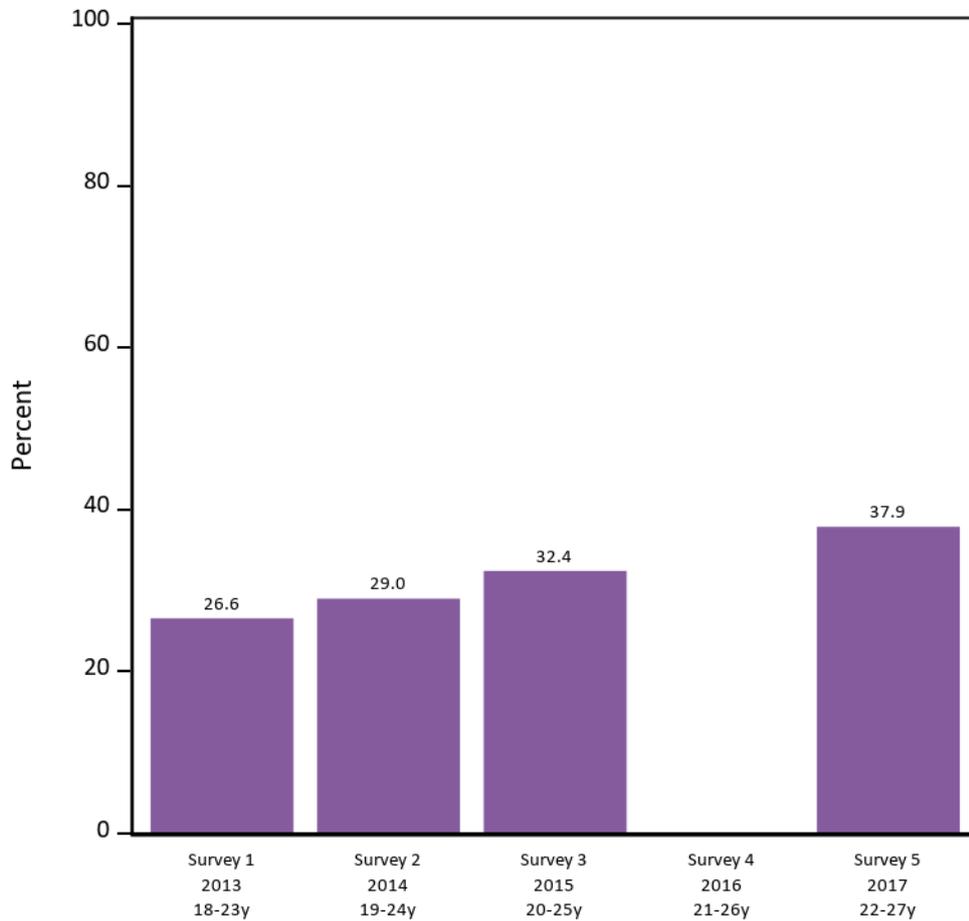


Figure 3-29 Self-reported ever diagnosed with anxiety from Survey 1 to Survey 5 excluding Survey 4 (N = 5,497).

The proportion of women reporting diagnosis or treatment of anxiety increased by over 11%, from 26.6% in Survey 1 (age 18-23) to 37.9% in Survey 5 (age 22-27).

3.6.2 Depression

QUESTION: Have you ever been diagnosed or treated for depression?

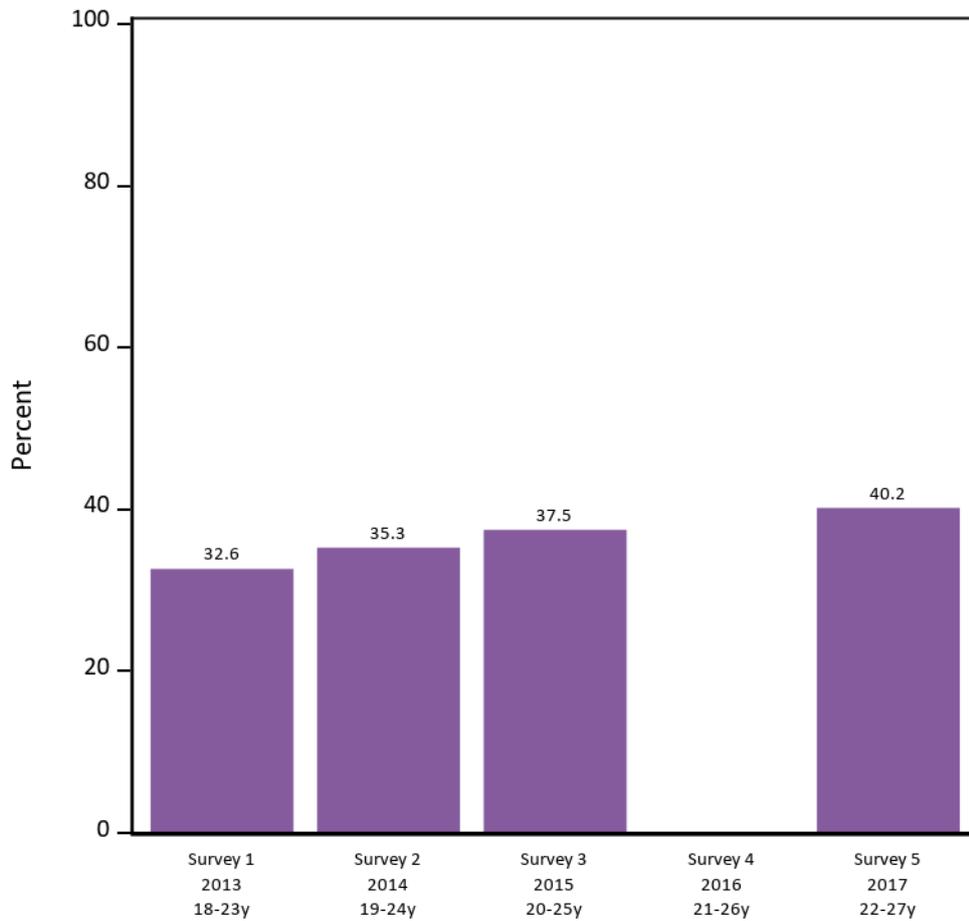


Figure 3-30 Self-reported ever diagnosed with depression from Survey 1 to Survey 5 excluding Survey 4 (N = 5, 497).

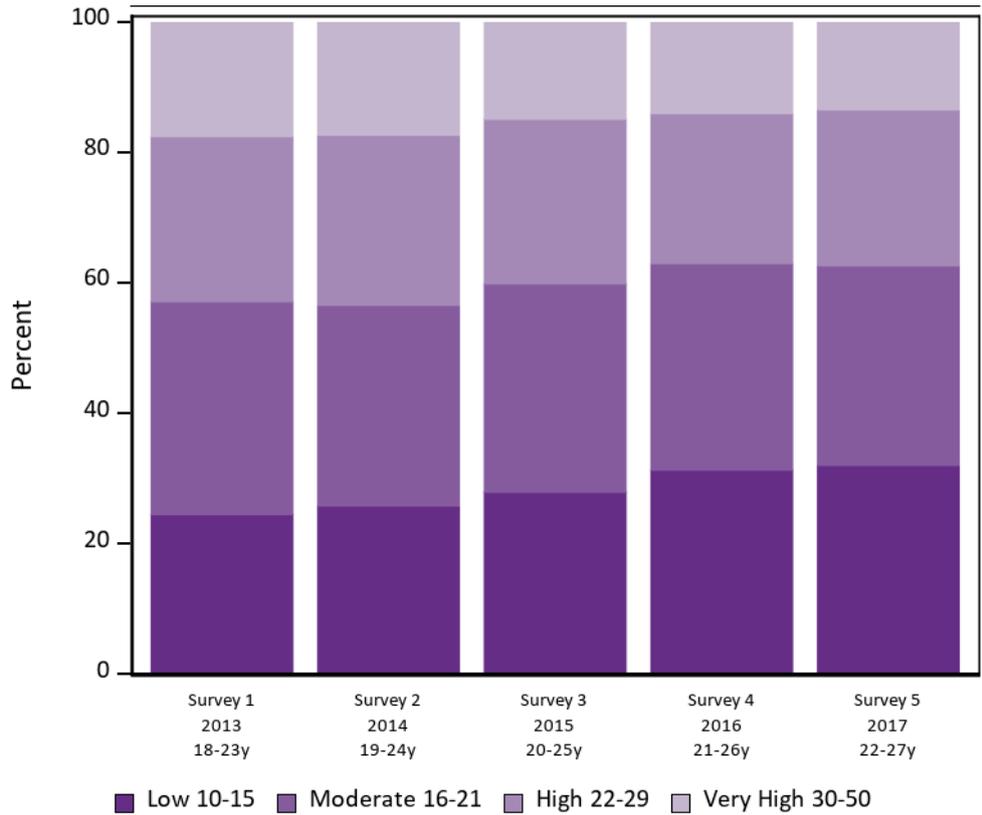
The proportion of women reporting diagnosis or treatment of depression increased 7.5%, from 32.6% in Survey 1 (age 18-23) to 40.2% in Survey 5 (age 22-27).

3.6.3 Kessler Psychological Distress Scale (K-10)

The Kessler Psychological Distress Scale (K-10) is a 10-item questionnaire designed to produce a global measure of distress based on questions about anxiety and depressive symptoms that a person has experienced in the most recent 4-week period¹. Items included on the K-10 are:

- In the past 4 weeks about how often did you feel tired out for no good reason?
- In the past 4 weeks about how often did you feel nervous?
- In the past 4 weeks about how often did you feel so nervous that nothing could calm you down?
- In the past 4 weeks about how often did you feel hopeless?
- In the past 4 weeks about how often did you feel restless or fidgety?
- In the past 4 weeks about how often did you feel so restless you could not sit still?
- In the past 4 weeks about how often did you feel depressed?
- In the past 4 weeks about how often did you feel that everything is an effort?
- In the past 4 weeks about how often did you feel so sad that nothing could cheer you up?
- In the past 4 weeks about how often did you feel worthless?

There are five response options, and each is given a score from 1 to 5 as follows - None of the time (1), A little of the time (2), Some of the time (3), Most of the time (4), All of the time (5). Each person's responses to the 10 items are summed to provide a score out of 50, with higher scores indicating higher levels of psychological distress. Scores have been categorised as very high, high, moderate, and low. (These categories are those used in the 2014-15 Australian Bureau of Statistics National Health Survey).



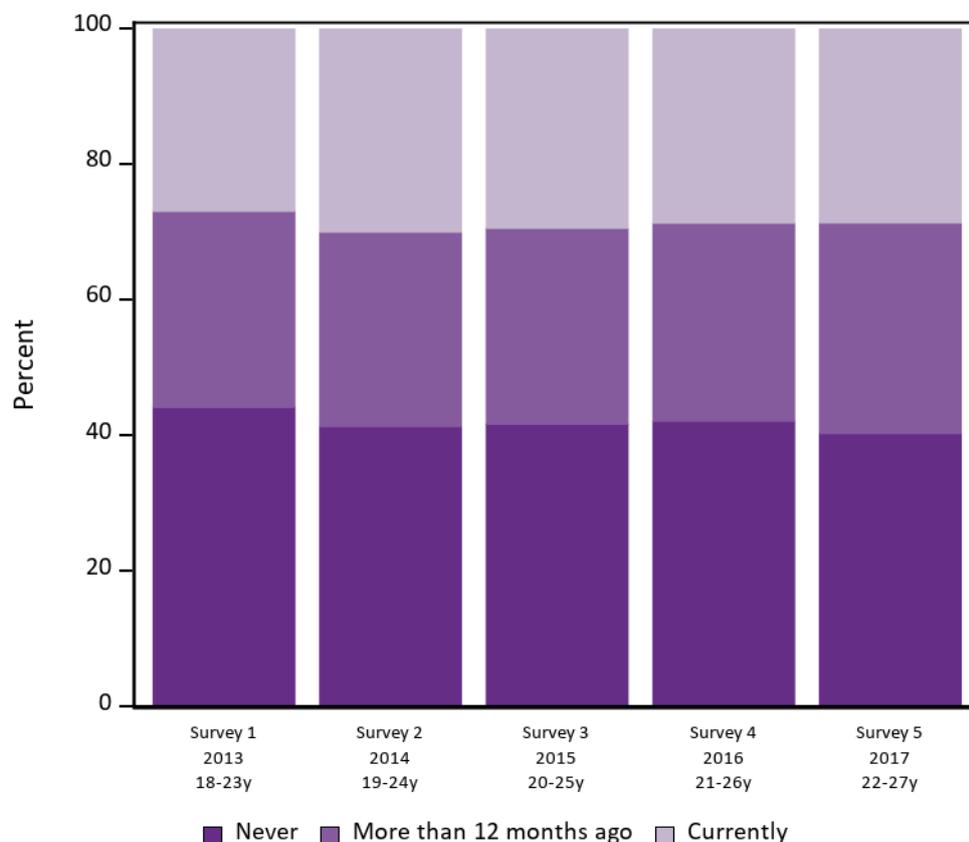
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Very high	17.5	17.3	14.8	14.0	13.4
High	25.3	26.1	25.3	23.0	23.9
Moderate	32.7	30.8	32.0	31.7	30.6
Low	24.5	25.8	28.0	31.3	32.1

Figure 3-31 Psychological distress from Survey 1 to Survey 5 (N = 5,320) measured on the Kessler Psychological Distress Scale (K-10).

The proportion of women with K10 scores of 10 to 15, indicating little or no psychological distress, increased between Survey 1 and Survey 5, and the proportion with very high scores, indicating distress, decreased.

3.6.4 Suicidal ideation and self-harm

QUESTION: Have you ever felt that life isn't worth living? (Response options: yes, in the last 12 months; yes, more than 12 months ago; never).

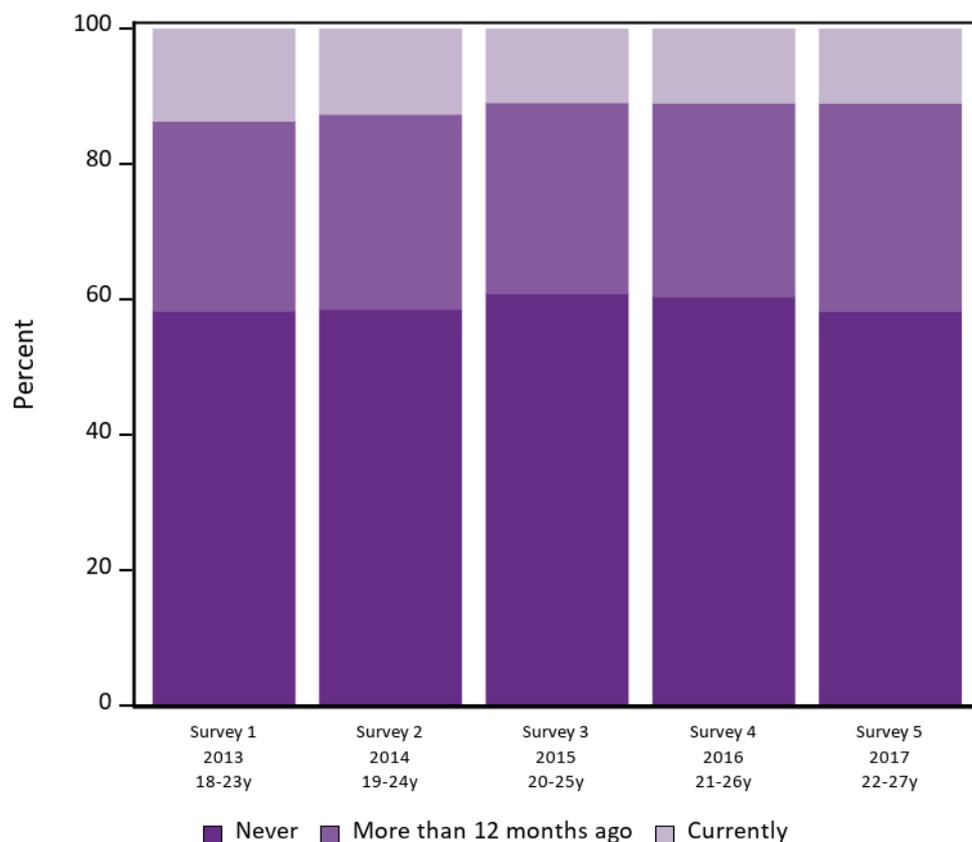


	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Current (In the last 12 months)	26.9	29.9	29.4	28.6	28.6
More than 12 months ago	28.9	28.7	28.9	29.2	31.1
Never	44.2	41.4	41.7	42.2	40.3

Figure 3-32 Women reporting suicidal ideation from Survey 1 to Survey 5 (N = 5,229).

At age 18-23 (Survey 1) just over 1 in 4 women (26.9%) reported feeling in the last 12 months that 'life wasn't worth living'. By age 22-27 (Survey 5), this had increased slightly to 28.6%.

QUESTION: Have you ever deliberately hurt yourself or done anything that you knew might have harmed or even killed you? (Response options: yes, in the last 12 months; yes, more than 12 months ago; never)



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Current (In the last 12 months)	13.6	12.6	10.9	10.9	10.9
More than 12 months ago	28.1	28.8	28.2	28.6	30.8
Never	58.3	58.6	60.9	60.5	58.3

Figure 3-33 Women reporting self-harming behaviours from Survey 1 to Survey 5 (N = 5,222).

Self-harming behaviour decreased with age. At age 18-23 (Survey 1) just under 14% of women reported self-harming behaviour in the last 12 months, and this decreased to 11% by age 22-27 (Survey 5).

3.6.5 Eating disorders

QUESTION: Have you ever been diagnosed or treated for anorexia?

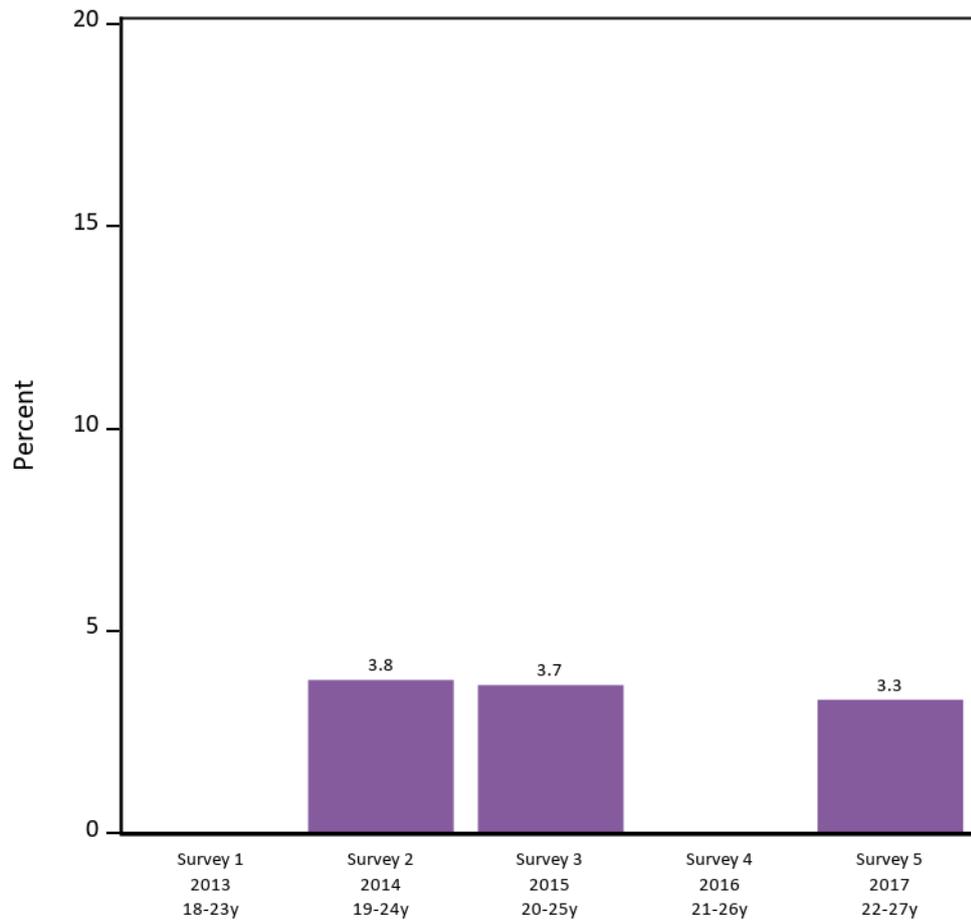


Figure 3-34 Self-reported ever diagnosed with or treated for anorexia from Surveys 2, 3 and 5 (N = 5,526).

Less than 4% of women reported ever being diagnosed or treated for anorexia.

QUESTION: Have you ever been diagnosed or treated for bulimia?

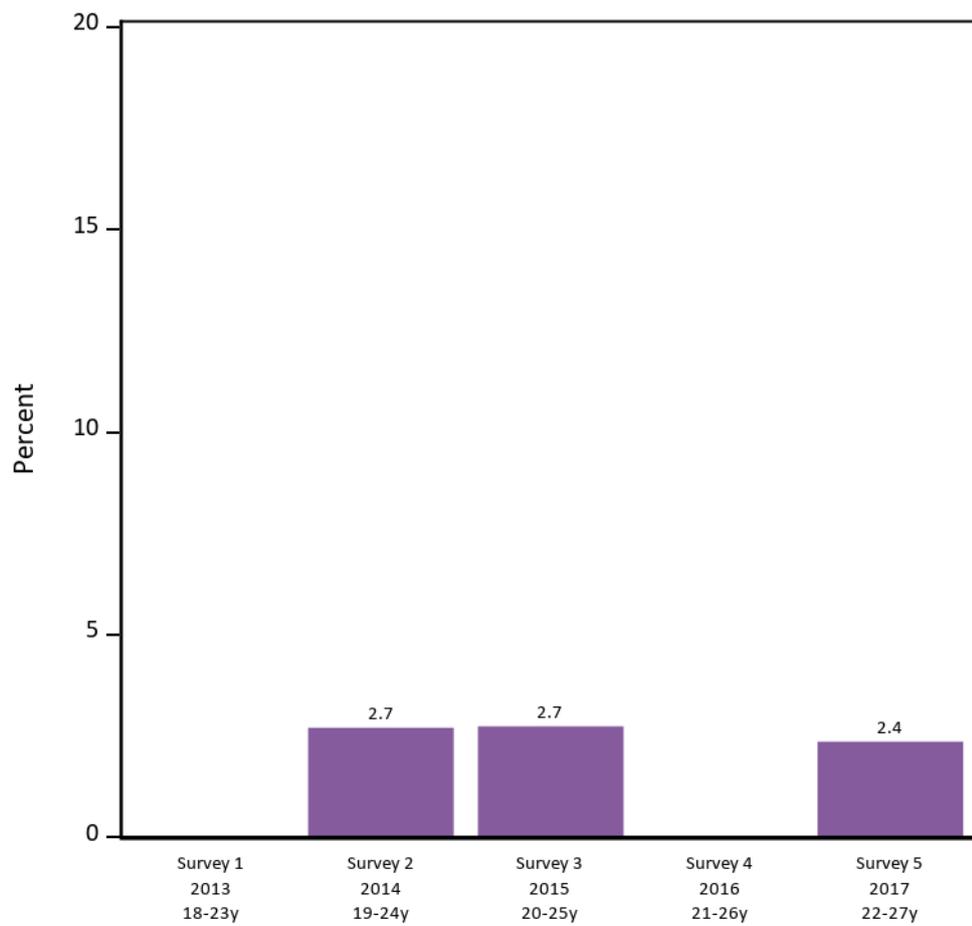


Figure 3-35 Self-reported ever diagnosed with or treated for other eating disorder from Surveys 2, 3 and 5 (N = 5,526).

Less than 3% of women reported ever being diagnosed or treated for bulimia.

3.6.6 Other diagnosed psychological conditions

QUESTION: Have you ever been diagnosed or treated for post-traumatic stress disorder (PTSD)?

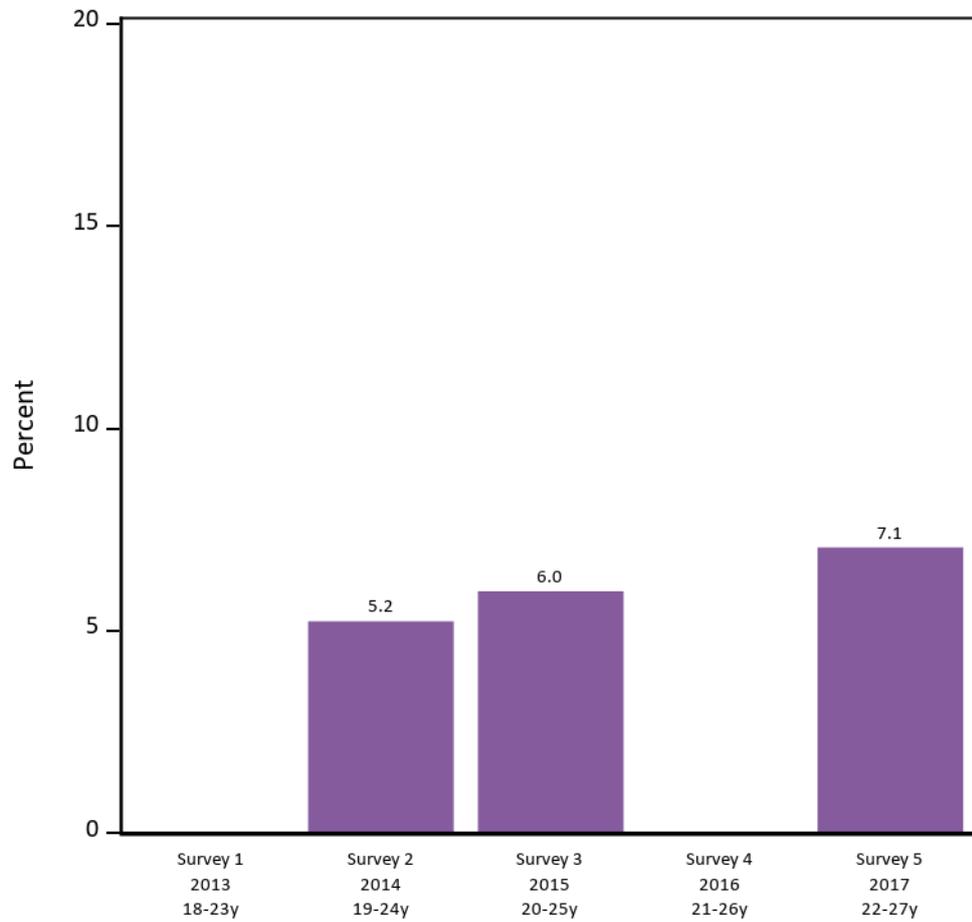


Figure 3-36 Self-reported ever diagnosed with or treated for PTSD from Surveys 2, 3 and 5 (N = 5,526).

Just over 7% of women reported diagnosis or treatment of post-traumatic stress disorder by Survey 5.

QUESTION: Have you ever been diagnosed or treated for bipolar disorder?

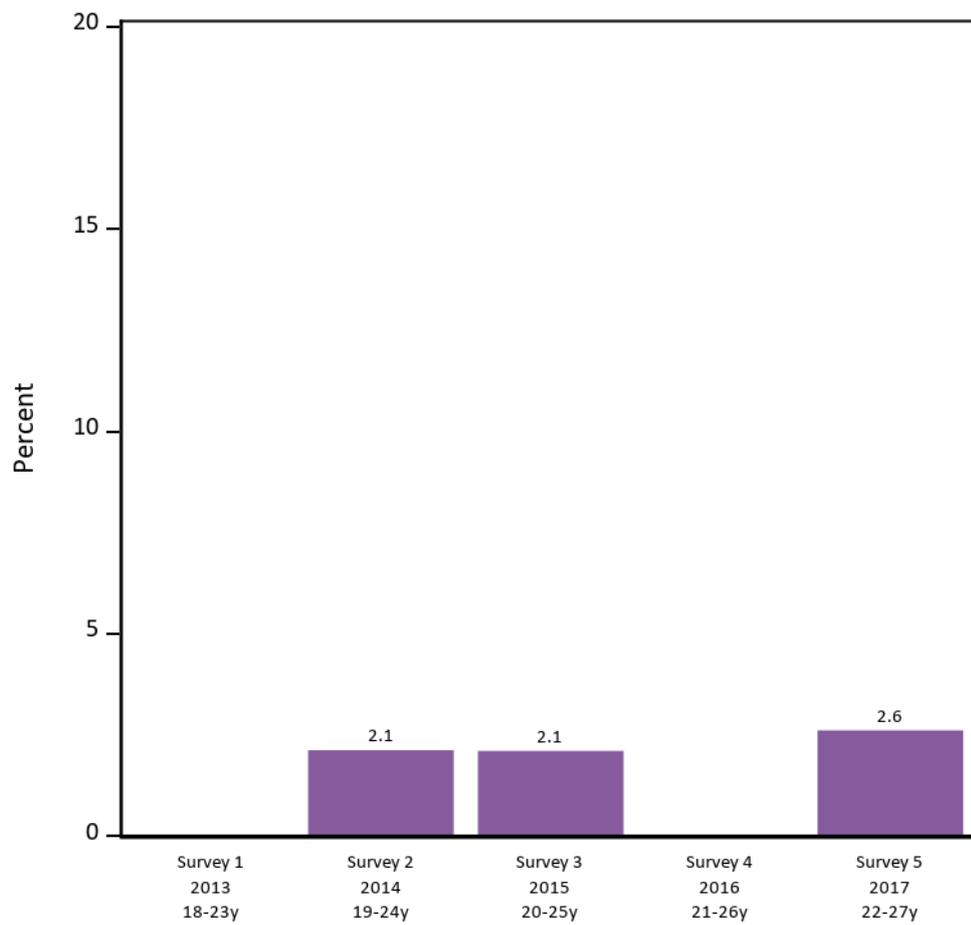


Figure 3-37 Self-reported ever diagnosed with or treated for bipolar disorder from Surveys 2, 3 and 5 (N = 5,526).

Reported diagnosis or treatment of bipolar disorder was under 3%.

QUESTION: Have you ever been diagnosed or treated for obsessive compulsive disorder?

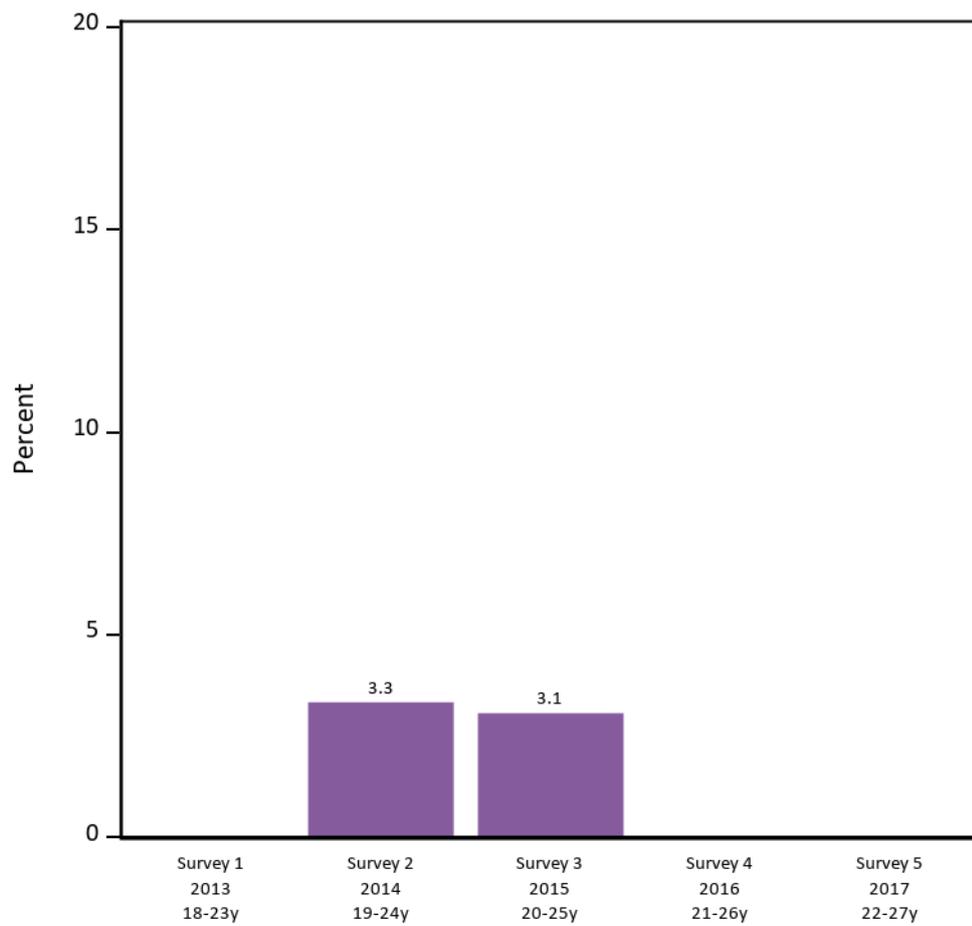


Figure 3-38 Self-reported ever diagnosed with or treated for obsessive compulsive disorder from Surveys 2 and 3 (N = 5,531).

Reported diagnosis or treatment of obsessive compulsive disorder was around 3%.

QUESTION: Have you ever been diagnosed or treated for borderline personality disorder?

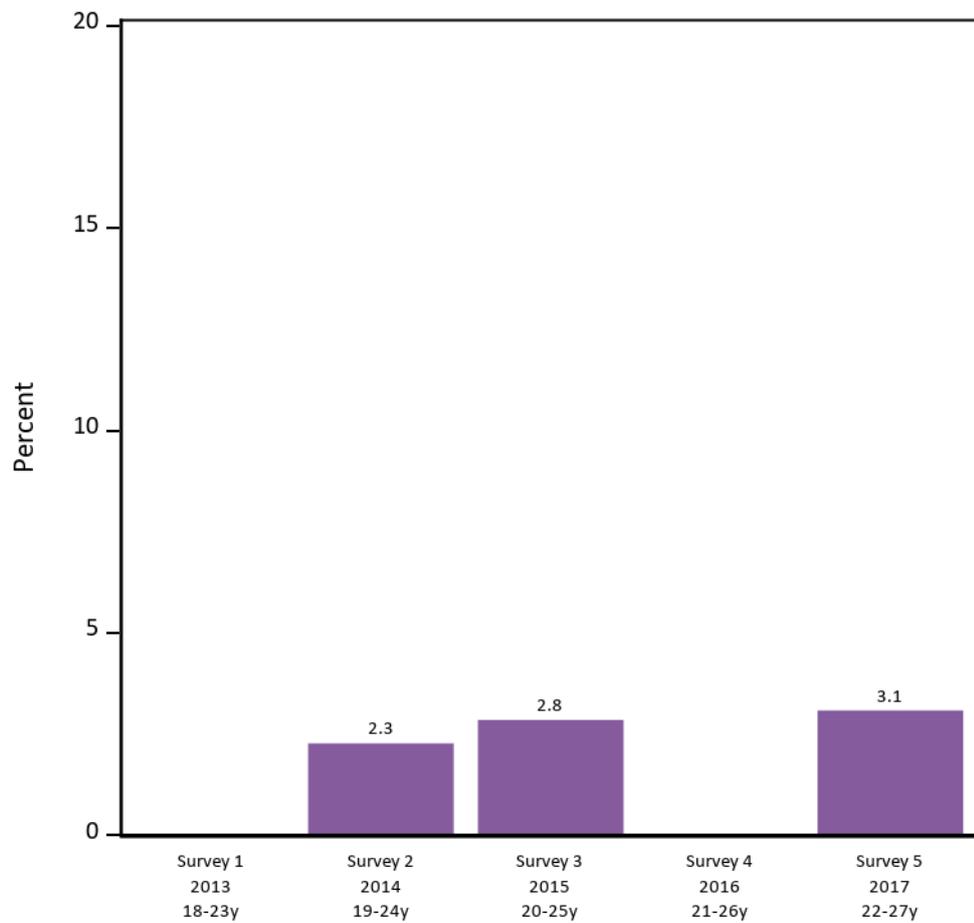


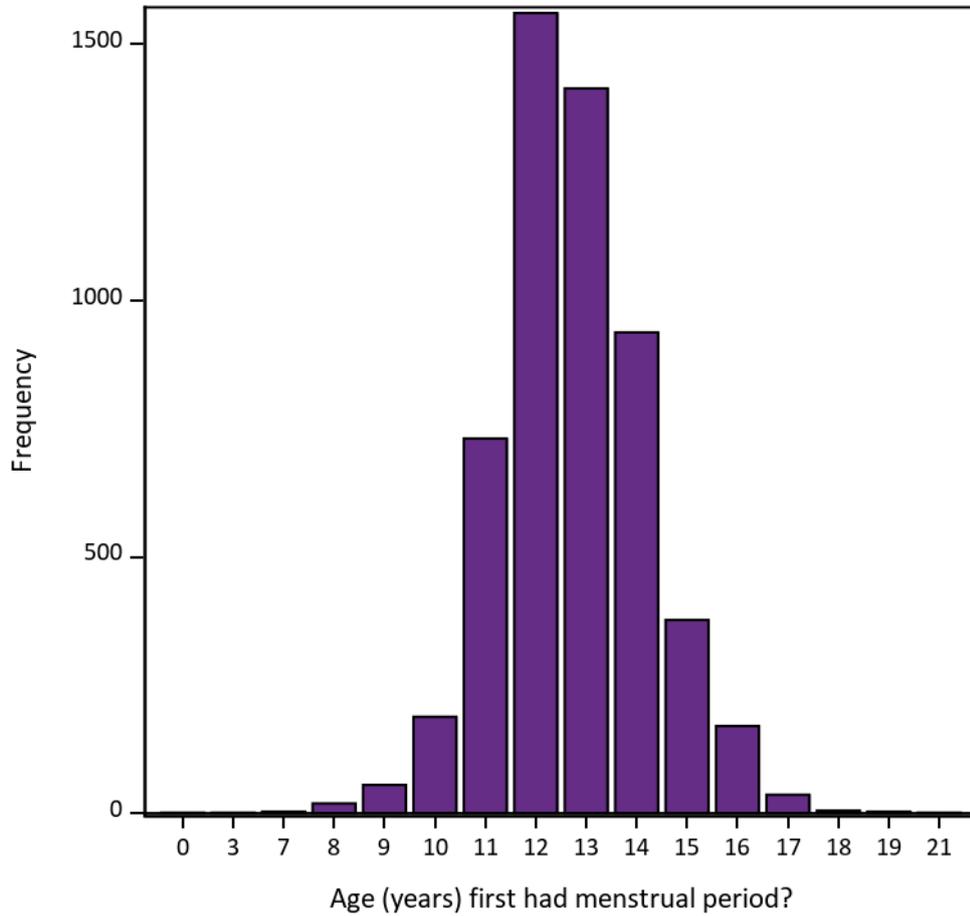
Figure 3-39 Self-reported ever diagnosed with or treated for borderline personality disorder from Surveys 2, 3 and 5 (N = 5,526).

Reported diagnosis or treatment of borderline personality disorder was around 3%.

3.7 Reproductive and sexual health

3.7.1 Menarche

QUESTION: At what age did you have your first menstrual period?



Age	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
N	3	19	55	188	731	1,561	1,414	938	377	170	36	5	3	0	1

Figure 3-40 Age at first menstrual period (N= 5,503).

The most common age for women in the cohort to have their first menstrual period was 12. The median age was 13.

3.7.2 Sexual activity

QUESTION (Survey 1): Have you ever had vaginal sex?

QUESTION (Surveys 2, 3 and 4): Have you ever vaginal sex? This means penis in vagina sex.

QUESTION (Survey 5): Have you ever had penis in vagina sex?

Response options:

- Yes
- No
- I prefer not to answer

Note: Not applicable was included as an option at Survey 5 only. It has been included with 'No' here.

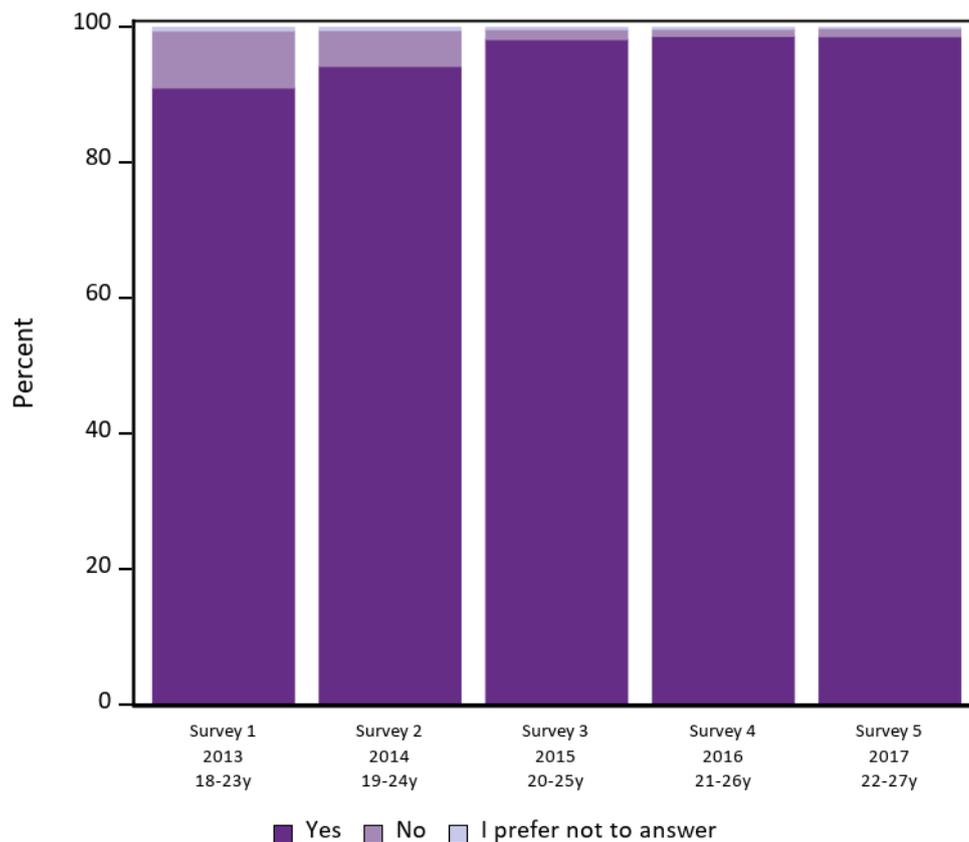


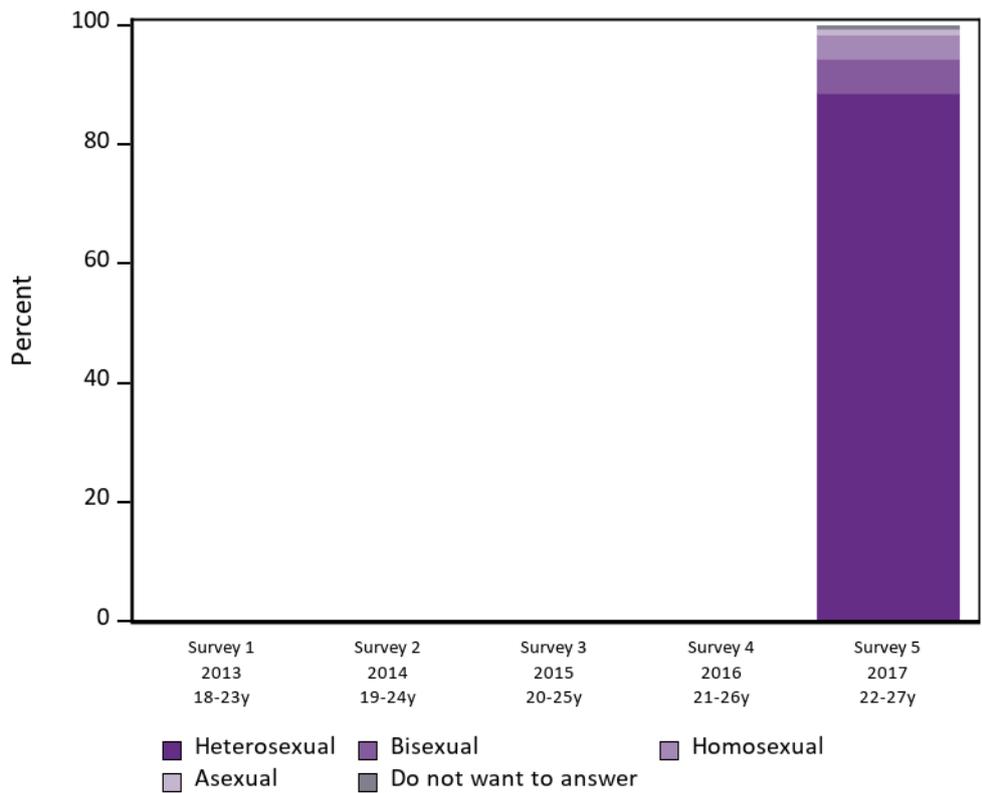
Figure 3-41 Experience of vaginal sex reported by women from Survey 1 to Survey 5 (N = 4,889).

The proportion of women reporting having had vaginal sex increased from 91% to 99% in the 4 years between Survey 1 and Survey 5.

QUESTION: Which of these statements best describes you?

I am sexually attracted:

- Only to females
- More often to females
- Equally to both
- More often to males
- Only to males
- Never to anyone
- Don't want to answer



	Survey 5
Do not want to answer	0.5
Asexual (never to anyone)	1.0
Homosexual (only to females + more often to females)	4.1
Bisexual (equally to both)	5.7
Heterosexual (only to males + more often to males)	88.7

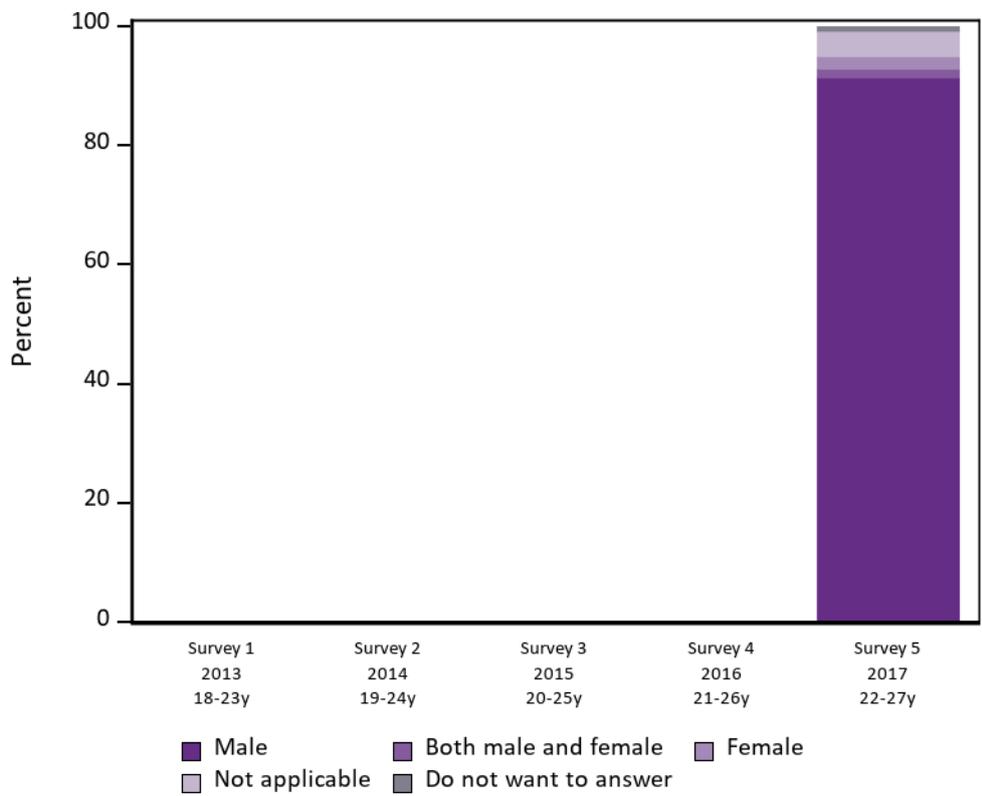
Figure 3-42 Sexual attraction, Survey 5 (N = 5,445).

Almost 10% of the women have some same-sex attraction.

QUESTION: Which statement best describes you?

I have had sexual experiences:

- Only with females
- More often with females
- Equally with both males and females
- More often with males
- Only with males
- No experience
- Don't want to answer



	Survey 5
Do not want to answer	0.7
Not applicable (no experience)	4.3
Female (only female + more often female)	2.1
Both male and female	1.5
Male (only male + more often male)	91.5

Figure 3-43 Sexual experiences, Survey 5 (N = 5,445).

Over 90% of women had had sexual experiences either more often, or only, with males.

3.7.3 Sexually transmitted and other infections

QUESTION: Have you ever been diagnosed (with) or treated for chlamydia?

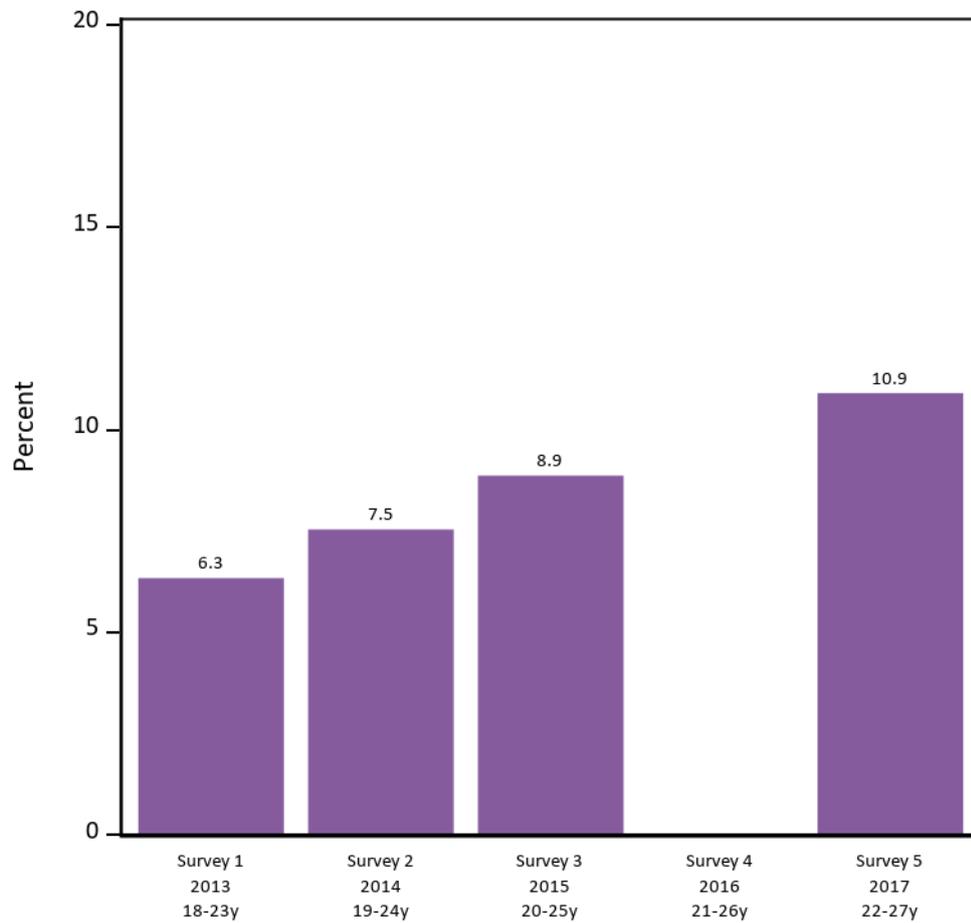


Figure 3-44 Women who reported ever being diagnosed or treated for chlamydia, Surveys 1, 2, 3 and 5 (N=5,493).

By Survey 5, just over 10% of women reported having been diagnosed or treated for chlamydia.

QUESTION: Have you ever been diagnosed (with) or treated for genital herpes?

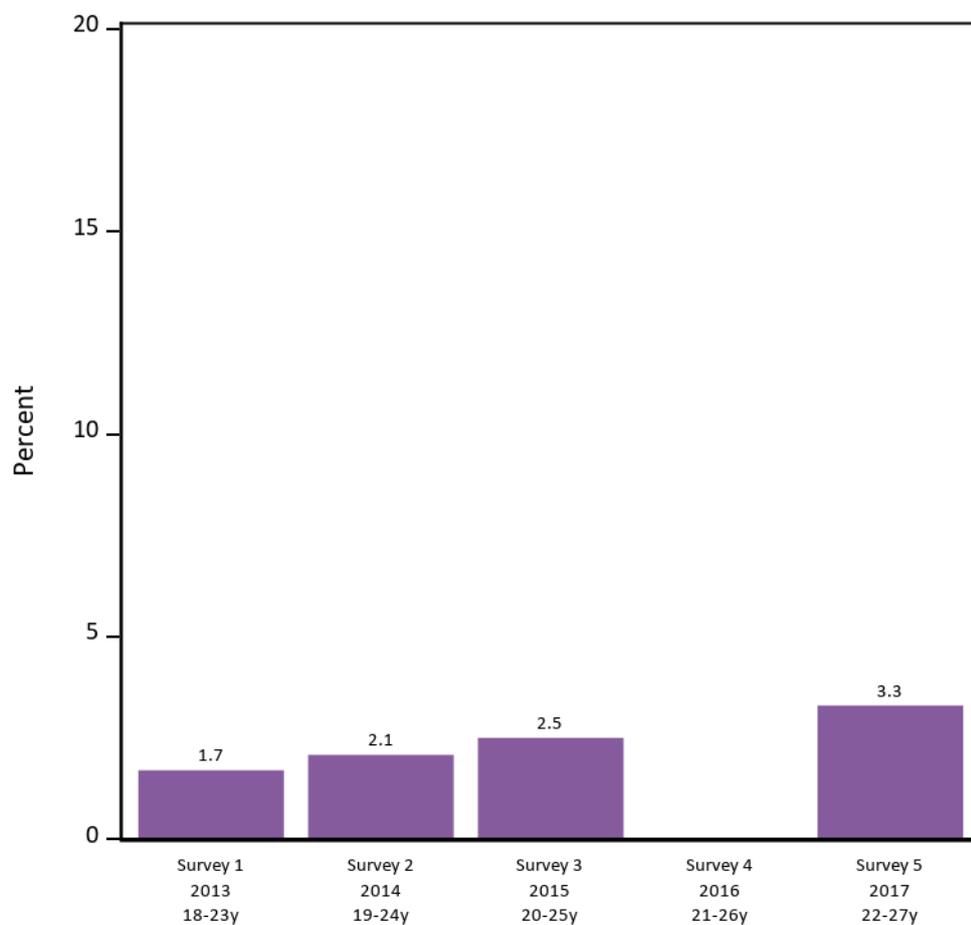


Figure 3-45 Women who reported ever being diagnosed or treated for genital herpes, Surveys 1, 2, 3 and 5 (N=5,493).

By Survey 5, just over 3.3% of women reported having been diagnosed or treated for genital herpes.

QUESTION: Have you ever been diagnosed (with) or treated for genital warts (HPV)?

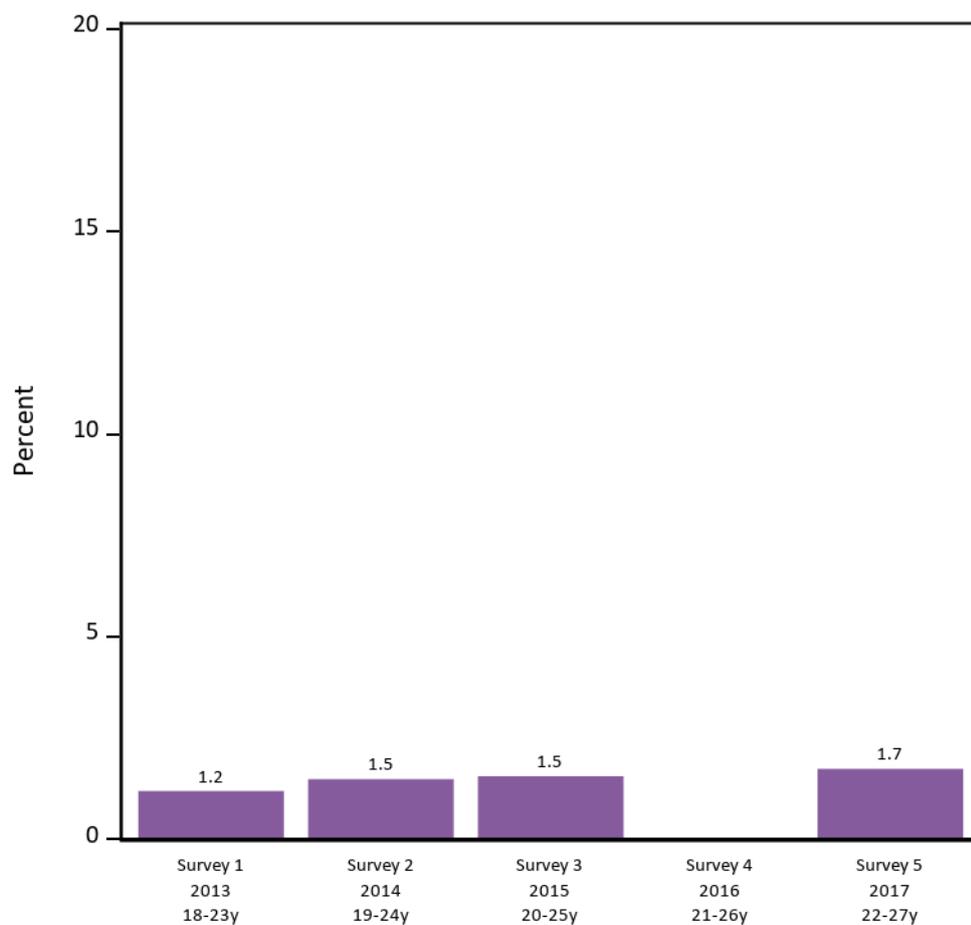


Figure 3-46 Women who reported ever being diagnosed or treated for genital warts (HPV), Surveys 1, 2, 3 and 5 (N=5,493).

The proportion of women diagnosed with or treated for genital warts (HPV) by Survey 5, was 1.7%.

QUESTION: Have you ever been diagnosed (with) or treated for thrush or yeast infection?

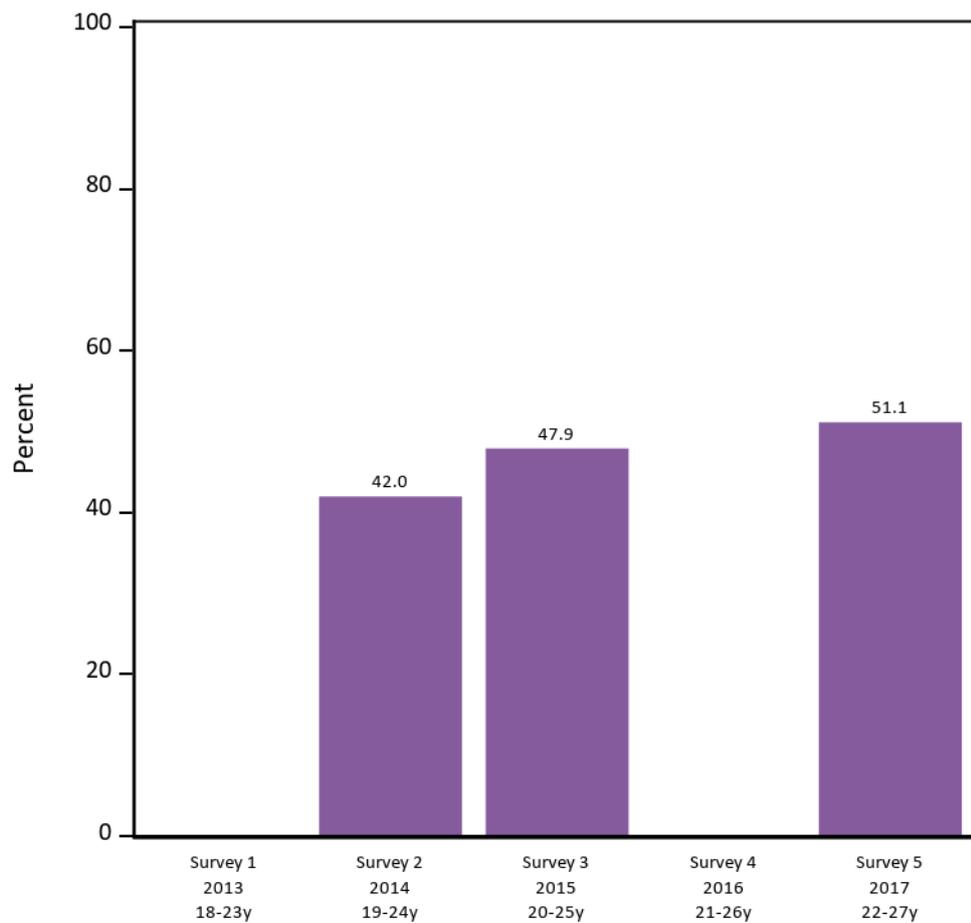


Figure 3-47 Women who reported ever being diagnosed or treated for thrush or yeast infection, Surveys 2, 3 and 5 (N=5,522).

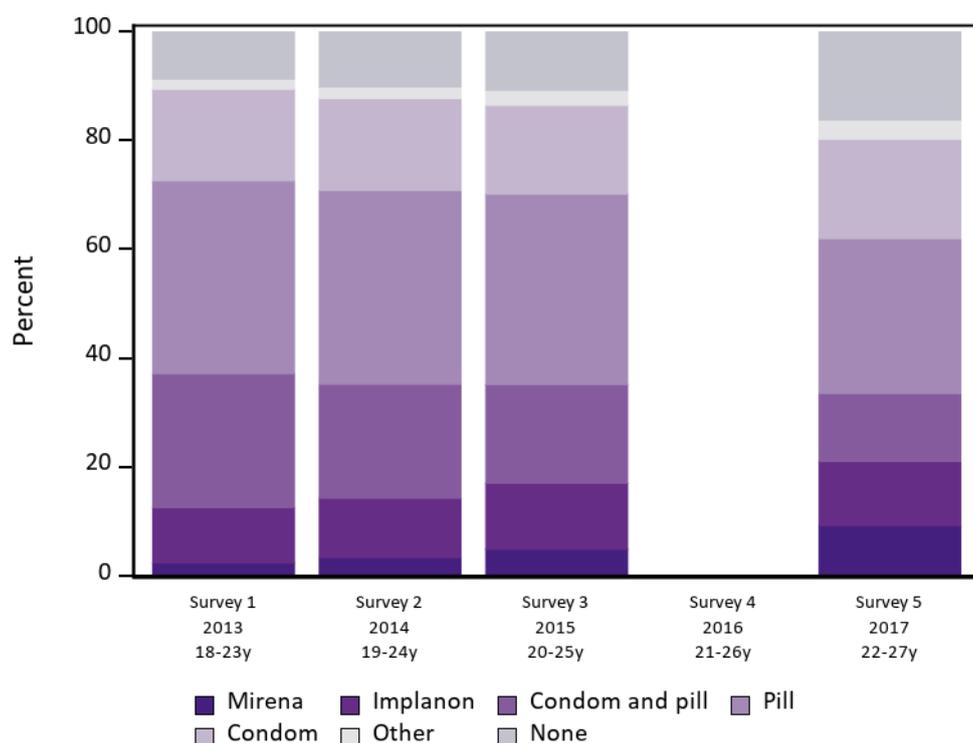
At Survey 2, 42% of women reported having been diagnosed or treated for thrush or yeast infection. This increased to 51.1% at Survey 5.

3.7.4 Contraceptive use

QUESTION (Survey 1, 2 and 3): Thinking about the LAST TIME you had vaginal sex, did you use any of the following? (Mark all that apply)

QUESTION (Survey 5): Thinking about the LAST TIME you had penis in vagina sex, did you use any of the following? (Mark all that apply)

- The Pill
- Condoms
- Implanon
- Mirena
- Other contraceptive
- None



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
None	8.7	10.1	10.7		16.2
Other	1.9	2.1	2.8		3.5
Condom	16.8	16.9	16.3		18.3
Pill	35.4	35.6	35.0		28.4
Condom and pill	24.6	20.9	18.1		12.5
Implanon	10.2	10.9	12.1		11.8
Mirena	2.5	3.5	5.0		9.3

Figure 3-48 Contraceptive use by women from Survey 1 to Survey 5, excluding Survey 4 (N = 4,458).

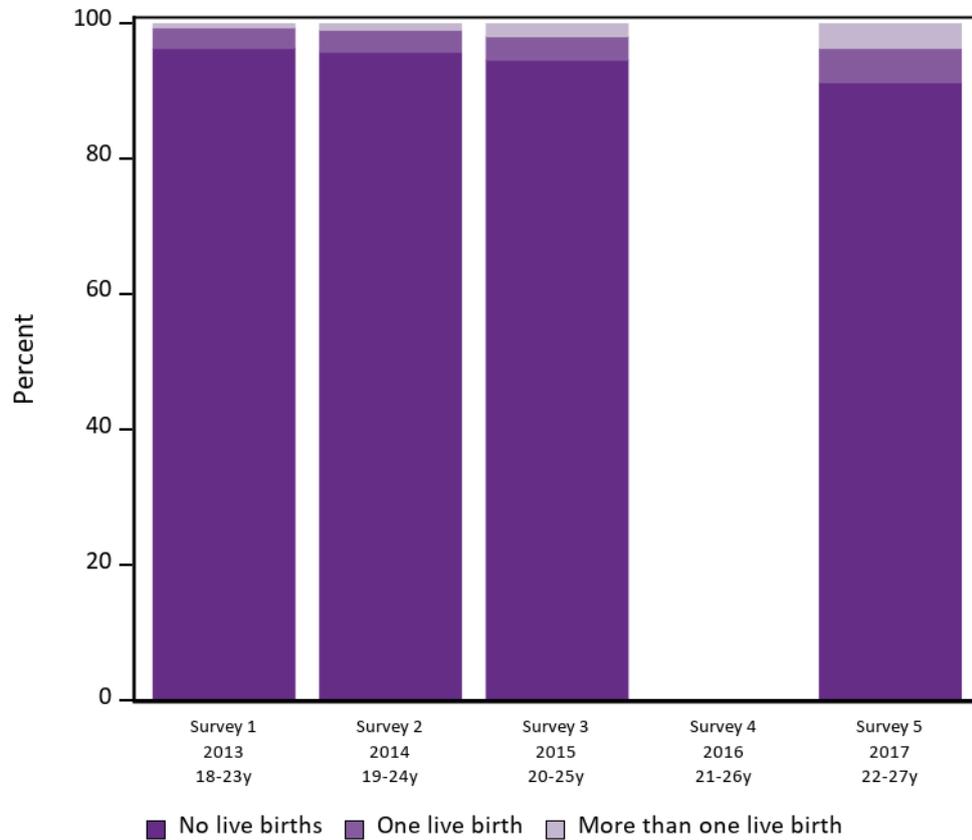
Between Survey 3 and Survey 5 the number of women using no contraceptive increased from 8.7% to 16.2%, possibly as they began having families. Mirena (a hormone-releasing IUD) use also increased markedly between Survey 1 and Survey 5, from 2.5% to 9.3%. Use of the Pill and the Pill combined with condoms decreased over the same period, from 35.4% to 28.4% (Pill) and from 24.6% to 12.5% (Condom and Pill).

3.7.5 Pregnancy outcomes

QUESTION: (Survey 1) How many live births have you had?

(Surveys 2, 3, 5) How many times have you had each of the following pregnancy outcomes:

- Live births?



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
More than 1 live birth	0.6	0.9	1.9		3.6
1 live birth	3.0	3.3	3.5		5.1
No live births	96.4	95.8	94.6		91.3

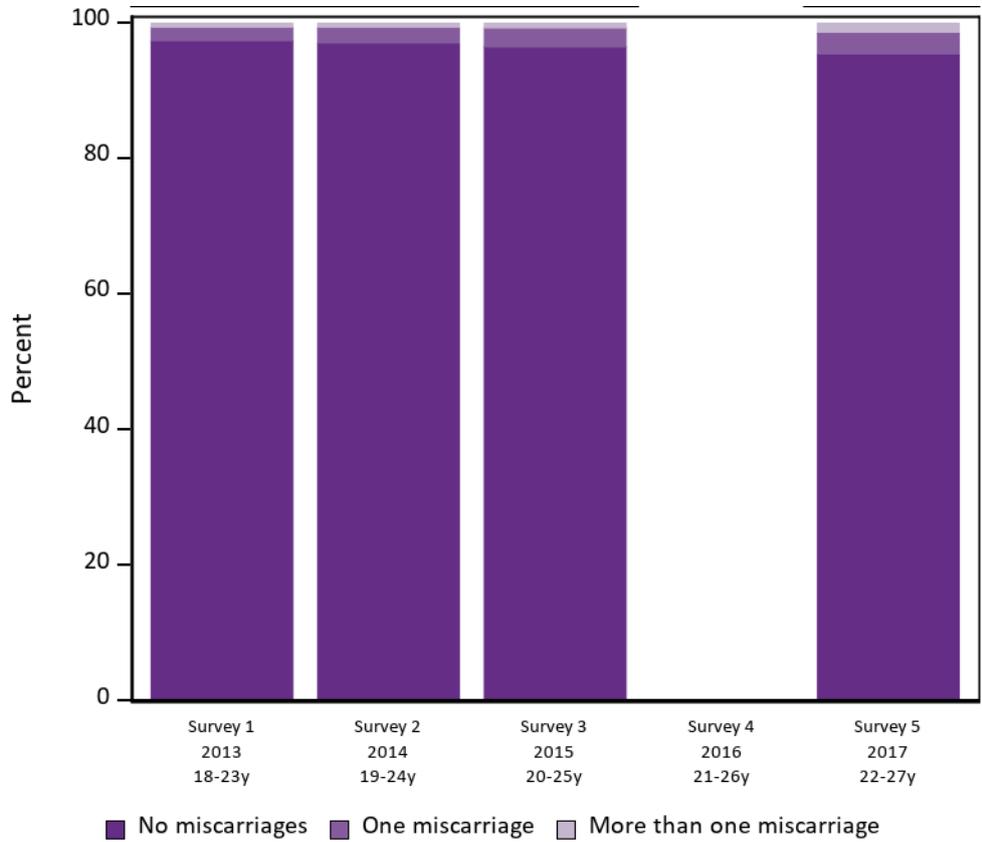
Figure 3-49 Women who reported having live births, Survey 1, 2, 3 and 5. (N = 5,281)

The proportion of women who had one or more live births increased from 3.6% at Survey 1 to 8.7% at Survey 5.

QUESTION: (Survey 1) How many miscarriages have you had?

(Surveys 2, 3, 5) How many times have you had each of the following pregnancy outcomes:

- Miscarriages?



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
More than 1 miscarriage	0.6	0.6	0.7		1.3
1 miscarriage	2.0	2.3	2.8		3.2
No miscarriages	97.4	97.1	96.5		95.5

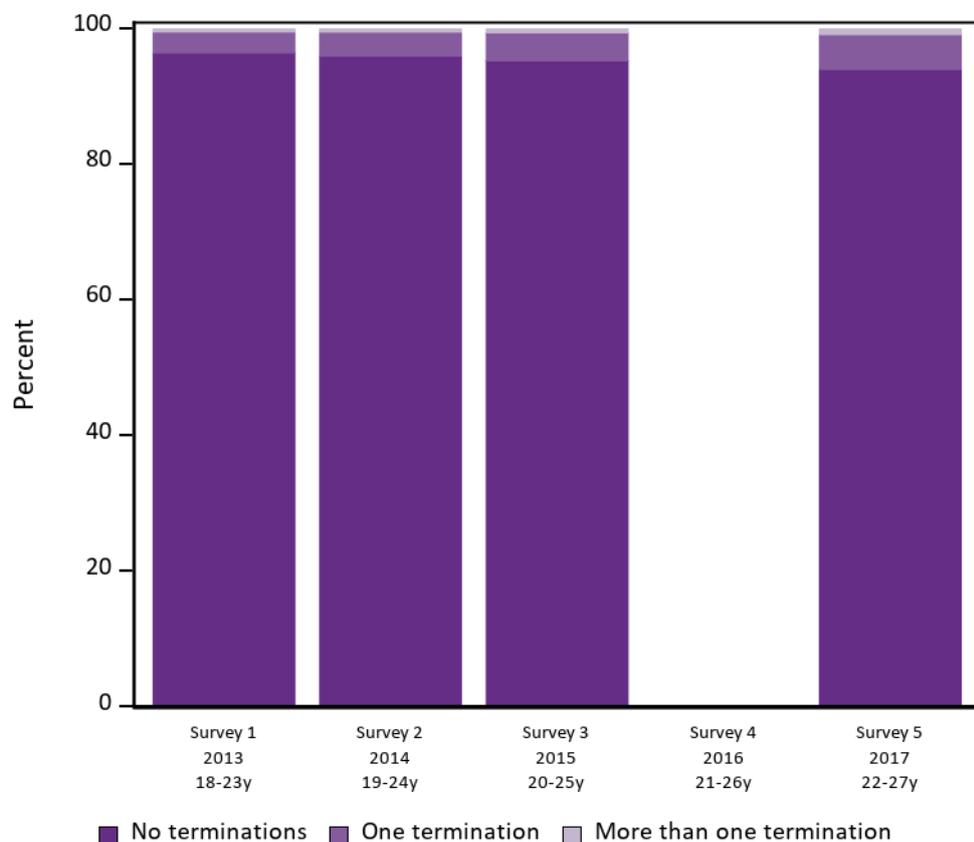
Figure 3-50 Women who reported having miscarriages, Surveys 1, 2, 3 and 5. (N = 5,271)

The proportion of women who had one or more miscarriages increased from 2.6% at Survey 1 to 4.5% at Survey 5.

QUESTION: (Survey 1) How many terminations for personal reasons have you had?

(Surveys 2, 3, 5) How many times have you had each of the following pregnancy outcomes:

- Abortions or terminations (for personal reasons)?



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
More than 1 termination	0.4	0.5	0.6		0.8
1 termination	3.1	3.5	4.1		5.1
No terminations	96.5	96.0	95.3		94.0

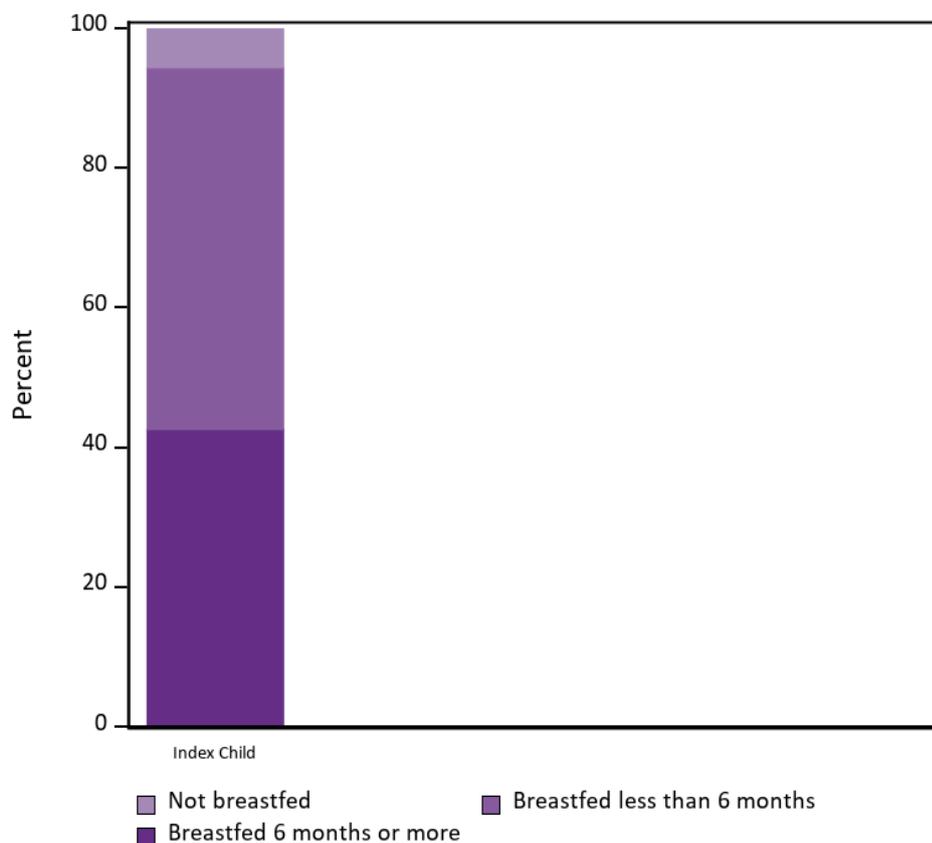
Figure 3-51 Women who reported having a termination for personal reasons, Survey 1, 2, 3 and 5. (N = 5,270)

The proportion of women who had one or more terminations for personal reasons increased from 3.5% at Survey 1 to 6.0% at Survey 5.

3.7.6 Breastfeeding

QUESTION: Did your baby receive any breast milk?

QUESTION: How many complete months was your baby breastfed?



Not breastfed	5.6
Breastfed less than 6 months	51.8
Breastfed 6 months or more	42.6

Figure 3-52 Breastfeeding of the index child (i.e., single children, or the eldest of multiple children)

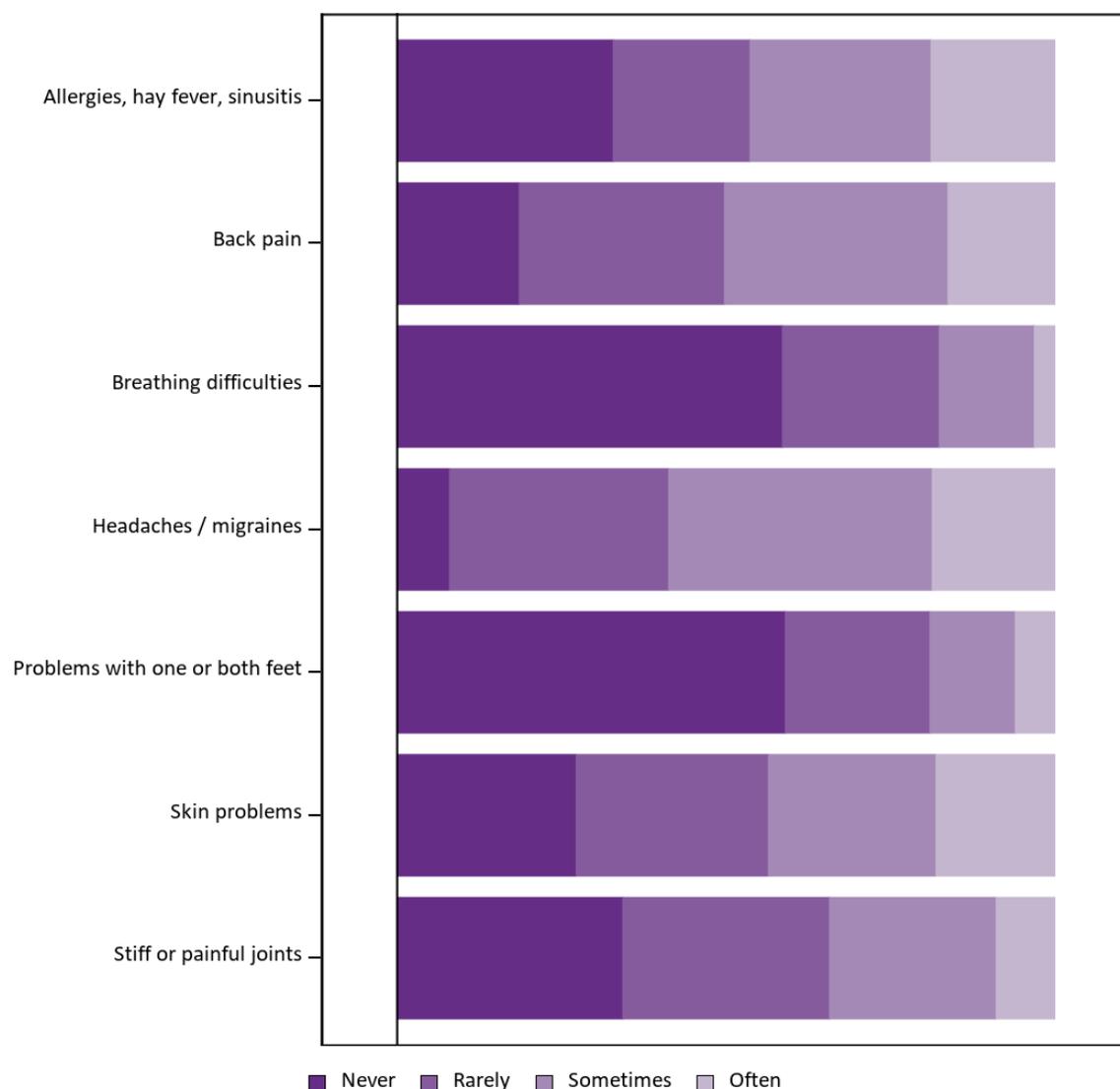
Note: Breastfeeding questions were asked at Surveys 2, 3 and 5. Data shown here includes responses to these questions for all live births (N=1,321) reported by women (N=880) by Survey 5 in 2017 (when they were aged 22-27).

Just over 40% of index children were breastfed for 6 months or more.

3.8 Physical health

3.8.1 Self-reported symptoms

QUESTION: In the last 12 months have you had: Allergies, hay fever, sinusitis; Breathing difficulties; Headaches/migraines; Stiff or painful joints; Back pain; Skin problems; Problems with one or both feet.



	Never	Rarely	Sometimes	Often
Allergies, hay fever, sinusitis	32.78	20.83	27.55	18.84
Back pain	18.50	31.23	34.00	16.27
Breathing difficulties	58.55	23.87	14.47	3.11
Headaches/migraines	7.89	33.33	40.12	18.66
Problems with one or both feet	58.99	22.01	13.00	6.01
Skin problems	27.17	29.25	25.50	18.08
Stiff or painful joints	34.26	31.46	25.36	8.92

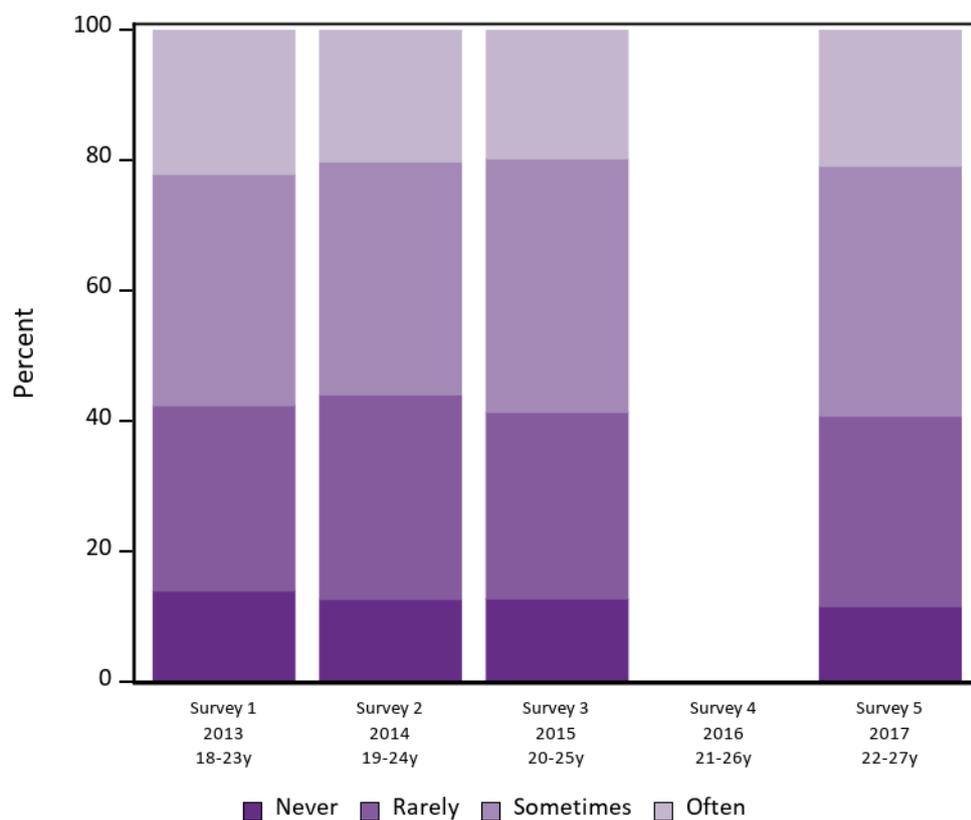
Figure 3-53 Health problems (allergies, hay fever, sinusitis; back pain; breathing difficulties; headaches/migraines; problems with feet; skin problems; stiff or painful joints) reported at Survey 5 (N = 5,525)

At Survey 5, more than 15% of the cohort reported having allergies, back pain, skin problems or headaches/migraine often in the previous 12 months.

3.8.2 Sleep difficulty

QUESTION: In the last 12 months, have you had any difficulty sleeping? Response options:

- Never
- Rarely
- Sometimes
- Often



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Often	22.1	20.2	19.7		20.8
Sometimes	35.5	35.7	38.9		38.3
Rarely	28.4	31.4	28.6		29.2
Never	14.0	12.7	12.8		11.6

Figure 3-54 Self-reported frequency of difficulty sleeping from Survey 1 to Survey 5 excluding Survey 4 (N = 5,492).

The frequency of sleeping difficulty remained steady from Survey 1 to Survey 5. At each Survey, 1 in 5 women reported at every survey that they *often had difficulty sleeping*.

QUESTION: In the last 12 months, have you had severe tiredness? Response options:

- Never
- Rarely
- Sometimes
- Often

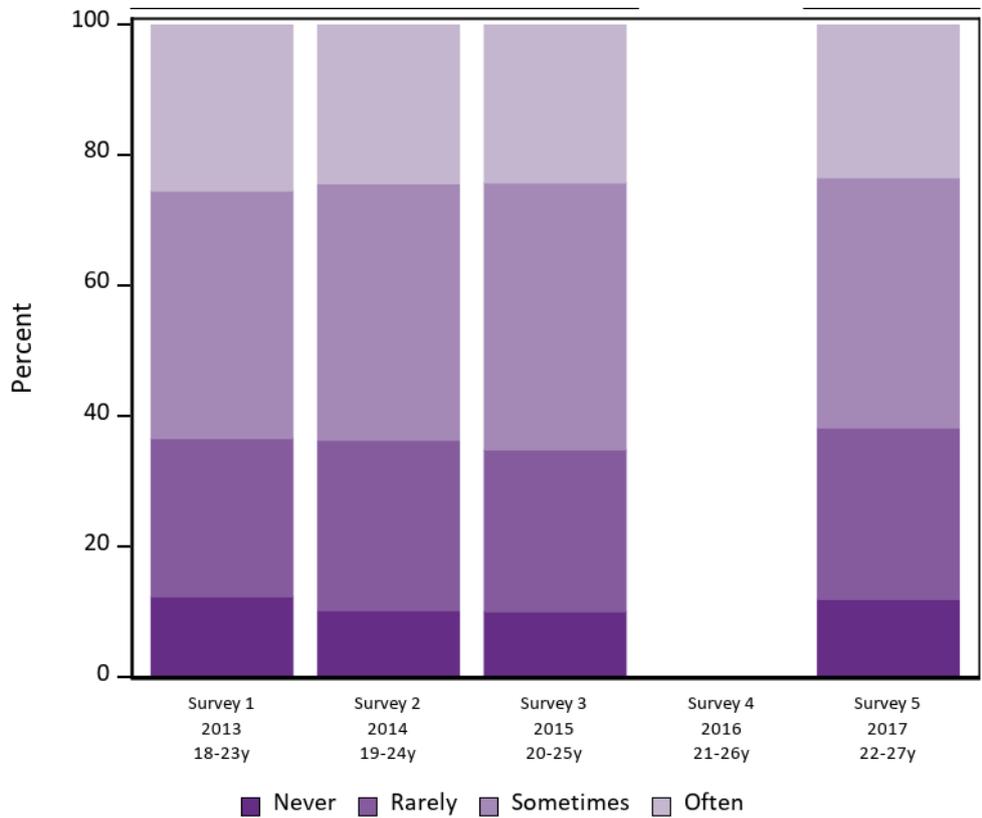


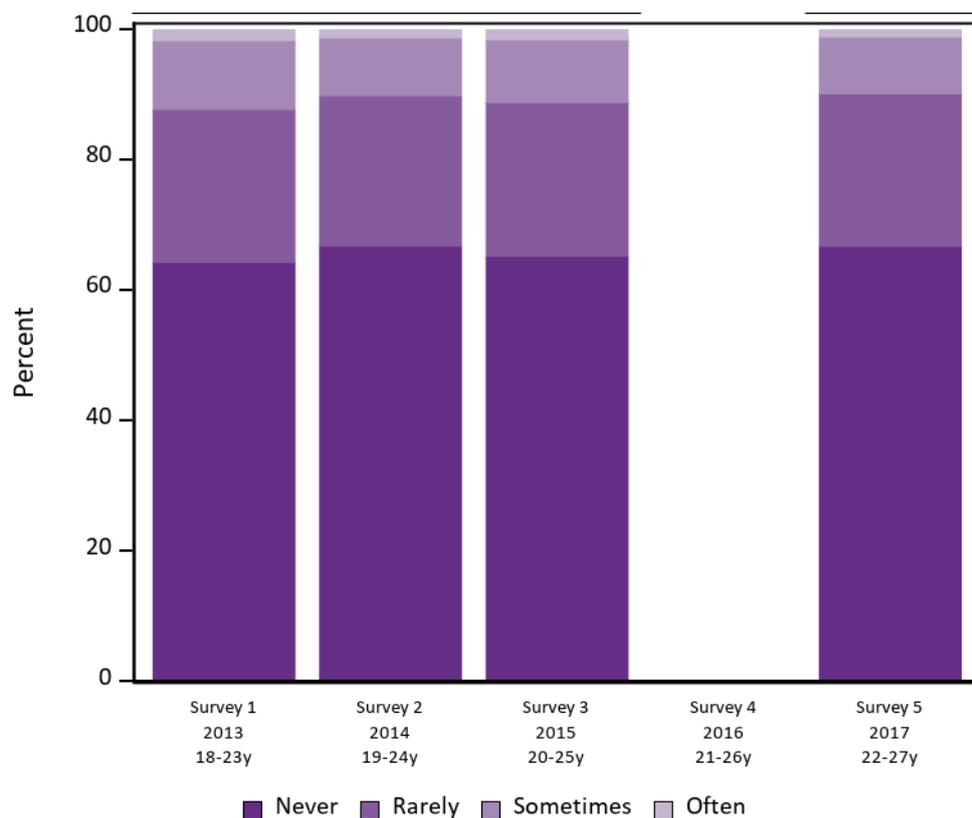
Figure 3-55 Self-reported frequency of severe tiredness from Survey 1 to Survey 5 excluding Survey 4 (N = 5,493).

The frequency of severe tiredness also remained steady over Surveys 1, 2, 3 and 5. The proportion of women from Survey 1 to 5 reporting that they *often experienced severe tiredness* declined slightly from 25% to 23%.

3.8.3 Urine problems

QUESTION: In the last 12 months, have you had urine that burns or stings?

- Often
- Sometimes
- Rarely
- Never



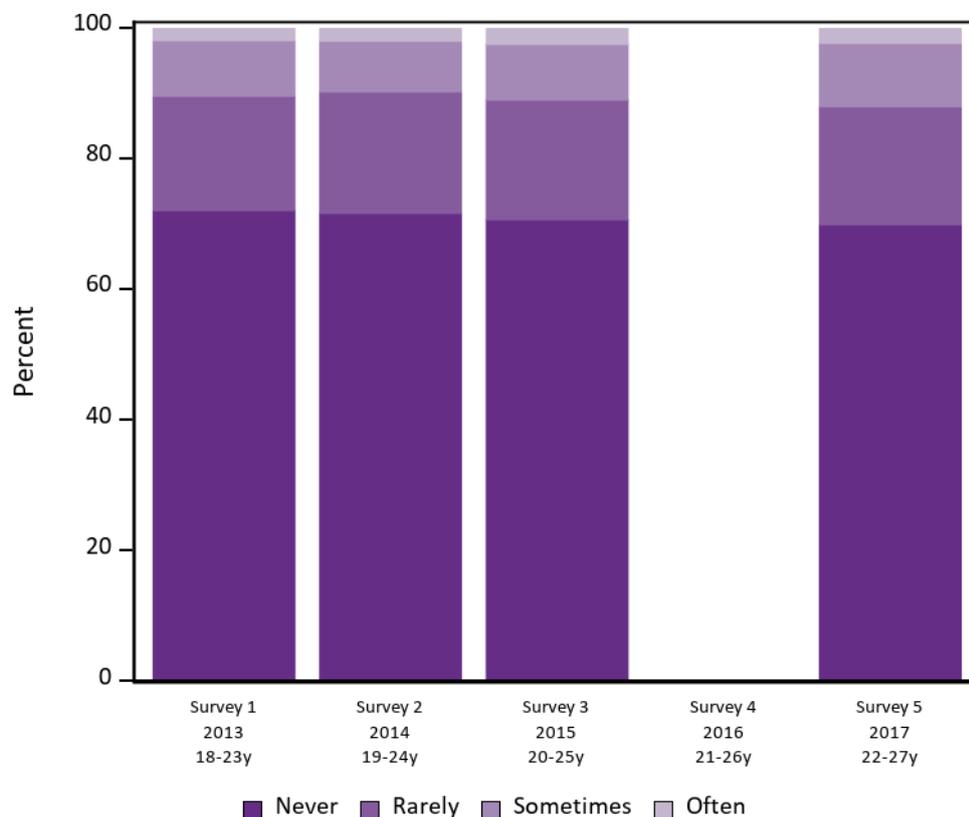
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Often	1.6	1.2	1.5		1.1
Sometimes	10.6	8.9	9.6		8.7
Rarely	23.5	23.1	23.6		23.4
Never	64.3	66.8	65.3		66.8

Figure 3-56 Burning or stinging urine from Survey 1 to Survey 5 excluding Survey 4 (N = 5,487).

The prevalence of burning or stinging urine remained steady over surveys – about 90% of women *never*, or only *rarely*, reported having had the symptom in the last 12 months.

QUESTION: In the last 12 months, have you had leaking urine?

- Often
- Sometimes
- Rarely
- Never



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Often	1.9	1.9	2.4		2.3
Sometimes	8.5	7.8	8.5		9.7
Rarely	17.5	18.6	18.4		18.1
Never	72.1	71.7	70.7		69.9

Figure 3-57 Leaking urine from Survey 1 to Survey 5 excluding Survey 4 (N = 5,486).

The prevalence of leaking urine was fairly steady across all surveys. There was a very slight increase in women who reported experiencing leaking urine either *sometimes* or *often*, from 10.4% at Survey 1 to 12% at Survey 5.

QUESTION: Have you ever been diagnosed (with) or treated for urinary tract infection?

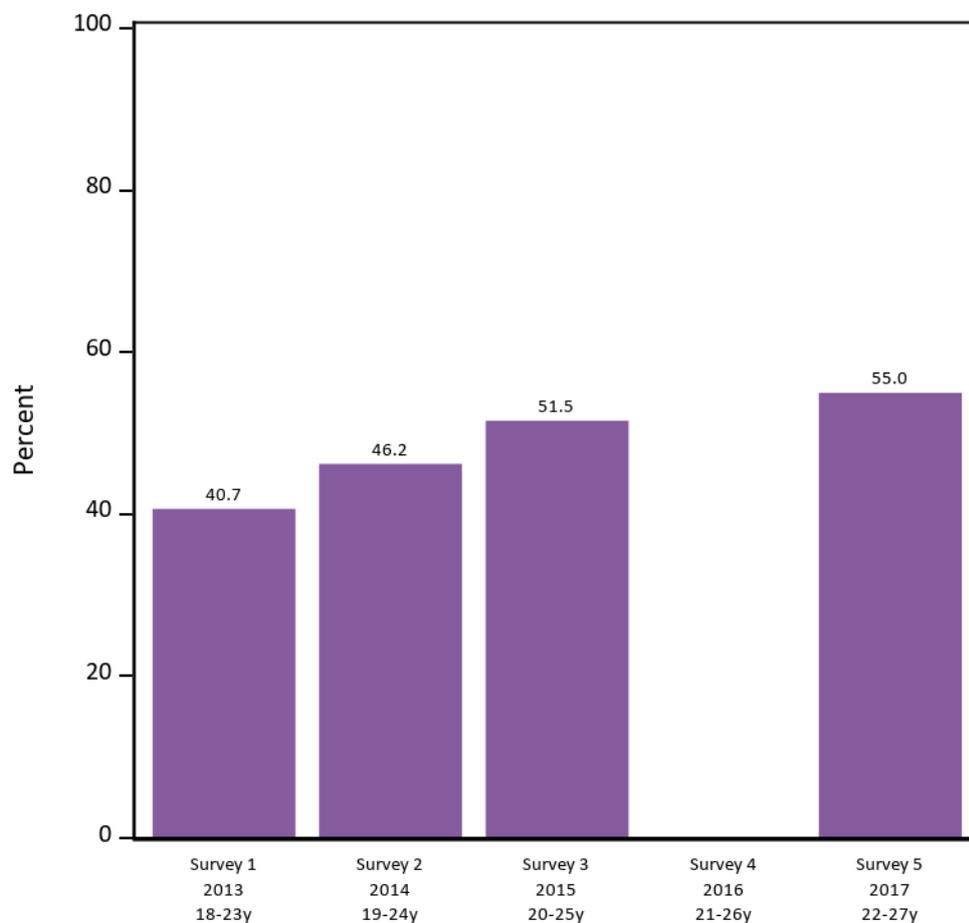


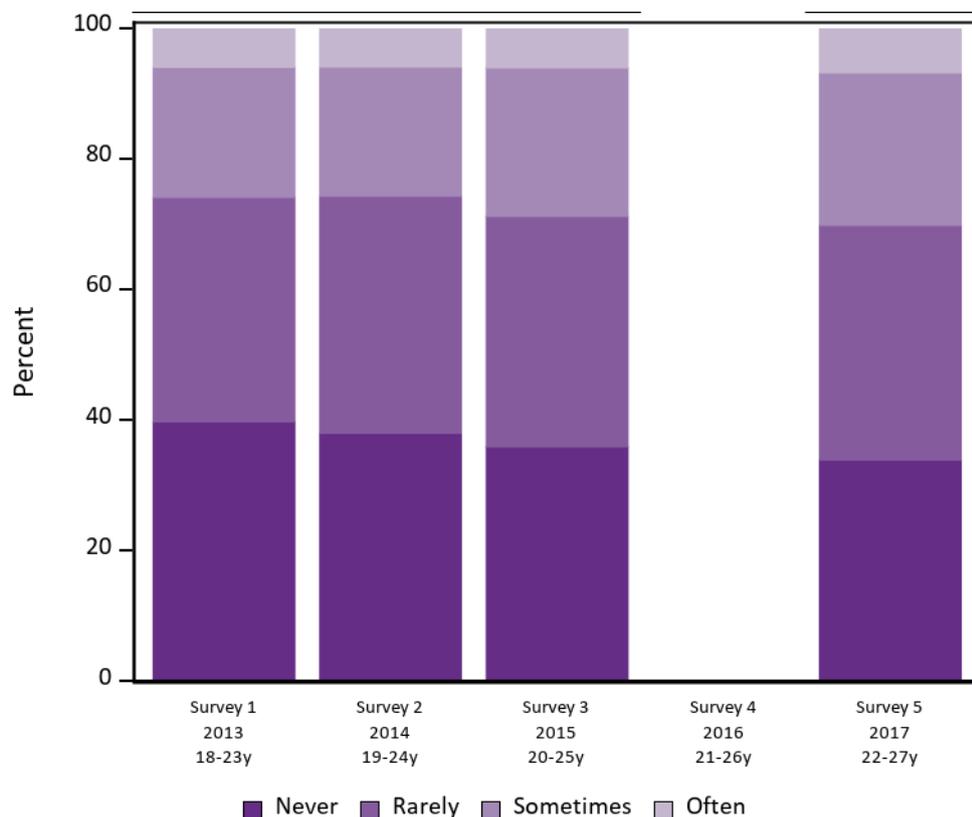
Figure 3-58 Women who reported ever being diagnosed or treated for a urinary tract infection, Survey 1 to Survey 5 excluding Survey 4 (N=5,493).

At Survey 1, 40.7% of women reported having been diagnosed or treated for a urinary tract infection. This increased to 55% at Survey 5.

3.8.4 Bowel problems

QUESTION: In the last 12 months, have you had constipation?

- Often
- Sometimes
- Rarely
- Never



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Often	5.9	5.8	6.0		6.7
Sometimes	19.9	19.8	22.8		23.4
Rarely	34.4	36.3	35.3		36.0
Never	39.8	38.0	36.0		33.9

Figure 3-59 Constipation from Survey 1 to Survey 5 excluding Survey 4 (N = 5,486).

The prevalence of constipation increased over Surveys 1, 2, 3 and 5. At Survey 1, 1 in 4 women (25.5%) reported sometimes or often having had constipation in the last 12 months, and this had increased to almost 1 in 3 (30%) by Survey 5.

QUESTION: In the last 12 months, have you had haemorrhoids (piles)?

- Often
- Sometimes
- Rarely
- Never

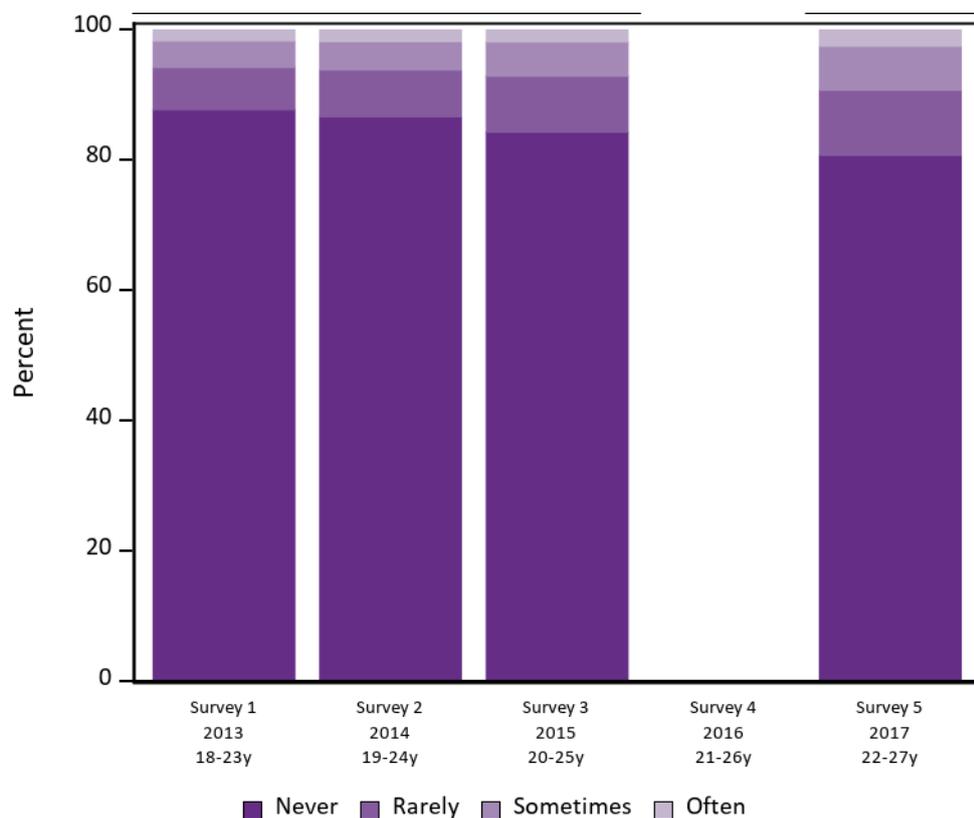


Figure 3-60 Haemorrhoids from Survey 1 to Survey 5 excluding Survey 4 (N = 5,487).

The prevalence of haemorrhoids increased over Surveys 1, 2, 3 and 5. At Survey 1, almost 88% of women reported never having had haemorrhoids in the last 12 months, and this had decreased to 81% by Survey 5.

QUESTION: In the last 12 months, have you had other bowel problems?

- Often
- Sometimes
- Rarely
- Never

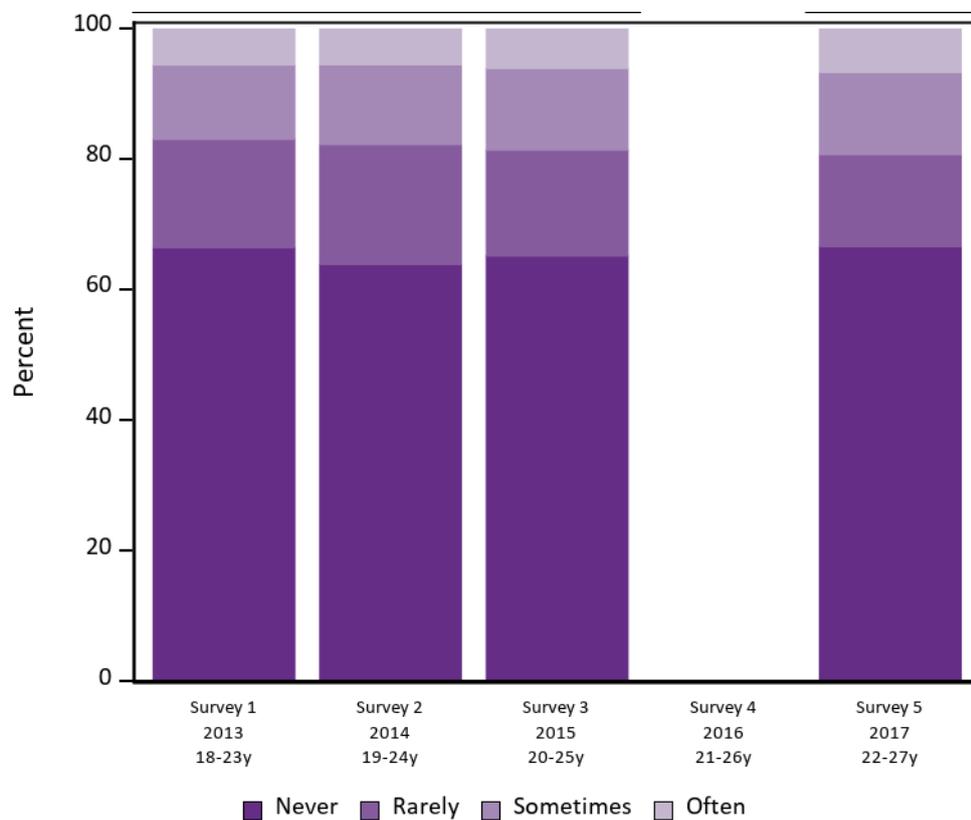


Figure 3-61 Other bowel problems from Survey 1 to Survey 5 excluding Survey 4 (N = 5,487).

The prevalence of other bowel problems did not change much over Surveys 1, 2, 3 and 5. About one third of women reported other bowel problems in the last 12 months, either *often*, *sometimes* or *rarely*.

3.8.5 Menstrual problems

QUESTION: In the last 12 months, have you had any of the following:

- Vaginal discharge?

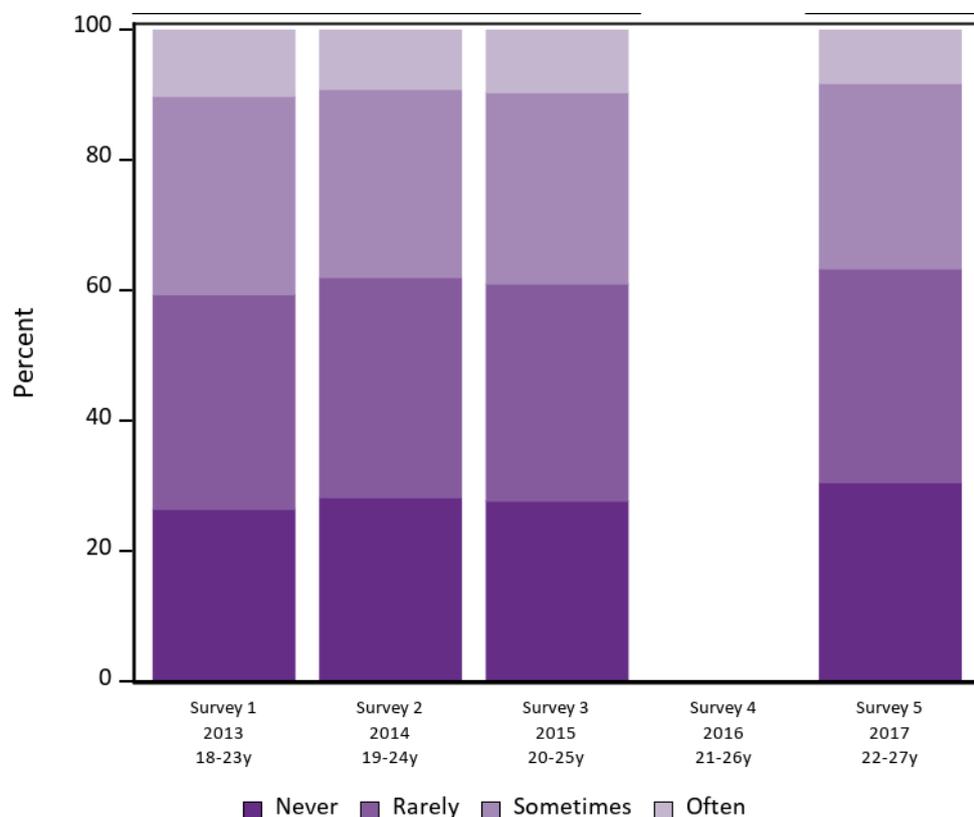
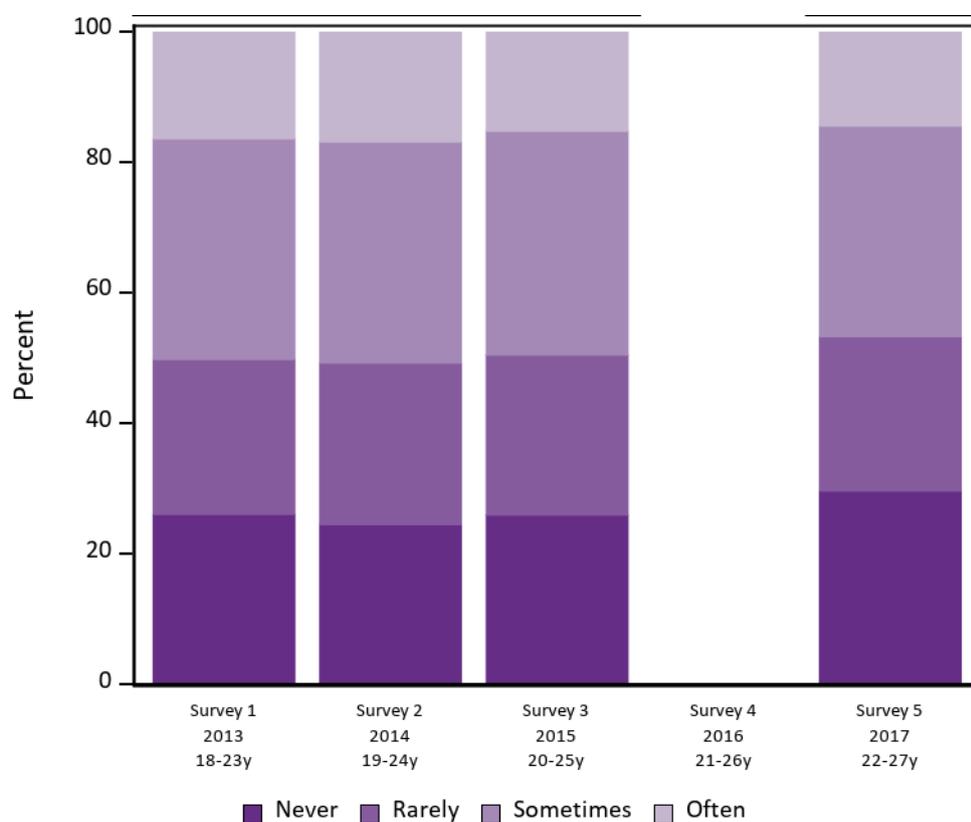


Figure 3-62 Vaginal discharge, Surveys 1-5 (N = 5,489).

More than 2/3rds of the women reported vaginal discharge in the previous 12 months. Between Survey 1 and Survey 5, the proportion of women who reported vaginal discharge either *often*, *sometimes* or *rarely* decreased slightly, from 73.4% to 69.4%.

QUESTION: In the last 12 months, have you had any of the following

- Premenstrual tension?



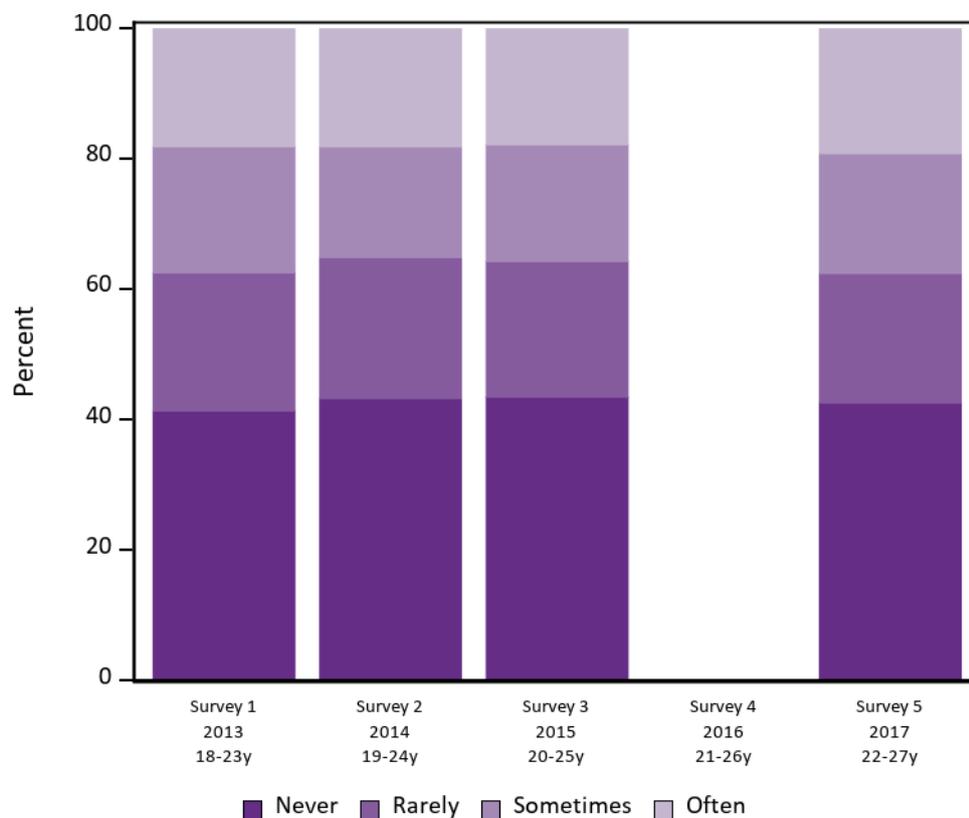
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Often	16.3	16.8	15.2		14.4
Sometimes	33.8	33.9	34.3		32.3
Rarely	23.7	24.8	24.5		23.7
Never	26.1	24.5	26.0		29.7

Figure 3-63 Premenstrual tension, Surveys 1-5 (N = 5,487).

Between Survey 1 and Survey 5, the proportion of women who reported premenstrual tension either *often*, *sometimes* or *rarely* decreased slightly, from 73.8% to 70.4%.

QUESTION: In the last 12 months, have you had any of the following:

- Irregular periods?



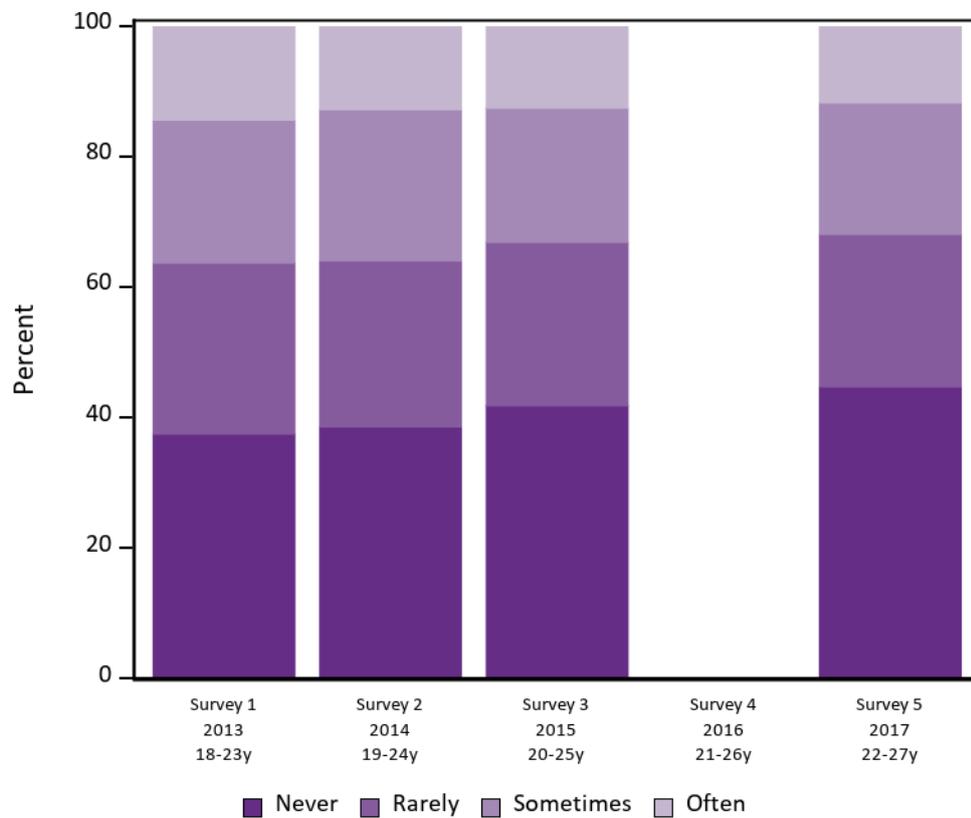
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Often	18.1	18.1	17.8		19.1
Sometimes	19.3	17.0	17.9		18.4
Rarely	21.2	21.6	20.8		19.9
Never	41.4	43.3	43.5		42.6

Figure 3-64 Irregular periods, Surveys 1-5 (N = 5,486).

Between Survey 1 and Survey 5, the proportion of women who reported irregular periods remained steady, at just under 60%.

QUESTION: In the last 12 months, have you had any of the following:

- Heavy periods?



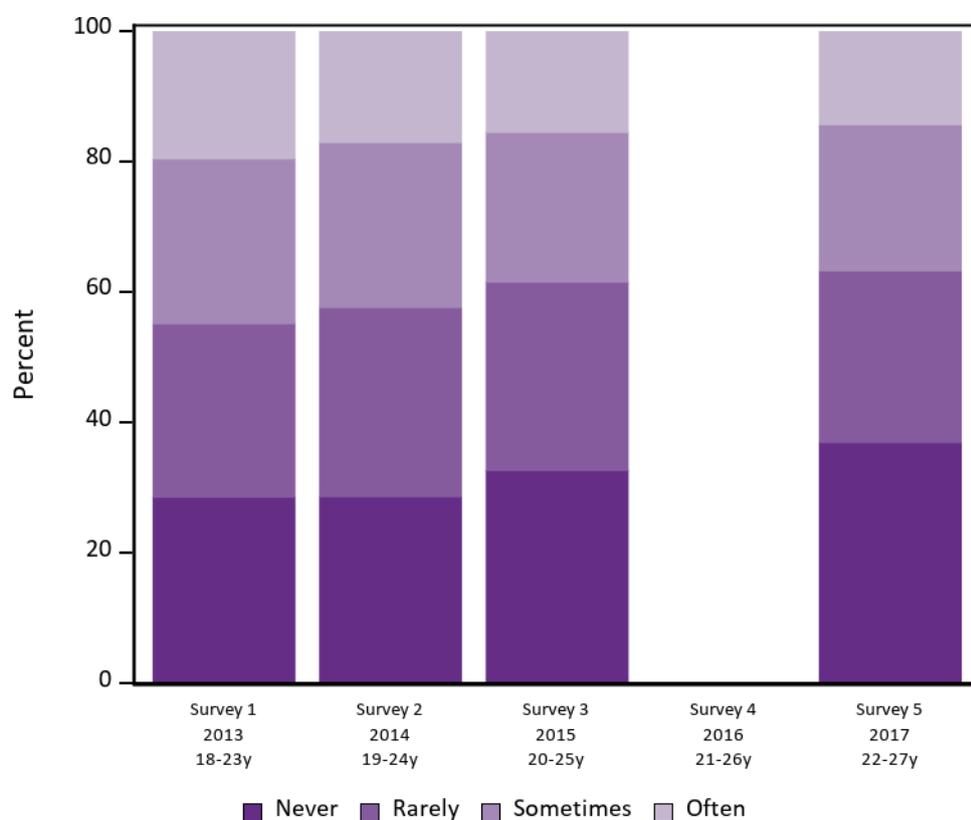
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Often	14.3	12.7	12.5		11.7
Sometimes	21.9	23.2	20.6		20.2
Rarely	26.2	25.5	25.1		23.4
Never	37.5	38.6	41.9		44.8

Figure 3-65 Women reporting heavy periods, Surveys 1, 2, 3 and 5 (N = 5,488)

Between Survey 1 and Survey 5, the proportion of women who reported heavy periods decreased, from 62% to 55%.

QUESTION: In the last 12 months, have you had any of the following:

- Severe period pain?



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Often	19.5	17.0	15.4		14.3
Sometimes	25.3	25.3	23.0		22.4
Rarely	26.6	29.0	28.9		26.3
Never	28.6	28.7	32.7		37.0

Figure 3-66 Women reporting severe period pain, Surveys 1, 2, 3 and 5 (N = 5,488)

Between Survey 1 and Survey 5, the proportion of women who reported severe period pain decreased from 71% to 63%. The proportion of women who *often* had severe period pain decreased from almost 20% in Survey 1 to less than 15% in Survey 5.

3.9 Chronic conditions

QUESTION: Have you ever been diagnosed (with) or treated for low iron?

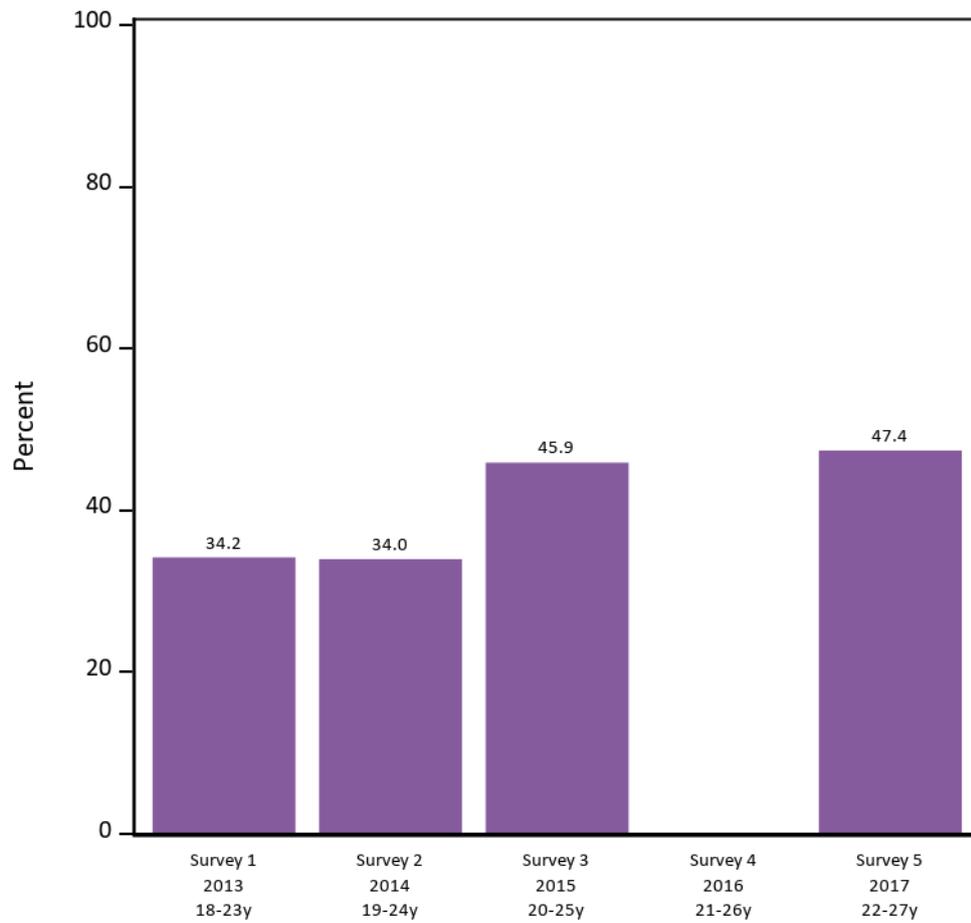


Figure 3-67 Women who reported ever being diagnosed or treated for low iron, Surveys 1, 2, 3 and 5 (N=5,338).

Diagnosis or treatment for low iron was increasingly common among women in the cohort over time, approaching 50% by Survey 5.

QUESTION: Have you ever been diagnosed (with) or treated for asthma?

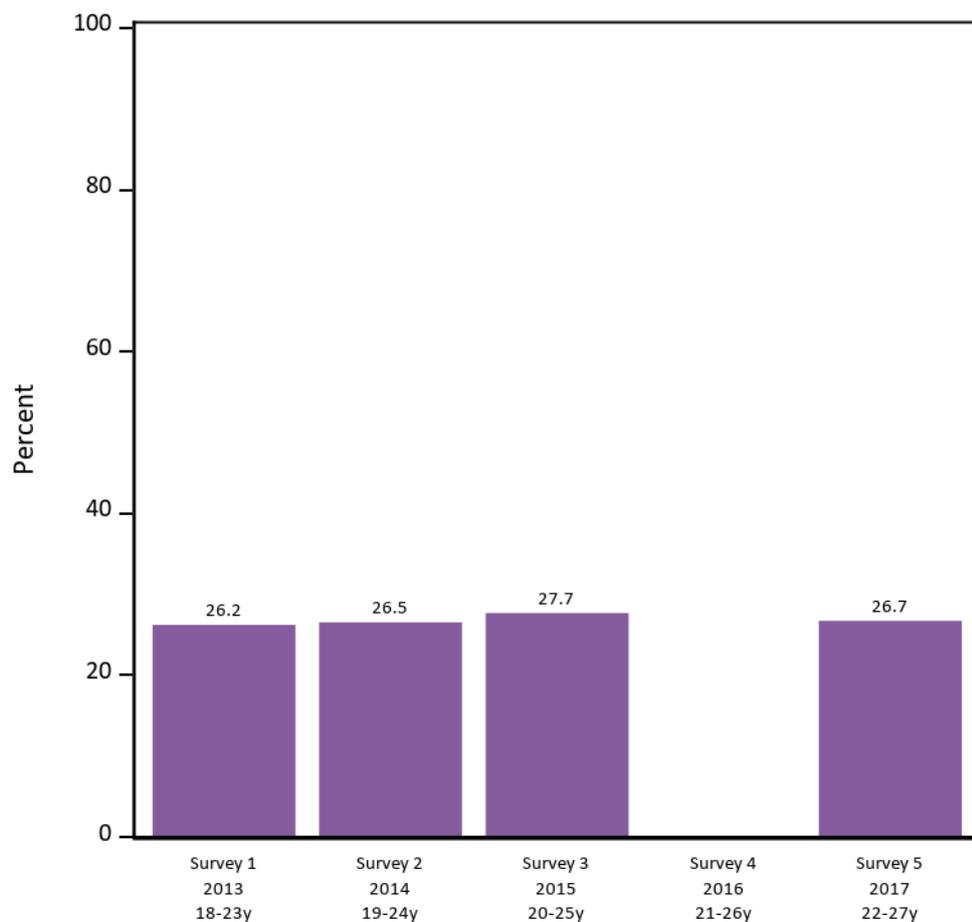


Figure 3-68 Women who reported ever being diagnosed or treated for asthma, Surveys 1, 2, 3 and 5 (N=5,338).

More than one quarter of women had had asthma diagnosed or treated.

QUESTION: Have you ever been diagnosed (with) or treated for a thyroid condition?

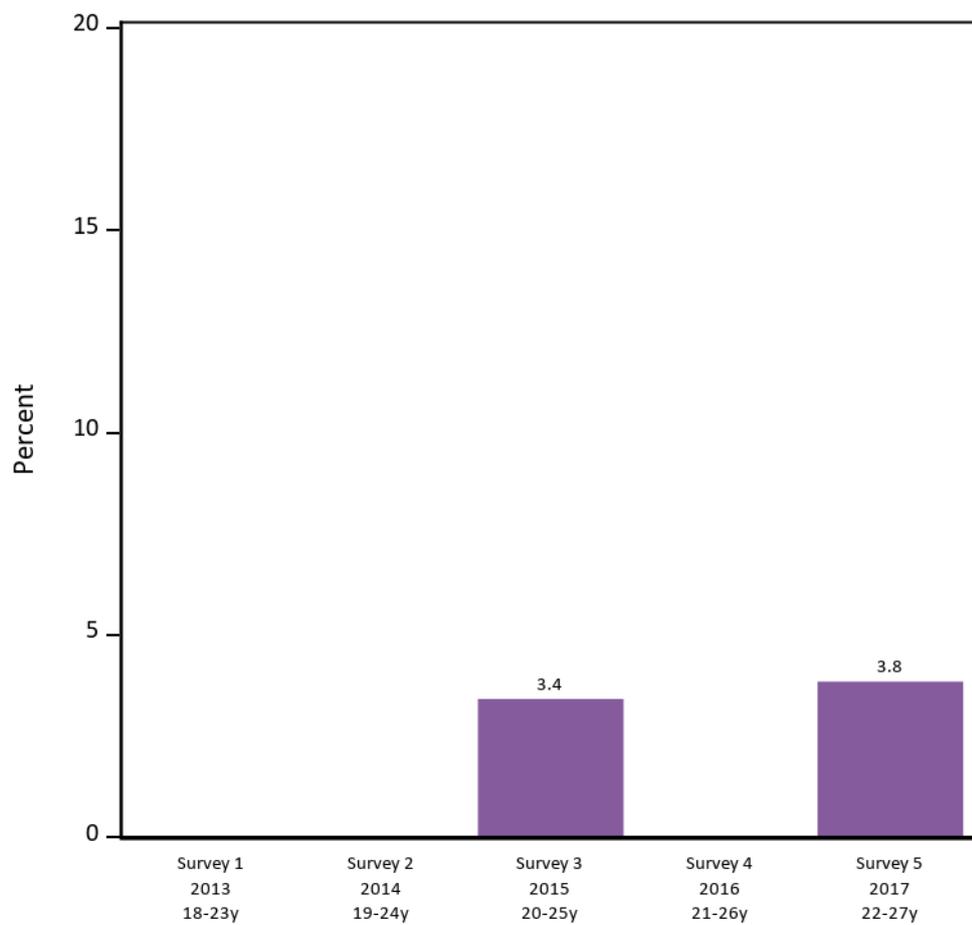


Figure 3-69 Women who reported ever being diagnosed or treated for a thyroid condition, Surveys 3 and 5 (N=5,363).

Thyroid condition diagnosis or treatment had been experienced by less than 4% of the women.

3.10 Gynaecological conditions

QUESTION: Have you ever been diagnosed (with) or treated for endometriosis?

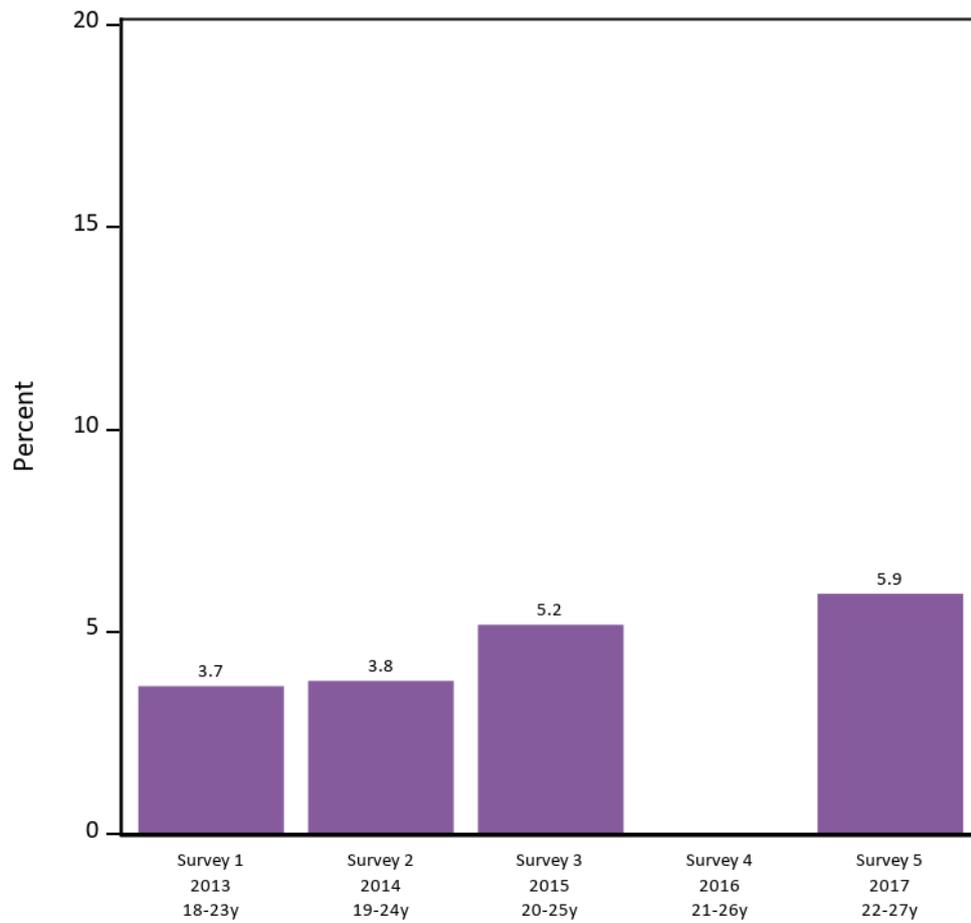


Figure 3-70 Women who reported ever being diagnosed or treated for endometriosis, Surveys 1, 2, 3 and 5 (N=5,338).

Endometriosis diagnosis or treatment was reported by approximately 6% (1 in 16) of the women.

QUESTION: Have you ever been diagnosed (with) or treated for polycystic ovarian syndrome?

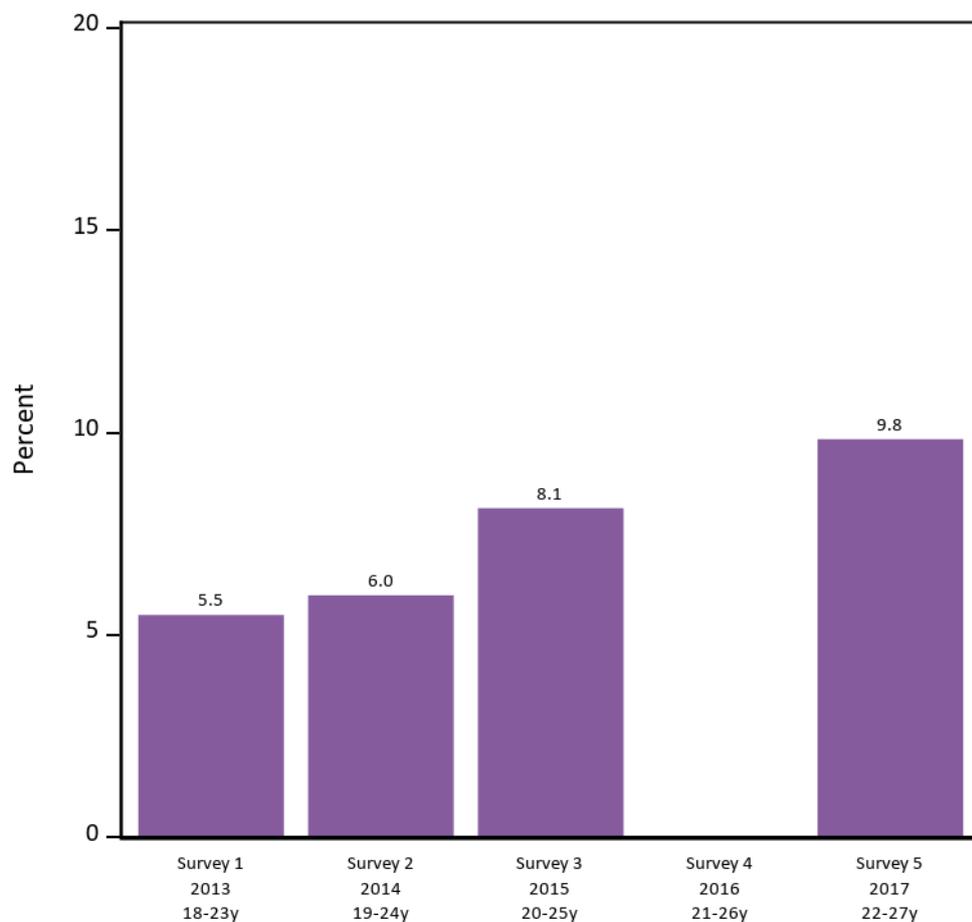


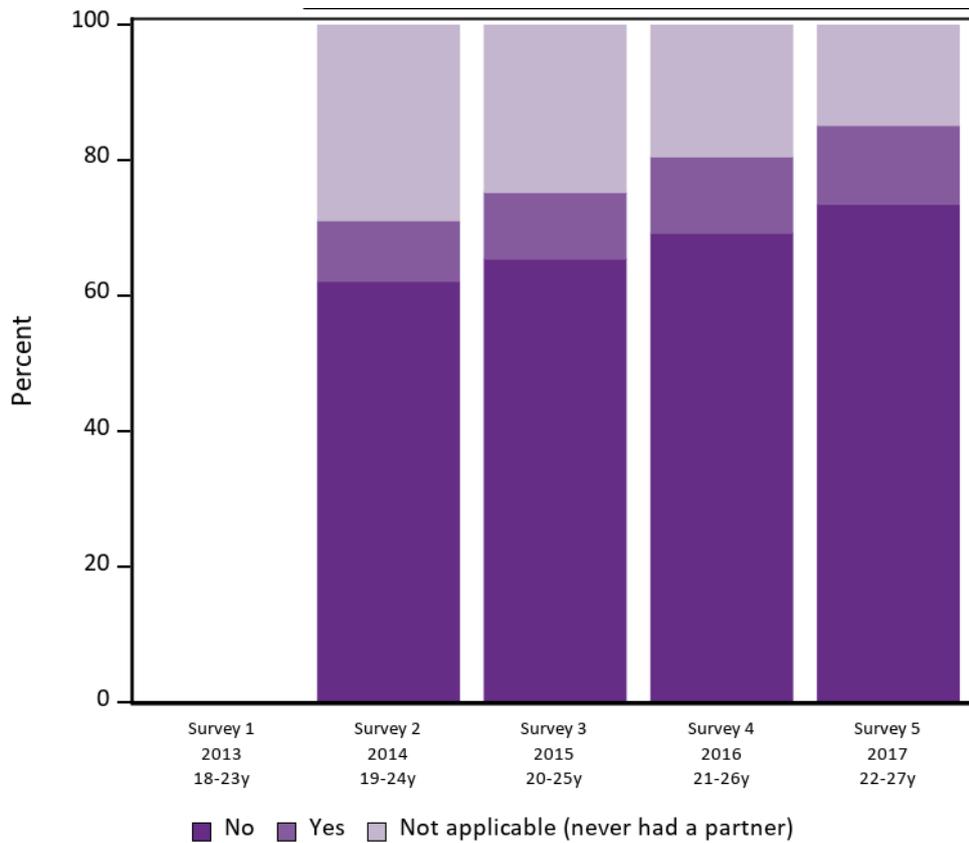
Figure 3-71 Women who reported ever being diagnosed or treated for polycystic ovarian syndrome, Surveys 1, 2, 3 and 5 (N=5,338).

By Survey 5, almost 10% of women reported being diagnosed or treated for polycystic ovarian syndrome.

3.11 Abuse

3.11.1 Intimate partner violence

QUESTION: Have you ever been in a violent relationship with a partner / spouse?



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Not applicable (never had a partner)		28.8	24.7	19.4	14.8
Yes		9.0	9.8	11.3	11.6
No		62.2	65.5	69.3	73.6

Figure 3-72 Women who reported ever being in a violent relationship from Surveys 2 to 5, (N = 5,376).

At Survey 2, 9% of women had been in a violent relationship with a spouse or partner, and this increased to 11.6% by Survey 5. (Over the same period, the proportion of women who had never had a partner halved, from almost 30% at Survey 2 to 15% at Survey 5).

QUESTION: My current or past partner:

- Followed me, or harassed me around my neighbourhood/work

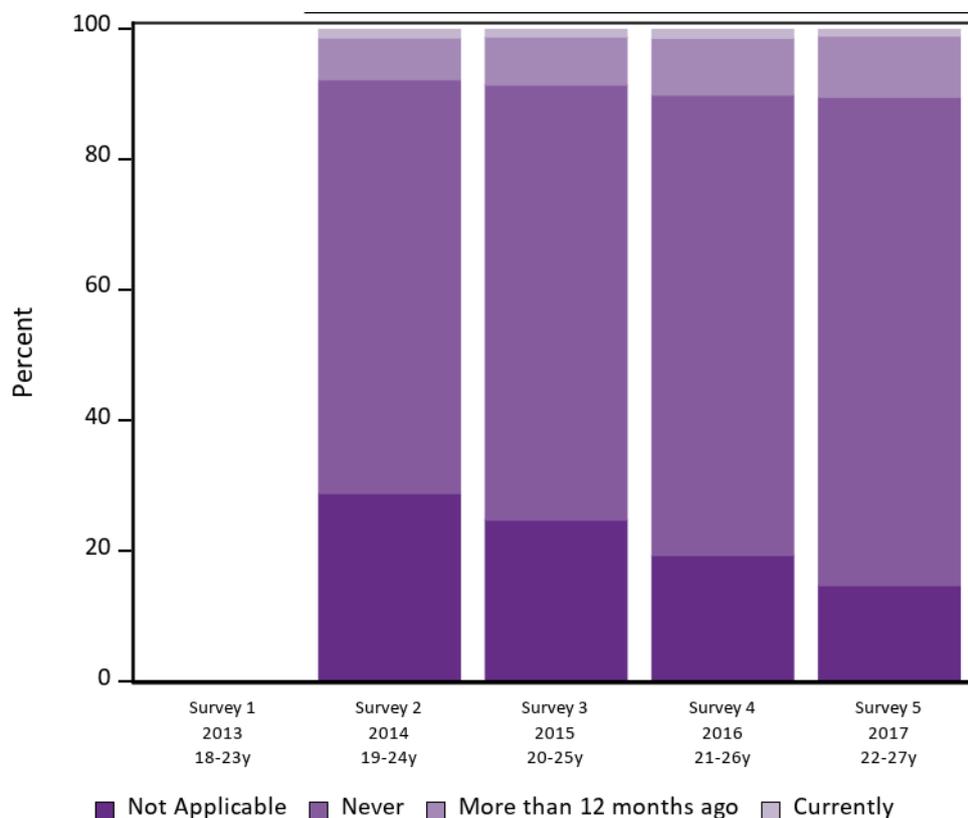
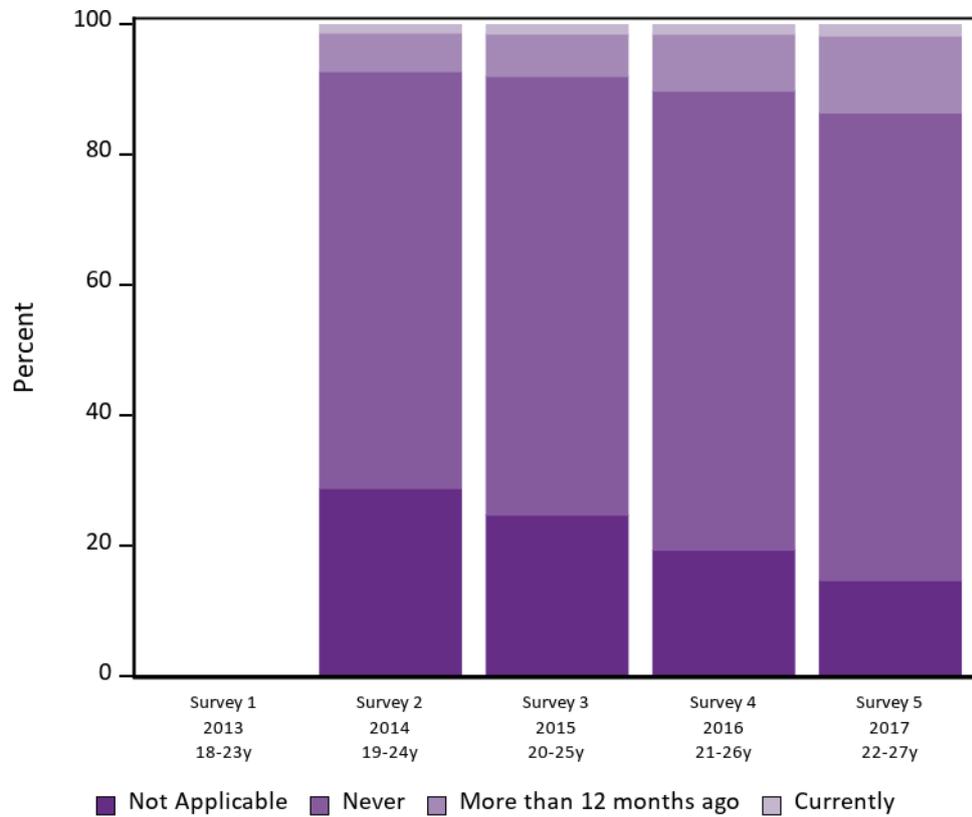


Figure 3-73 Partner followed or harassed them around neighbourhood/work, Surveys 2 to 5 (N= 5,330).

At Survey 5, over 10% of women reported that they had been followed or harassed around their neighbourhood or work, by their partner.

QUESTION: My current or past partner:

- Tried to turn my family, friends or children against me, or tried to convince them I was crazy



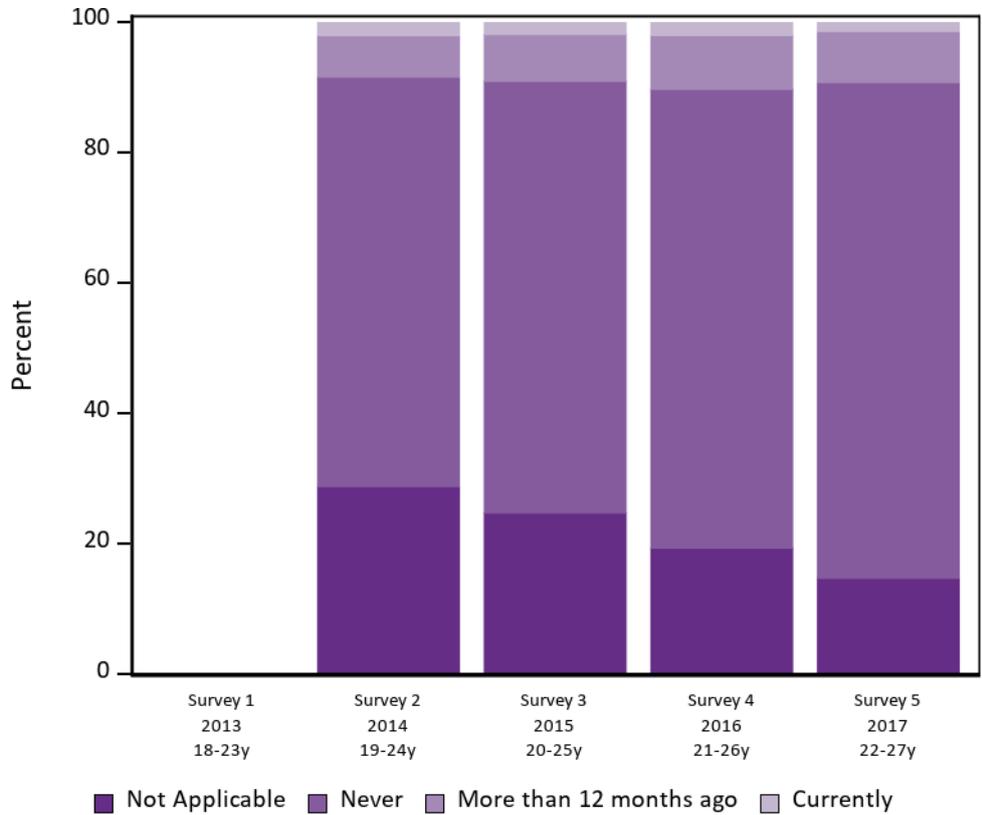
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Currently (in the last 12 months)		1.3	1.4	1.4	1.7
More than 12 months ago		5.9	6.5	8.7	11.8
Never		63.9	67.3	70.4	71.7
Not applicable		28.9	24.8	19.4	14.7

Figure 3-74 Partner tried to turn family, friends, children against me, or tried to convince them I was crazy, Surveys 2 to 5 (N= 5,326).

At each survey, the proportion of women whose partner had tried to turn family, friends, or children against them, or had tried to convince them she was crazy increased - from 7.2% at Survey 2 to 13.5% at Survey 5.

QUESTION: My current or past partner:

- Kicked, bit, slapped or hit me with a fist or tried to hit me with something



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Currently (in the last 12 months)		2.0	1.8	2.0	1.4
More than 12 months ago		6.3	7.2	8.3	7.8
Never		62.8	66.2	70.4	76.0
Not applicable		28.9	24.8	19.4	14.8

Figure 3-75 Partner kicked, bit, slapped or hit me with a fist, or tried to hit me with something, Surveys 2 to 5, N= 5,324.

Experience of partner abuse in the form of being kicked, bit, slapped or being hit with a fist or an attempt at being hit with something increased slightly from 8.3% at Survey 2 to 9.2% at Survey 5.

QUESTION: My current or past partner:

- Forced me to take part in unwanted sexual activity

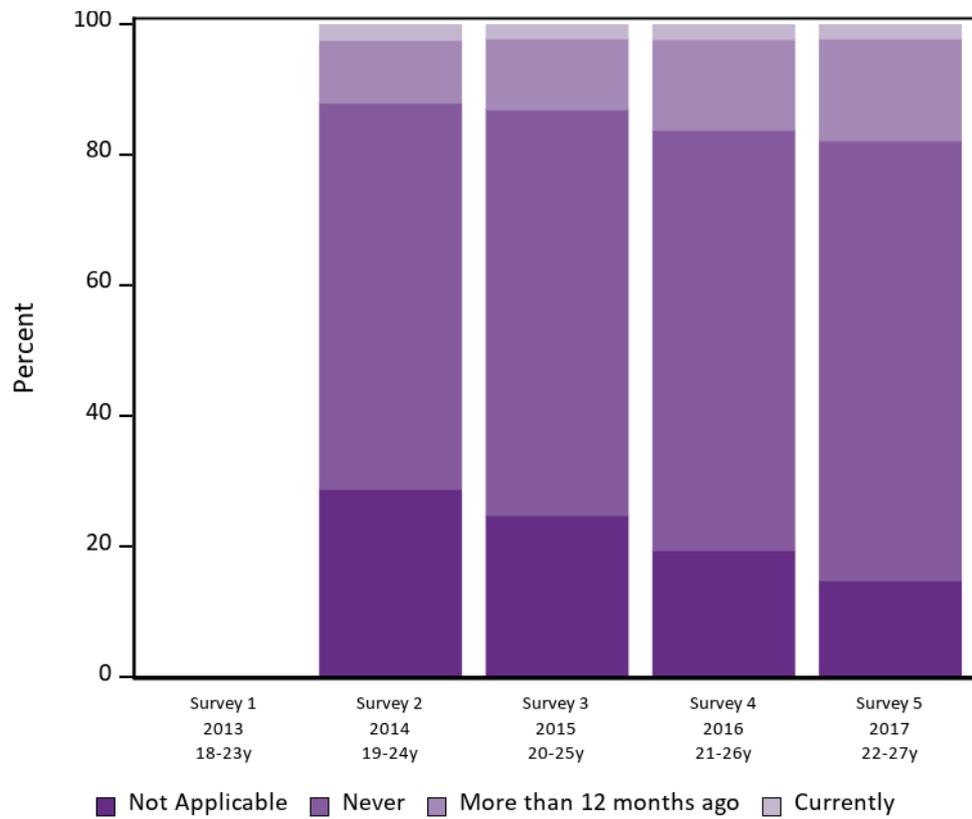
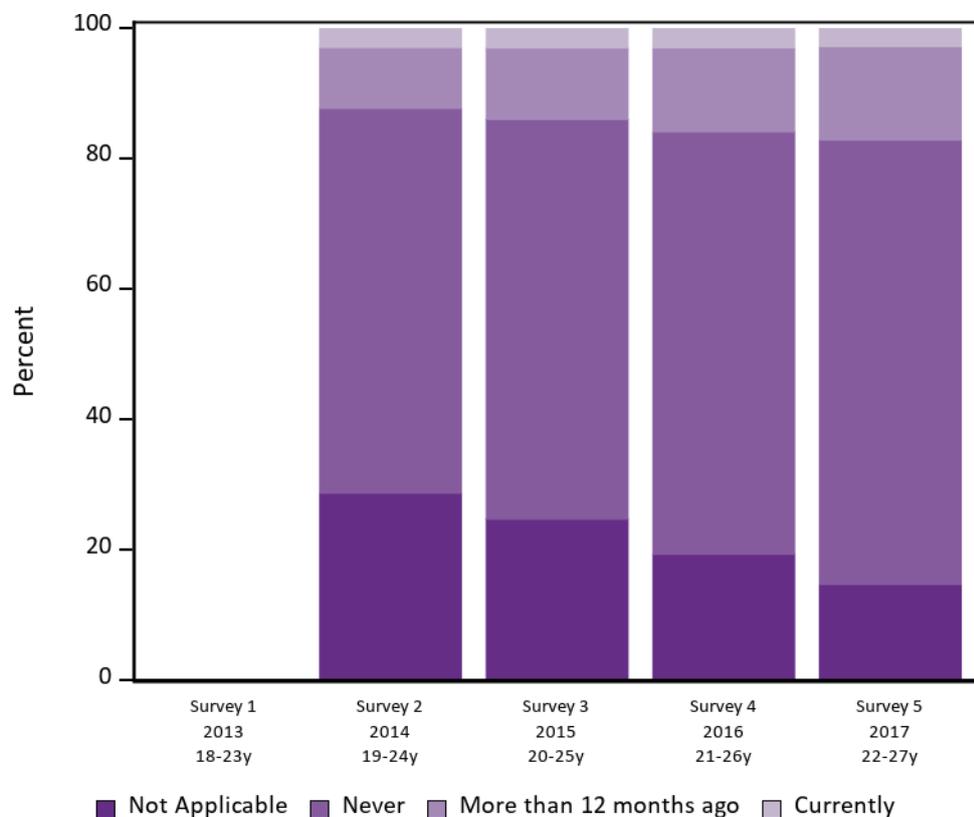


Figure 3-76 Partner forced me to take part in unwanted sexual activity, Surveys 2 to 5 (N=5,297).

The proportion of women whose partner had forced them to take part in unwanted sexual activity increased from 12% at Survey 2 to 17.8% at Survey 5.

QUESTION: My current or past partner:

- Tried to keep me from seeing or talking to my family, friends or children, or didn't want me to socialise



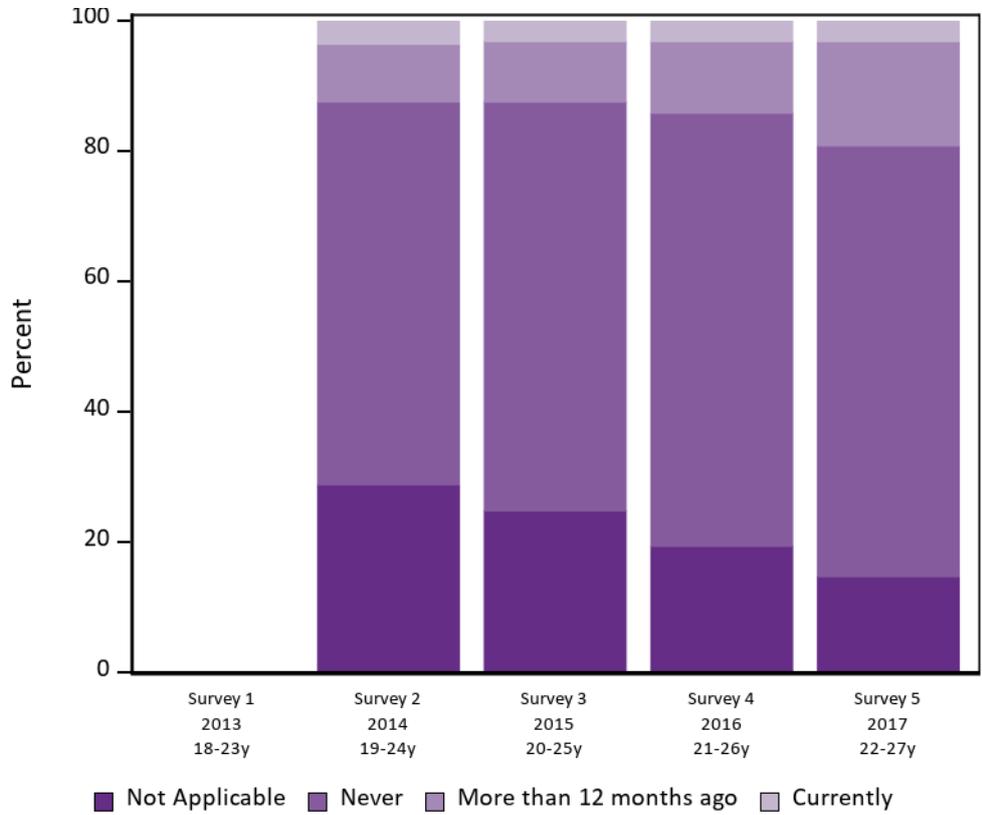
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Currently (in the last 12 months)		2.9	3.0	2.9	2.7
More than 12 months ago		9.3	11.0	12.9	14.4
Never		59.0	61.3	64.8	68.1
Not applicable		28.8	24.8	19.4	14.8

Figure 3-77 Partner tried to keep me from seeing or talking to family, friends or children, or didn't want me to socialise, Surveys 2 to 5 (N= 5,328).

At Survey 5, 17.1% of women reported their partner had tried to keep them from seeing or talking to their family, friends or children, or didn't want them to socialise.

QUESTION: My current or past partner:

- Pushed, grabbed, shoved, shook or threw me



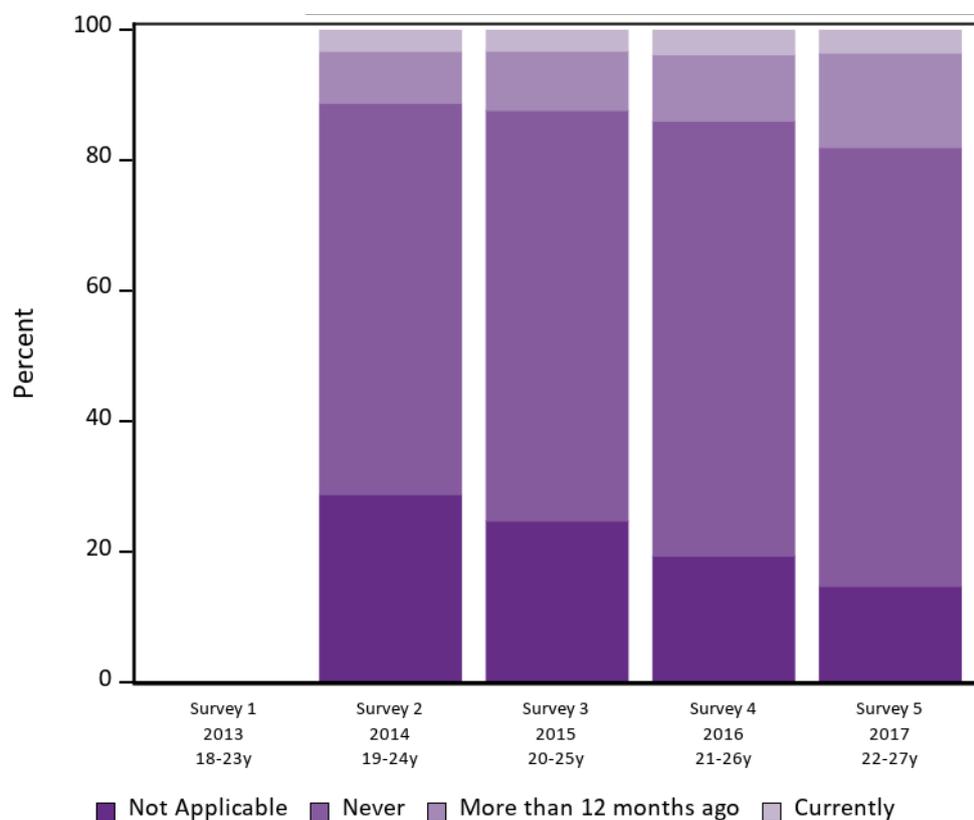
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Currently (in the last 12 months)		3.5	3.1	3.1	3.1
More than 12 months ago		8.9	9.3	11.0	16.0
Never		58.7	62.7	66.5	66.1
Not applicable		28.9	24.9	19.5	14.8

Figure 3-78 Partner pushed, grabbed, shoved or threw me, Surveys 2 to 5 (N= 5,321).

The proportion of women whose partner had pushed, grabbed, shoved or thrown them increased from 12.4% at Survey 2 to 19.1% at Survey 5.

QUESTION: My current or past partner:

- Blamed me for causing their violent behaviour



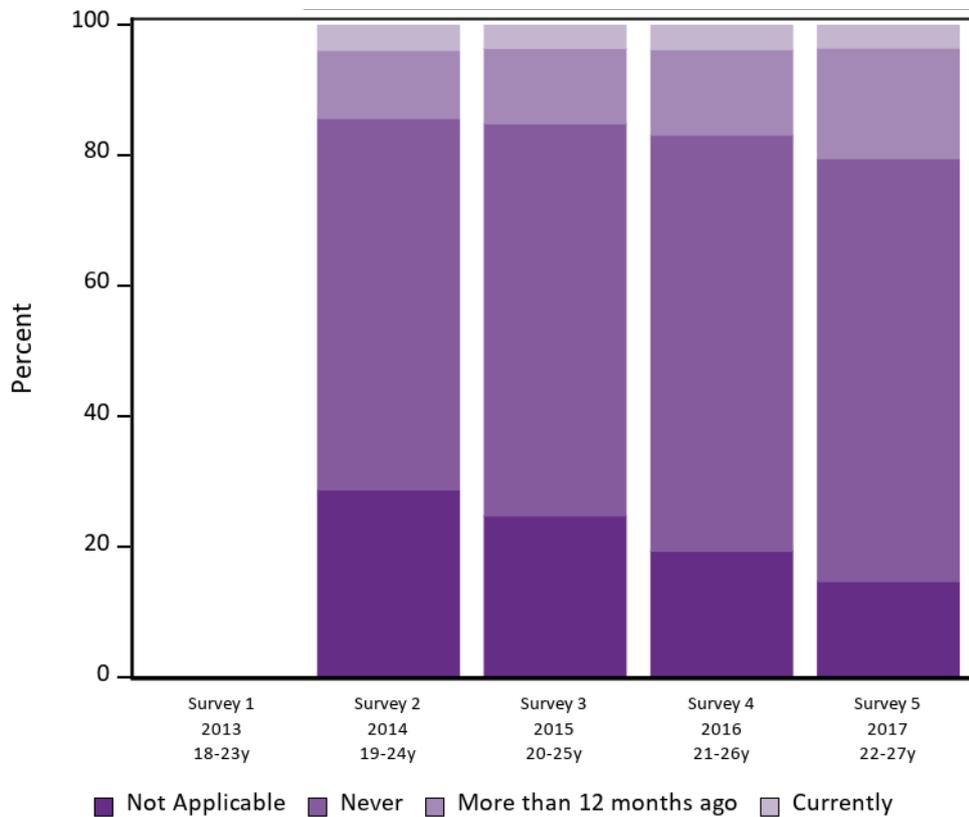
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Currently (in the last 12 months)		3.2	3.2	3.7	3.5
More than 12 months ago		8.0	9.1	10.2	14.5
Never		60.0	62.9	66.6	67.2
Not applicable		28.9	24.8	19.4	14.8

Figure 3-79 Partner blamed me for causing their violent behaviour, Surveys 2 to 5 (N= 5,319).

The proportion of women whose partner blamed them for causing their violent behaviour increased from 11.2% at Survey 2 to 18% at Survey 5.

QUESTION: My current or past partner:

- Harassed me over the telephone, email, Facebook or internet



	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5
Currently (in the last 12 months)		3.8	3.5	3.7	3.5
More than 12 months ago		10.4	11.6	13.1	17.0
Never		56.9	60.1	63.8	64.8
Not applicable		28.8	24.8	19.4	14.8

Figure 3-80 Partner harassed me over the telephone, email, Facebook or internet, Surveys 2 to 5 (N= 5,329).

By Survey 5, over 20% of women had been harassed by their partner over the telephone, email, Facebook or internet.

QUESTION: My current or past partner:

- Used a knife or gun or other weapon to beat me up

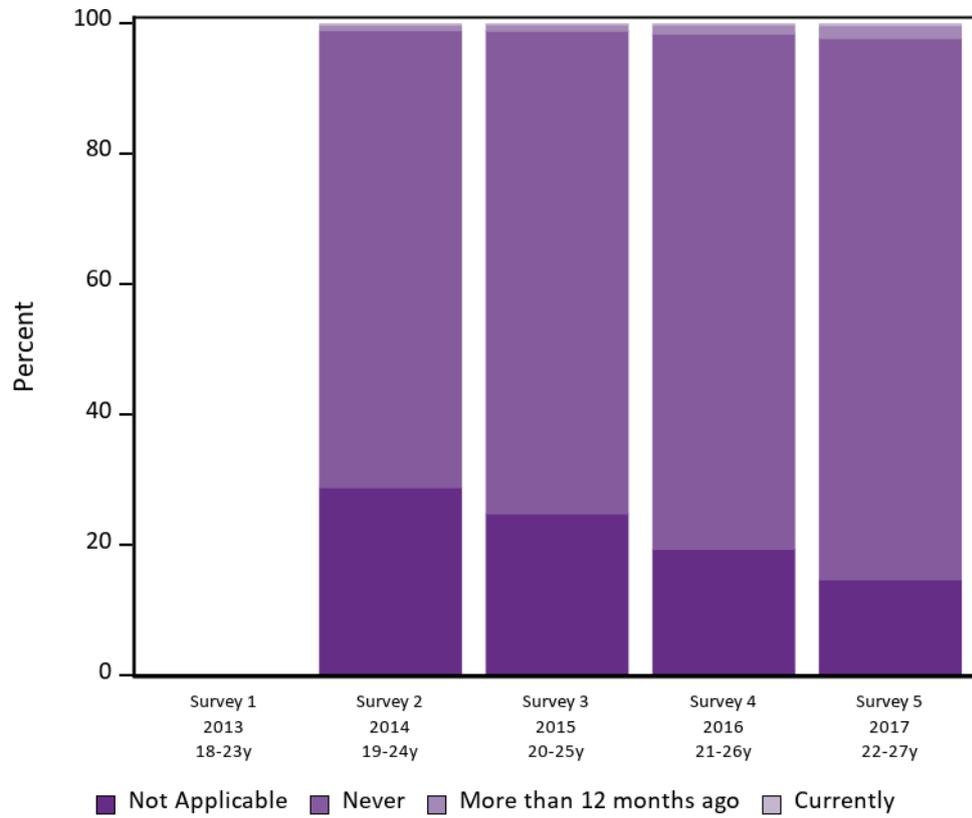


Figure 3-81 Partner used a knife or gun or other weapon to beat me up, Surveys 2 to 5 (N= 5,306).

At Survey 2, just over 1% of women reported their partner had used a knife, gun or other weapon to beat them up, and this increased to just over 2% at Survey 5.

QUESTION: My current or past partner:

- Became upset if dinner/housework wasn't done when they thought it should be

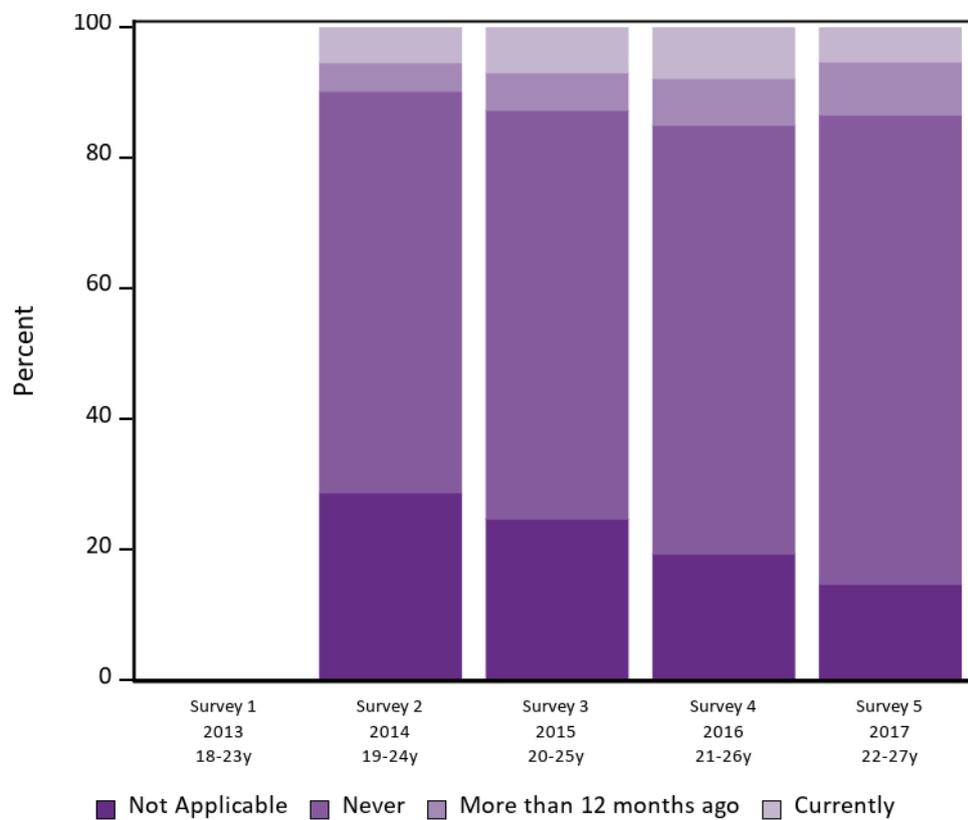


Figure 3-82 Partner became upset if dinner/housework wasn't done when they thought it should be, Surveys 2 to 5 (N= 5,326)

The proportion of women whose partner became upset if dinner/housework wasn't done increased by 3.7%, from 9.7% at Survey 2 to 13.4% at Survey 5.

3.11.2 Adverse Childhood Experiences (ACES)

Women were asked about adverse childhood experiences in Survey 3 and Survey 5, using a modified version of the Female Family Health History Questionnaire from the Adverse Childhood Experiences Study (ACES). Responses to the ACES questions from the 5,538 women who responded to all five surveys are reported here.

QUESTION: While you were growing up during your first 18 years of life, did a parent or other adult in the household:

- Often or very often swear at, insult, or put you down? (ACES001)
- Often or very often act in a way that made you afraid that you would be physically hurt? (ACES002)
- Often or very often push, grab, shove, or slap you? (ACES003)
- Often or very often hit you so hard that you had marks or were injured? (ACES004)
- None of the above? (ACES005)

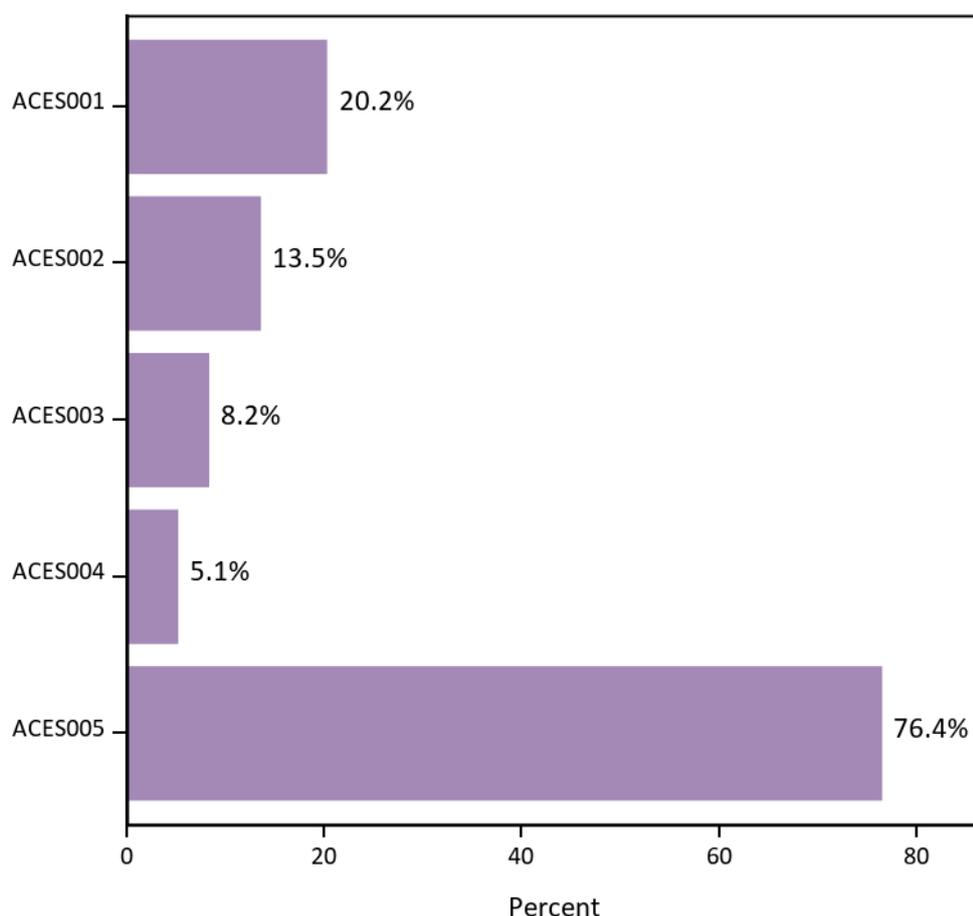


Figure 3-83 Responses to ACES questions 1–5.

Almost a quarter of women reported abusive behaviour by a parent or other adult before age 18. 10.9% reported experiencing one type of (non-sexual) child abuse, 5.8% reported two, and 7.0% reported experiencing three or more types of (non-sexual) child abuse.

QUESTION: While you were growing up during your first 18 years of life, did an adult or person at least 5 years older ever:

- Touch or fondle you in a sexual way? (ACES006)
- Have you touch their body in a sexual way? (ACES007)
- Attempt oral, anal, or vaginal intercourse with you? (ACES008)
- Actually have oral, anal, or vaginal intercourse with you? (ACES009)
- None of the above? (ACES0010)

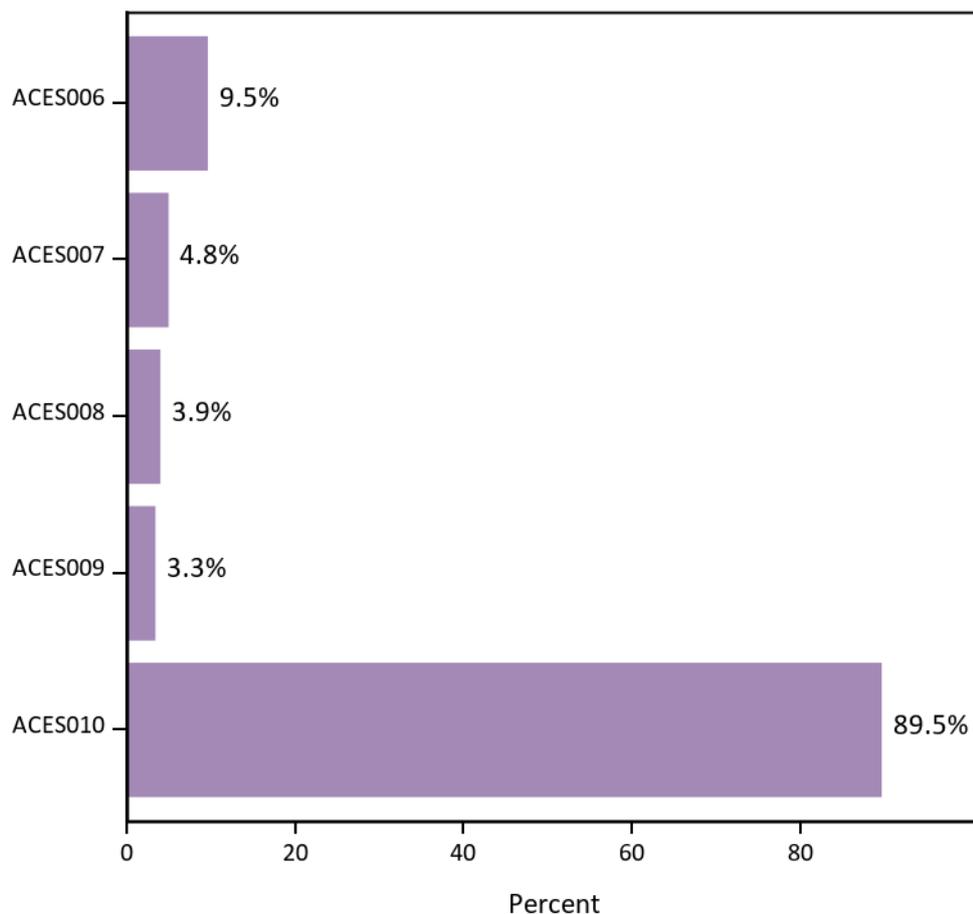


Figure 3-84 Responses to ACES questions 6-10.

10% of women reported sexual abuse by an adult or person at least 5 years older before they were 18 years of age. 5.0% reported experiencing one type of sexual abuse, 2.2% reported two, and 3.4% reported experiencing three or more types of sexual abuse.

QUESTION: While you were growing up during your first 18 years of life, did you:

- Live with anyone who was a problem drinker or alcoholic? (ACES0011)
- Live with anyone who used street drugs? (ACES0012)
- None of the above? (ACES0013)

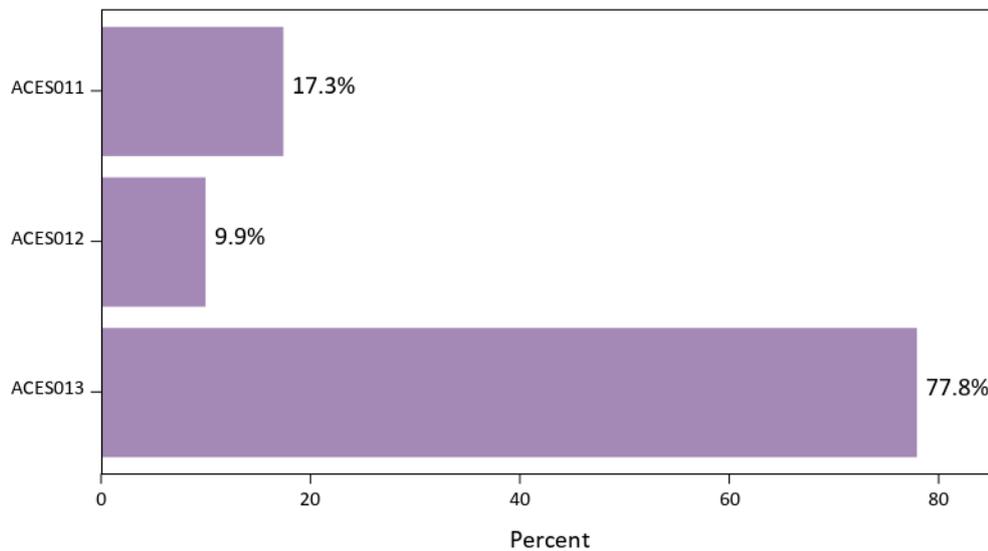


Figure 3-85 Responses to ACES questions 11-13.

Before they were 18, almost 23% of women lived with a person who was a problem drinker or alcoholic, or who used street drugs. 4.9% reported they had lived with substance abusers of both alcohol and street drugs.

QUESTION: While you were growing up during your first 18 years of life, was your mother (or stepmother):

- Sometimes, often, or very often pushed, grabbed, slapped, or had something thrown at her? (ACES0014)
- Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? (ACES0015)
- Ever repeatedly hit over at least a few minutes? (ACES0016)
- Ever threatened with, or hurt by, a knife or gun? (ACES0017)
- None of the above? (ACES0018)

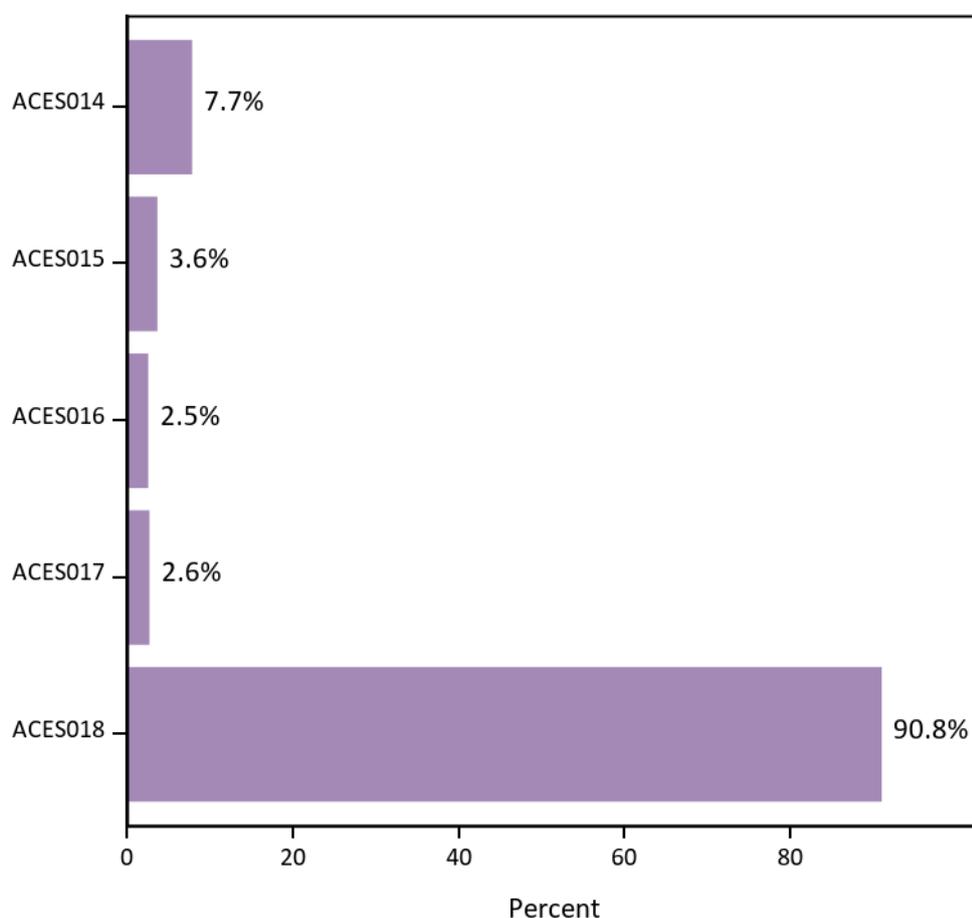


Figure 3-86 Responses to ACES questions 14-18.

Almost 10% of participants reported that before they (i.e., the participant) were 18 years old, their mother or stepmother was abused. 5.0% reported that their mother experienced one type of domestic violence, 2.0% reported two, and 2.2% reported that their mother experienced three or more types of domestic violence.

QUESTION: While you were growing up during your first 18 years of life, was your father (or stepfather):

- Sometimes, often, or very often pushed, grabbed, slapped, or had something thrown at him? (ACES0019)
- Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? (ACES0020)
- Ever repeatedly hit over at least a few minutes? (ACES0021)
- Ever threatened with, or hurt by, a knife or gun? (ACES0022)
- None of the above? (ACES0023)

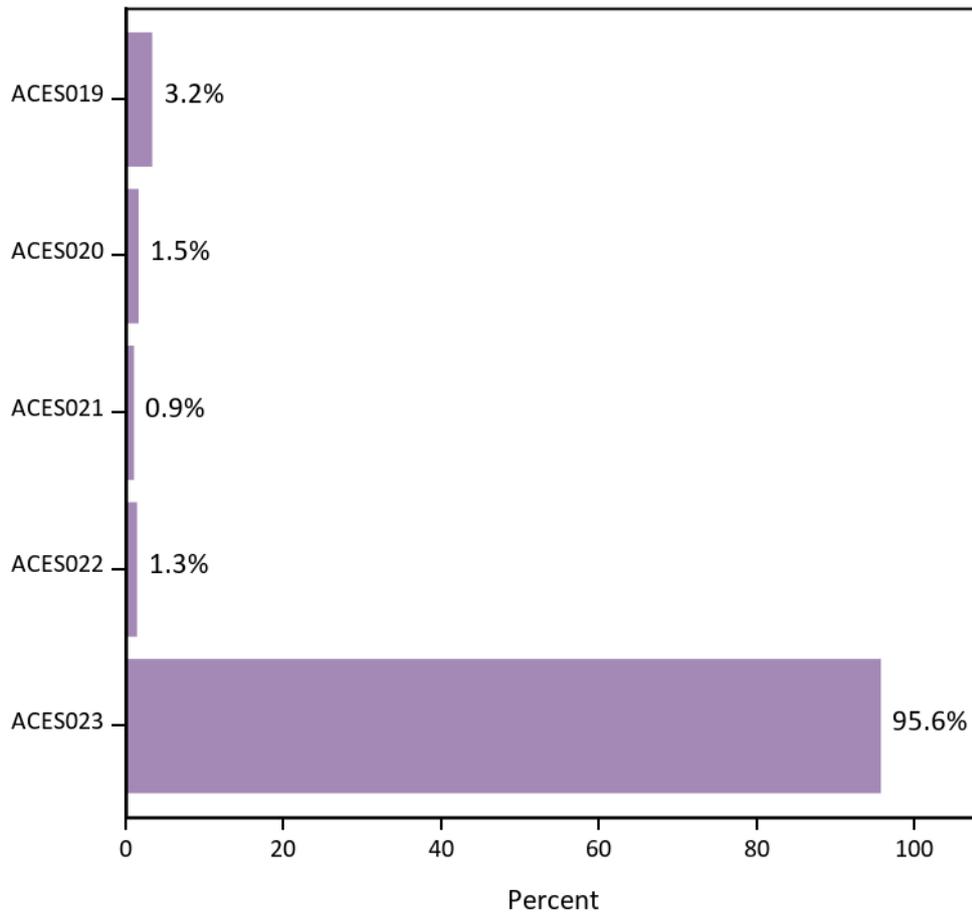


Figure 3-87 Responses to ACES questions 19-23.

About 4 per cent of participants reported that before they (i.e., the participant) were 18 years old, their father or stepfather was abused. 2.8% reported that their father experienced one type of domestic violence, 0.9% reported two, and 0.7% reported that their father experienced three or more types of domestic violence.

QUESTION: While you were growing up during your first 18 years of life...

- Was a household member depressed or mentally ill? (ACES0024)
- Did a household member attempt suicide? (ACES0025)
- Did a household member go to prison? (ACES0026)
- None of the above? (ACES0027)

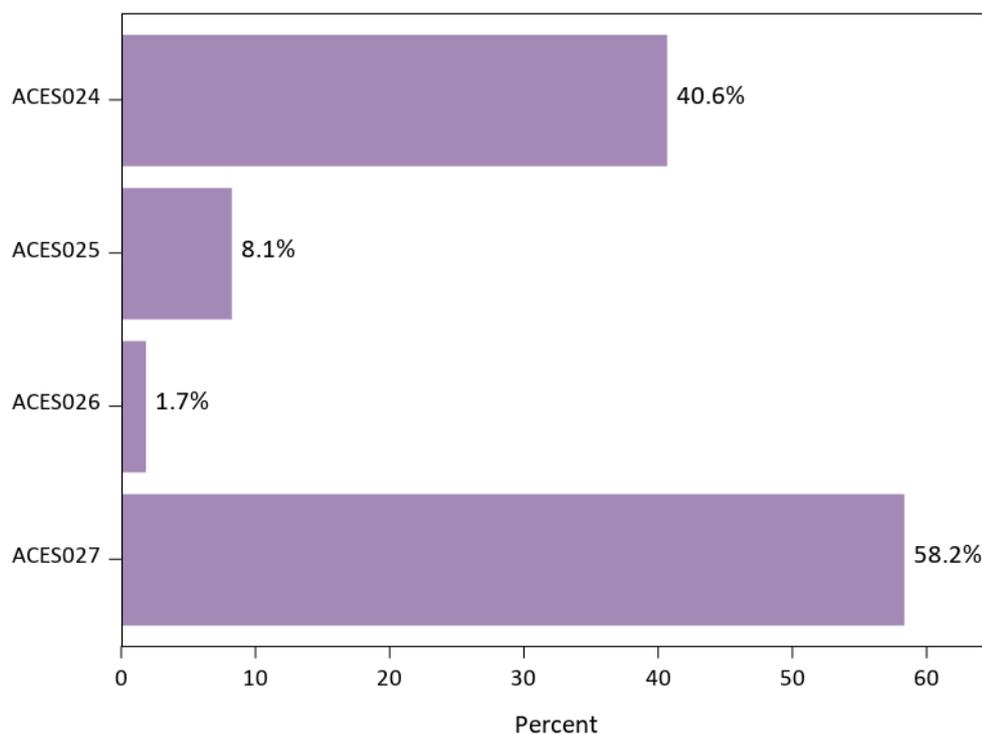


Figure 3-88 Responses to ACES questions 24-26.

Just over 40% of participants reported that before they were 18 years old, a member of their household was depressed or mentally ill. 8% reported that a member of their family had attempted suicide, and 1.7% had a family member who had gone to prison.

3.12 Sources of health information

QUESTION: Where do you get information about your health?

- Doctor

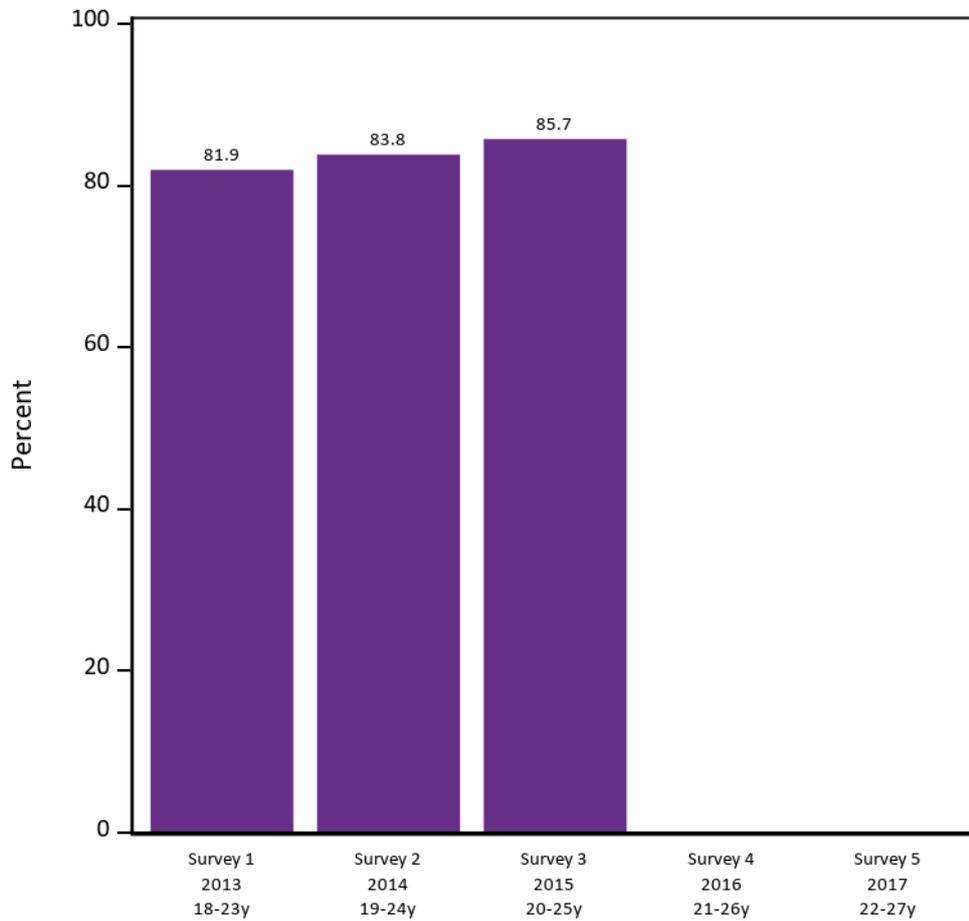


Figure 3-89 Health information from Doctor: Survey 1, 2 and 3, (N = 5,514).

Doctors became an increasingly important source of health information, with the proportion of women reporting them as a source increasing from 82% at Survey 1 to 86% at Survey 3.

QUESTION: Where do you get information about your health?

- Nurse

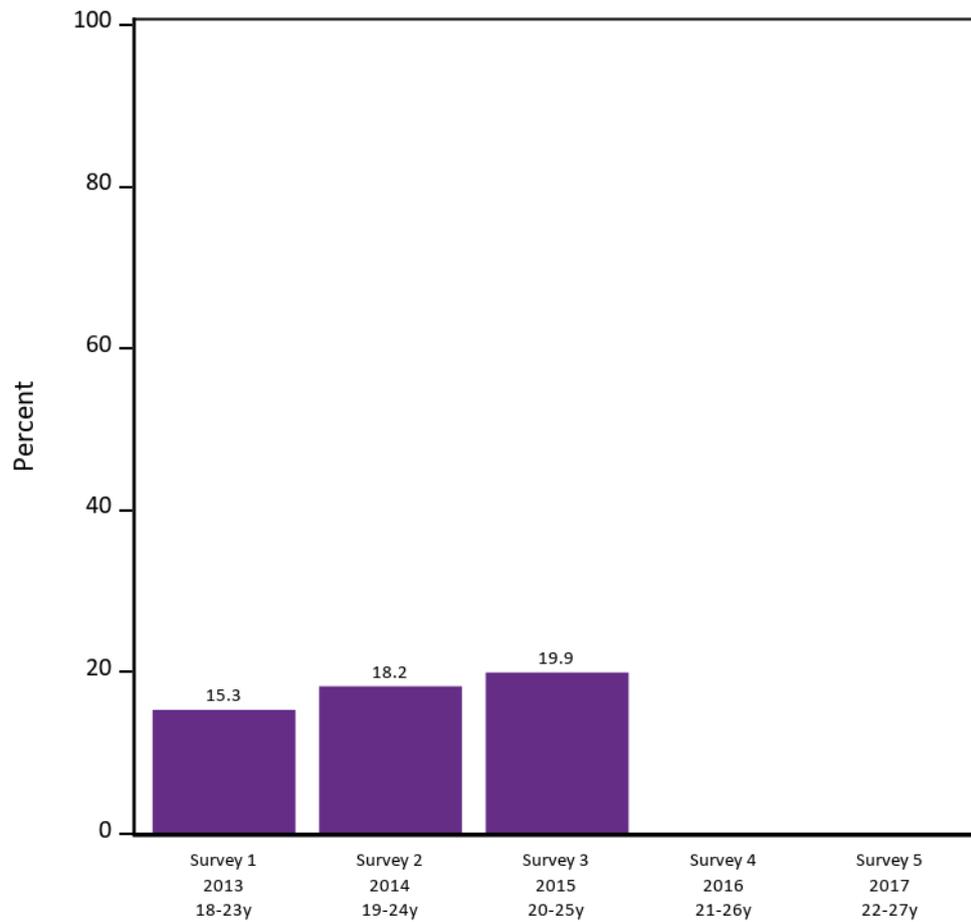


Figure 3-90 Health information from Nurse: Survey 1, 2 and 3, (N = 5,514).

Nurses also became more of a source of health information over the first three surveys, with the proportion of women reporting them as a source increasing from 15% at Survey 1 to 20% at Survey 3.

QUESTION: Where do you get information about your health?

- Other health professionals

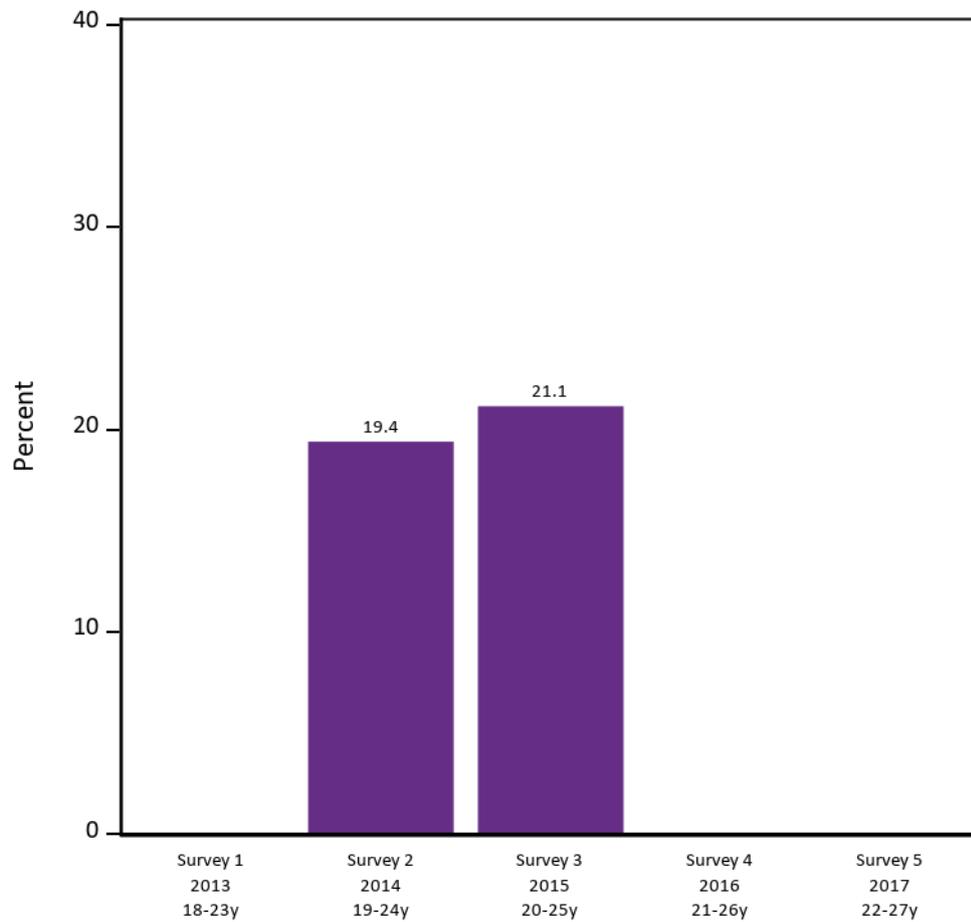


Figure 3-91 Health information from other health professionals: Surveys 2 and 3 (N = 5,538).

Around 20% of women used other health professionals as a source of health information.

QUESTION: Where do you get information about your health?

- Family planning or sexual health clinic

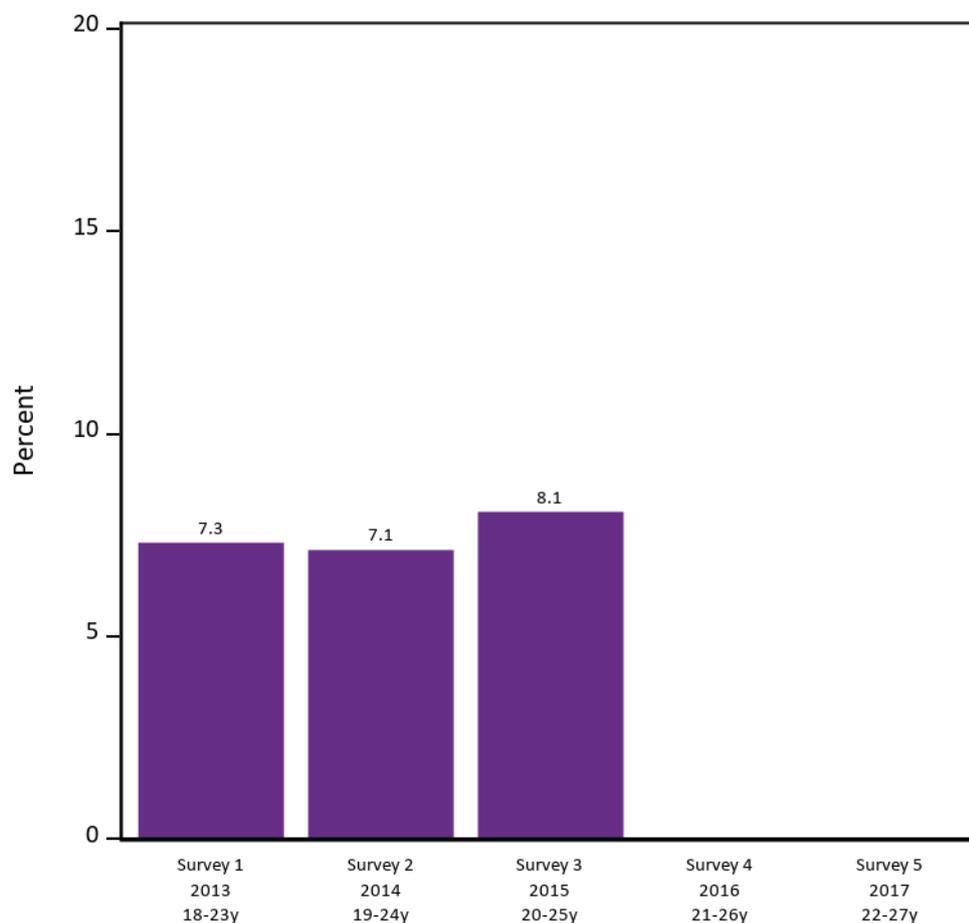


Figure 3-92 Health information from Family planning or sexual health clinic: Survey 1, 2 and 3, (N = 5,514).

The proportion of women who used family planning or sexual health clinics as a source of health information remained around 7-8% over the first three surveys.

QUESTION: Where do you get information about your health?

- Youth or community services

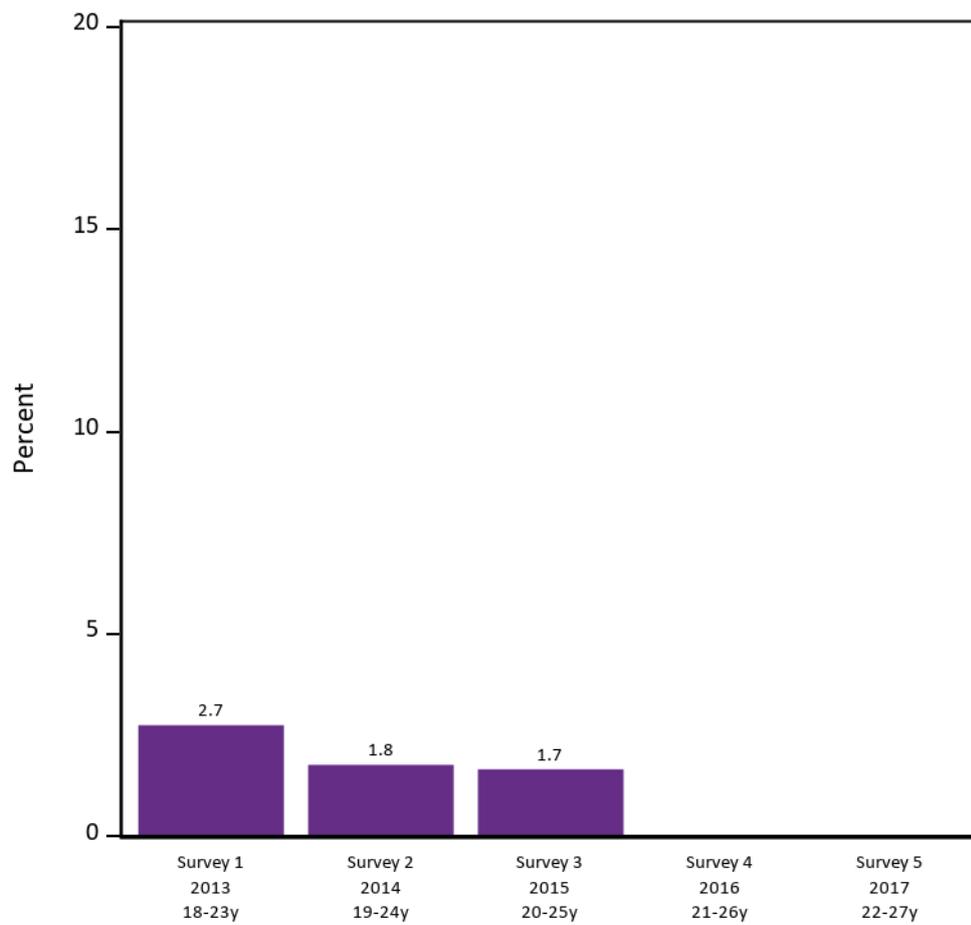


Figure 3-93 Health information from Youth or community services: Survey 1, 2 and 3, (N = 5,514).

A small and decreasing proportion of women used youth or community services as a source of health information.

QUESTION: Where do you get information about your health?

- Mother/Father/Sister/Brother/Other family

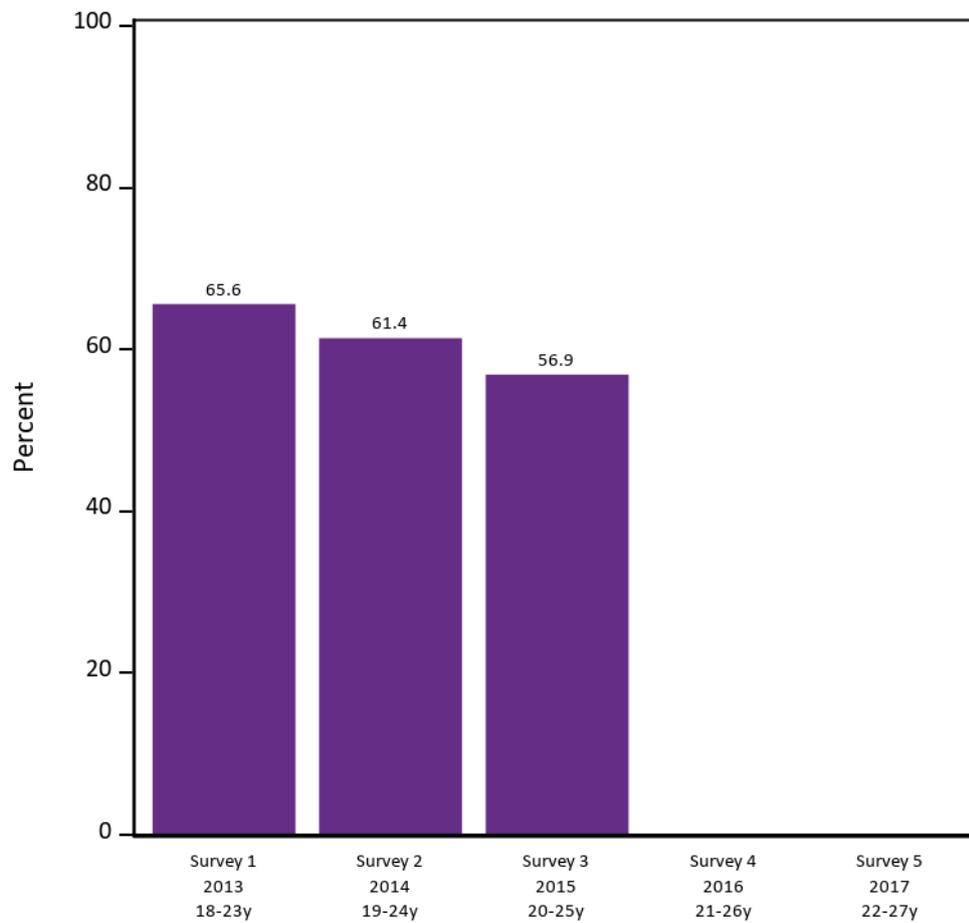


Figure 3-94 Health information from Mother /Father /Sister /Brother /Other family: Survey 1, 2 and 3 (N = 5,514).

Family as a source of health information decreased by just under 10% over Surveys 1, 2 and 3.

QUESTION: Where do you get information about your health?

- Friends

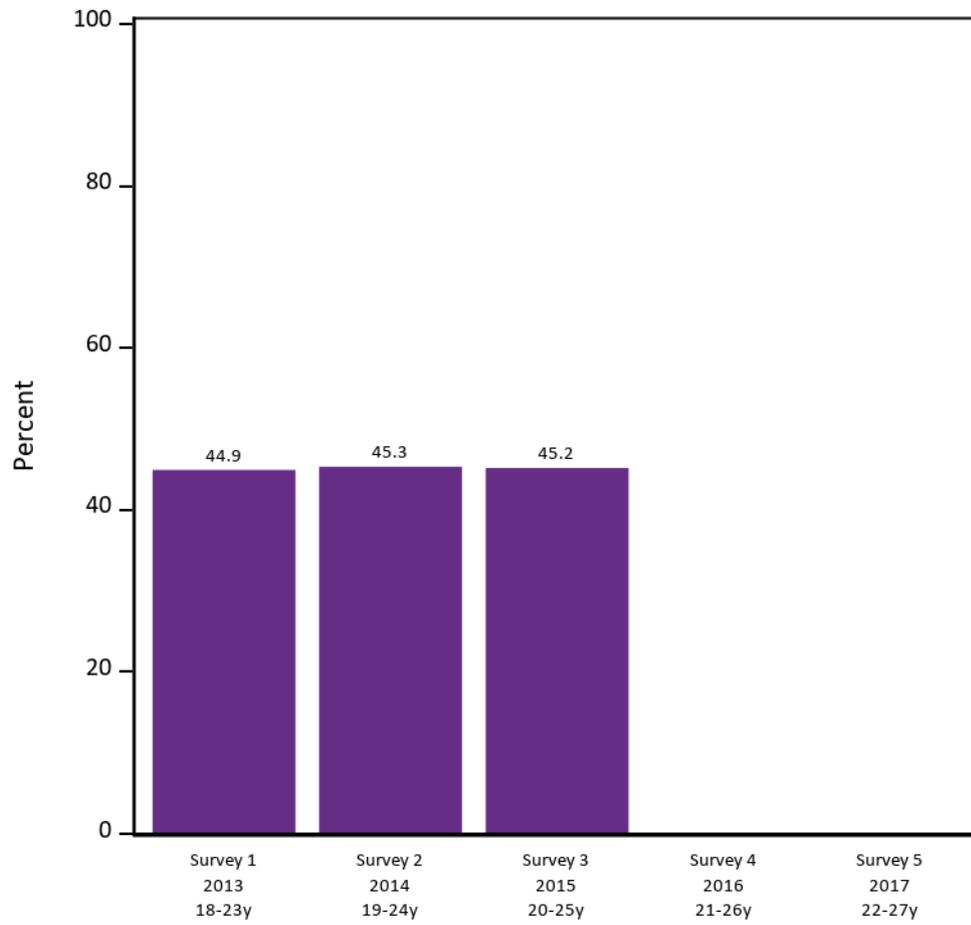


Figure 3-95 Health information from Friends Surveys 1, 2 and 3, (N = 5,514).

The proportion of women who obtained health information from their friends remained steady at about 45% over Surveys 1, 2 and 3.

QUESTION: Where do you get information about your health?

- School, University, TAFE, Work. Work was included at Surveys 2 and 3 only)

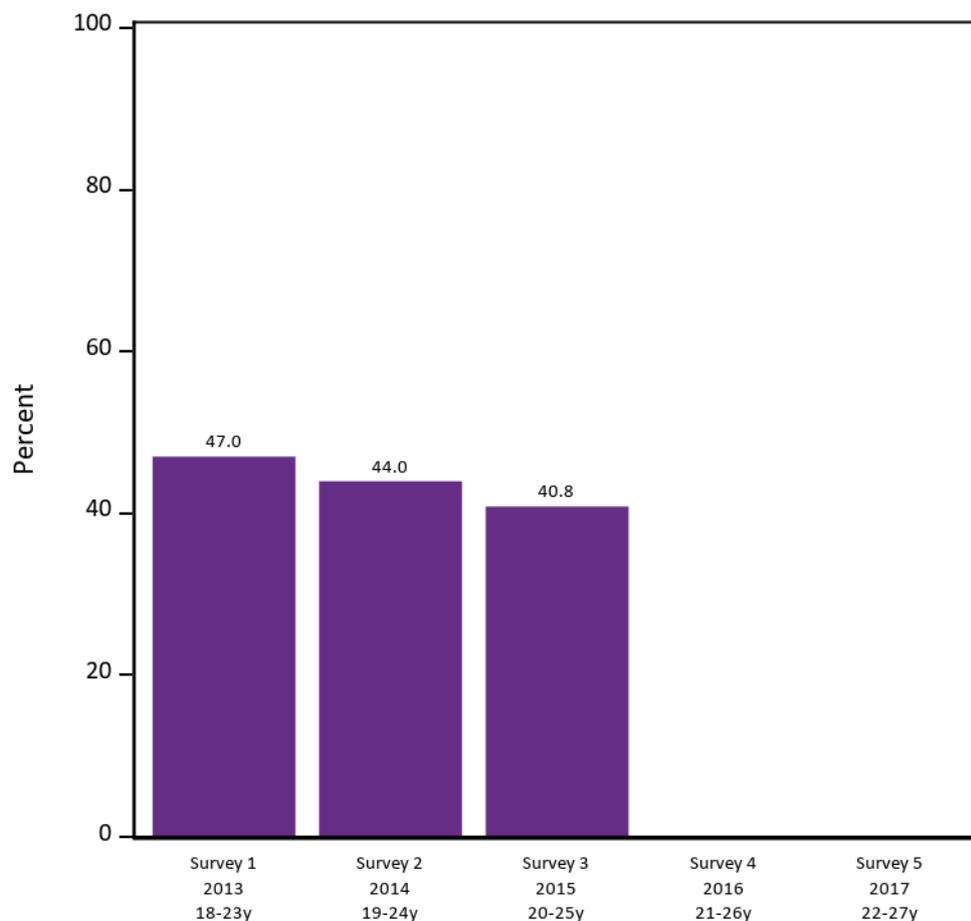


Figure 3-96 Health information from School, University, TAFE, work for Surveys 1, 2 and 3, (N = 5,514).

The proportion of women who obtained health information from their school, university, TAFE or work decreased over time, from 47% at Survey 1 to 41% at Survey 3.

QUESTION: Where do you get information about your health?

- Internet

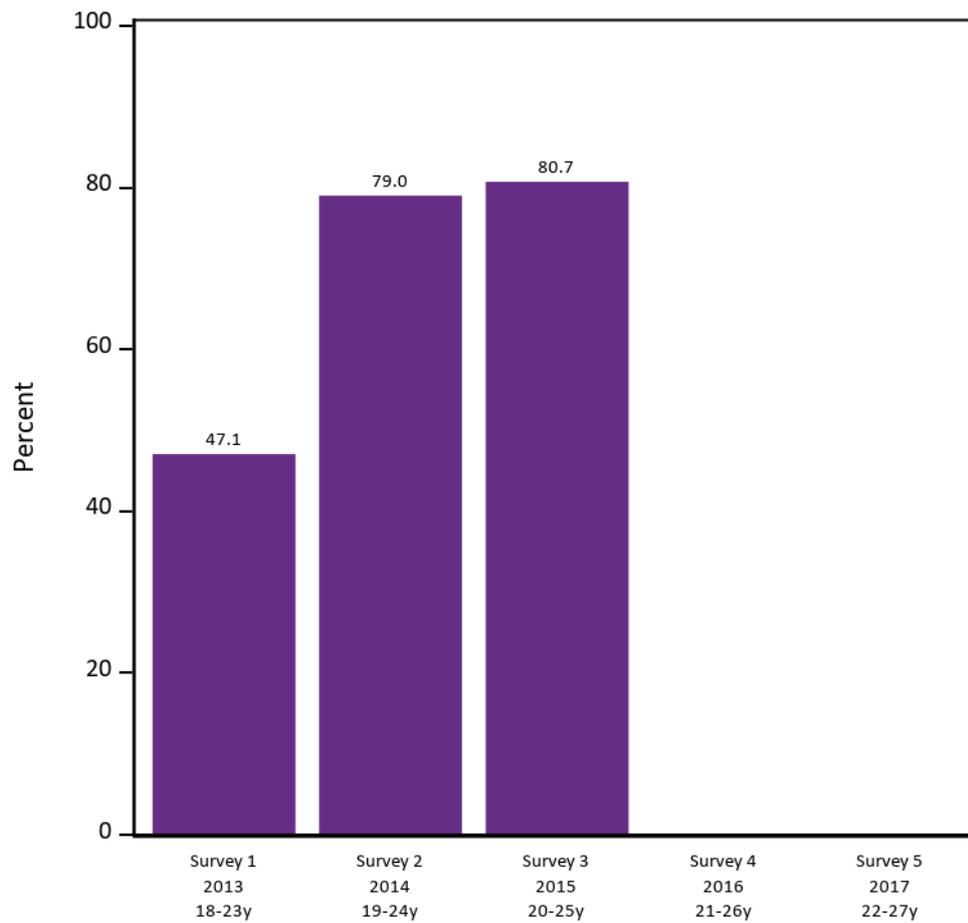


Figure 3-97 Health information from Internet; Survey 1, 2 and 3 (N = 5,514).

The Internet is an important source of health information for women. At Survey 1 almost half reported using the internet for health information, and this increased to about 80% at Surveys 2 and 3.

QUESTION: Where do you get information about your health?

- TV/radio, magazine, poster/leaflet

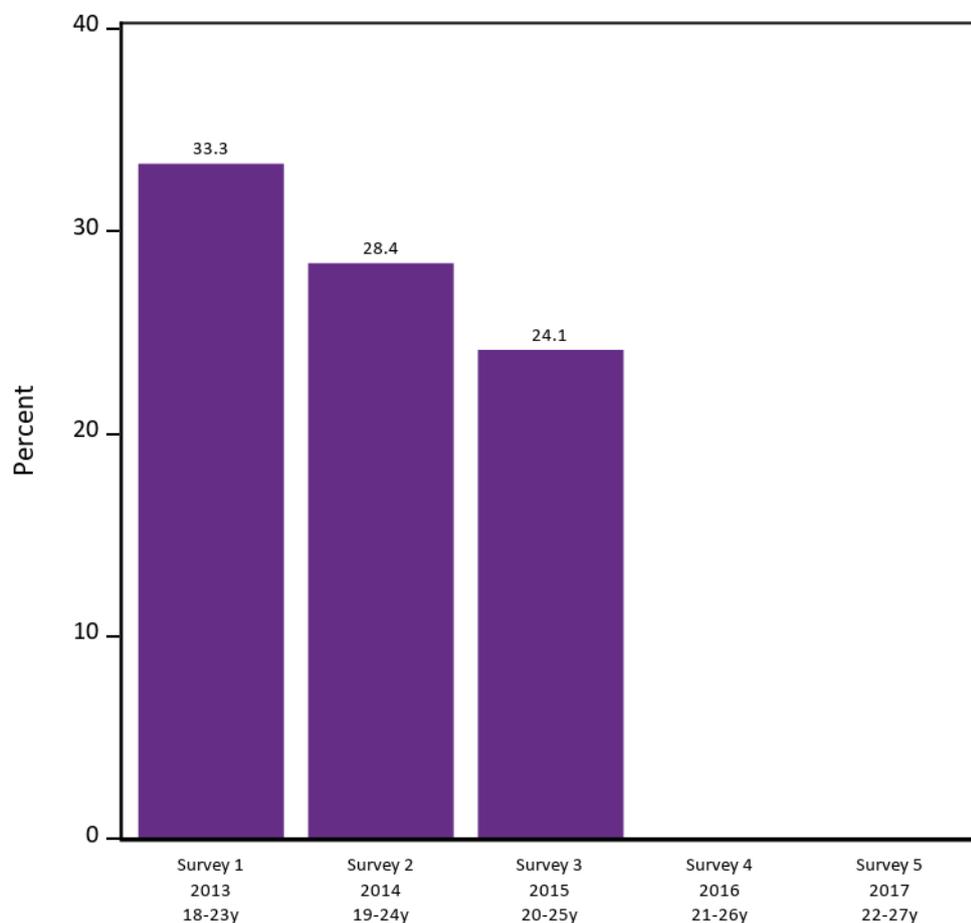


Figure 3-98 Health information from TV/radio, magazine, poster/leaflet: Survey 1, 2 and 3 (N = 5,514).

TV/radio, magazines and posters/leaflets were used by one in three women at Survey 1, but this decreased to one in four women by Survey 4.

QUESTION: Where do you get information about your health?

- Journal articles, textbooks, books.

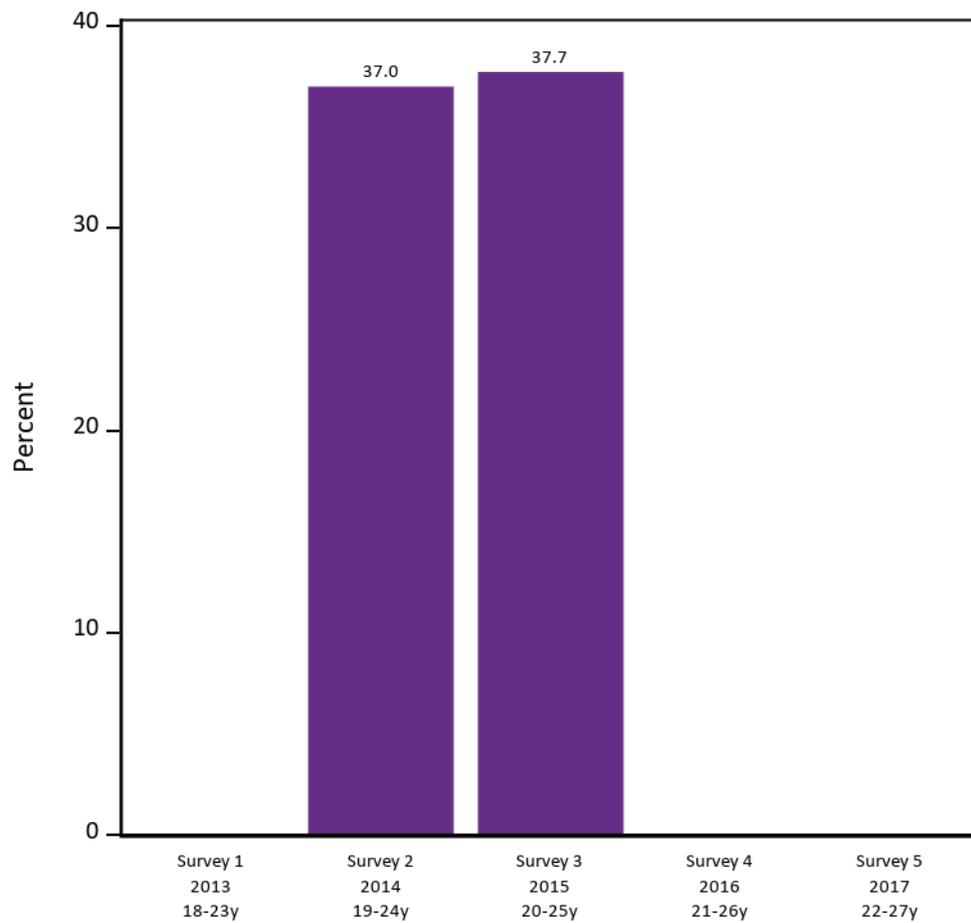


Figure 3-99 Health information from Journal articles, textbooks, books: Surveys 2 and 3, (N = 5,538).

Surveys 2 and 3 showed that just over one third of women used journal articles, textbooks and books as a source of health information.

3.13 Health services

3.13.1 Health care card

QUESTION: Do you have a Health Care Card?

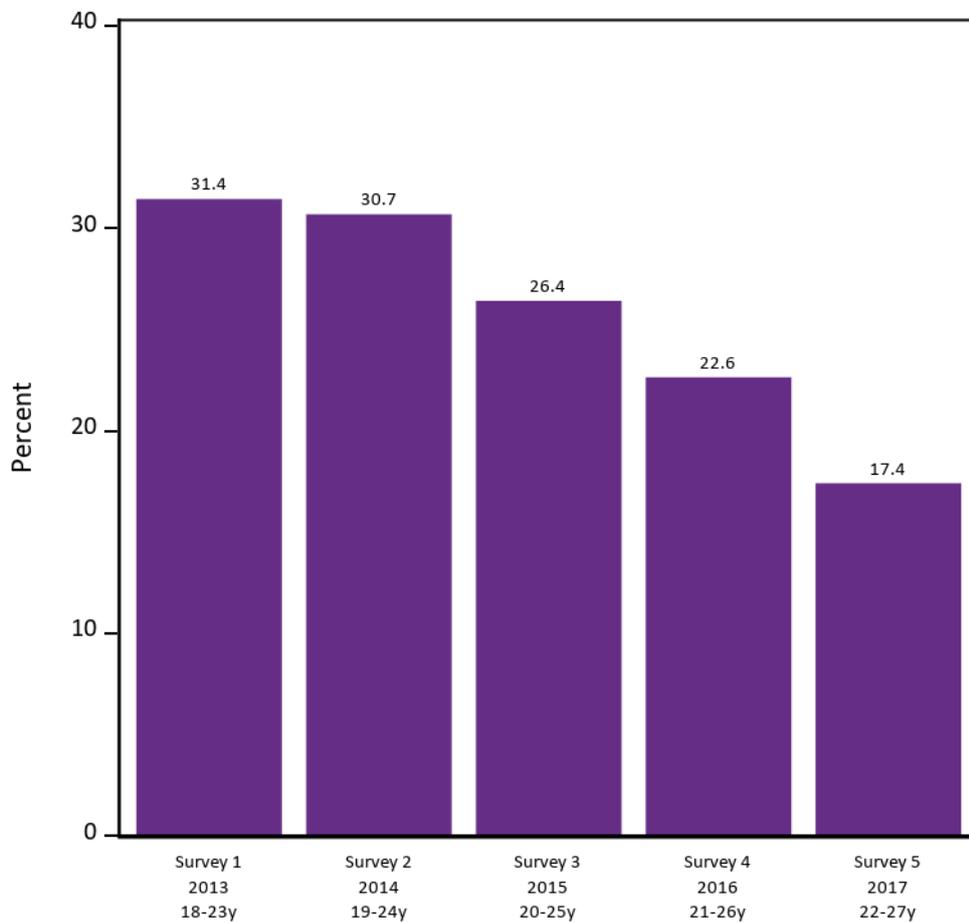


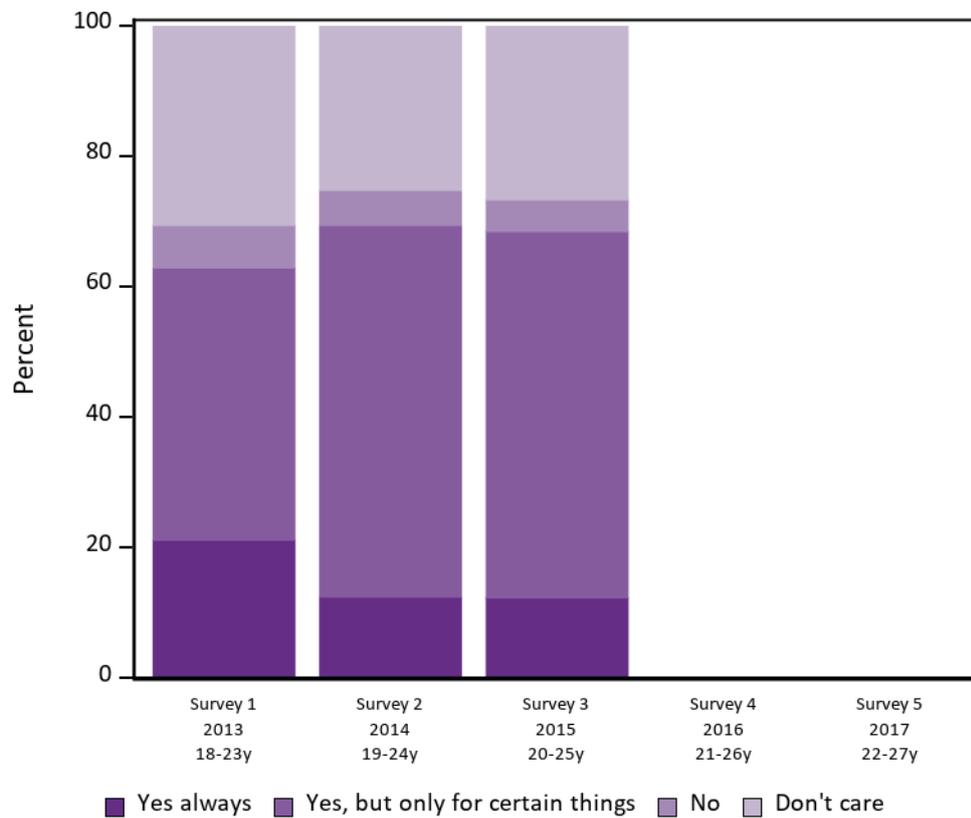
Figure 3-100 Health Care Card from Surveys 1 to 5 (N = 5,429).

Among the women who completed all 5 surveys, the proportion who had a Health Care Card decreased from almost one in three at Survey 1 to less than one in five at Survey 5.

3.13.2 Service use

QUESTION: In general, do you prefer to see a female doctor?

- Yes, always
- Yes, but only for certain things
- No
- Don't care



	Survey 1	Survey 2	Survey 3
Don't care	30.5	25.2	26.6
No	6.5	5.4	4.9
Yes, but only for certain things	41.7	57.0	56.2
Yes, always	21.2	12.5	12.3

Figure 3-101 Preference for female doctor, Surveys 1 to 3 (N=5,507).

Women's preference for a female doctor (either always or only for certain things) increased from 63% at Survey 1 (age 18-23) to 68.5% at Survey 3 (age 20-25).

QUESTION: Have you consulted the following services for your own health in the last 12 months:

- A midwife?

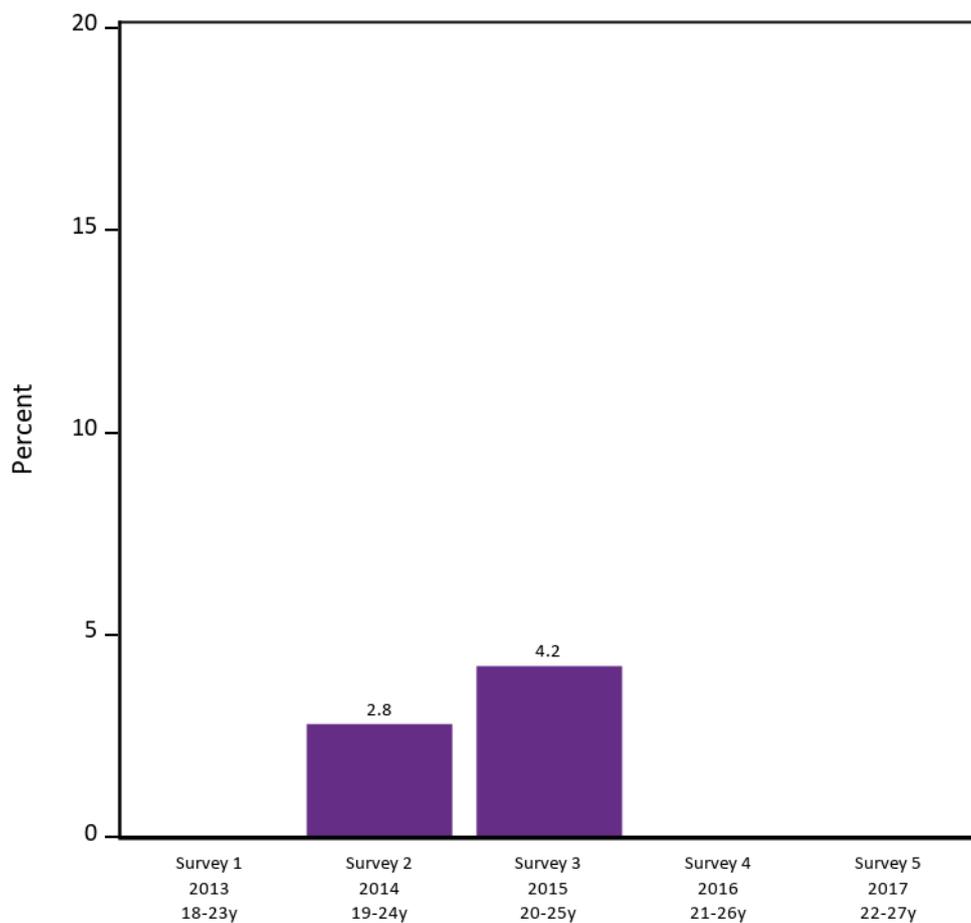


Figure 3-102 Women who had consulted a midwife: Survey 2 and 3 (N = 5,519).

A small proportion of women had consulted a midwife in the 12 months prior to Surveys 2 and 3.

QUESTION: Have you consulted the following services for your own health in the last 12 months:

- A counsellor or other mental health worker?

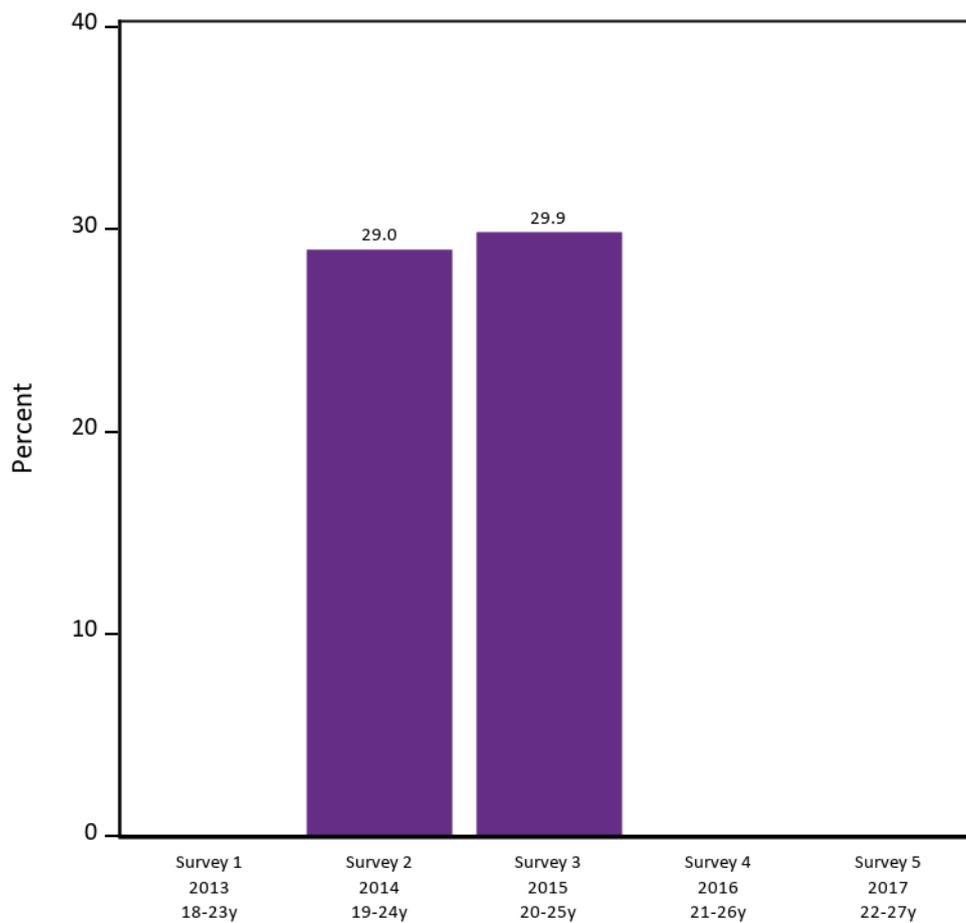


Figure 3-103 Women who had consulted a counsellor or other mental health worker: Survey 2 and 3 (N = 5,523).

Almost 30% of women had consulted a counsellor or other mental health worker in the 12 months before Survey 2 and Survey 3.

QUESTION: Have you consulted the following services for your own health in the last 12 months:

- A community nurse, practice nurse or nurse practitioner?

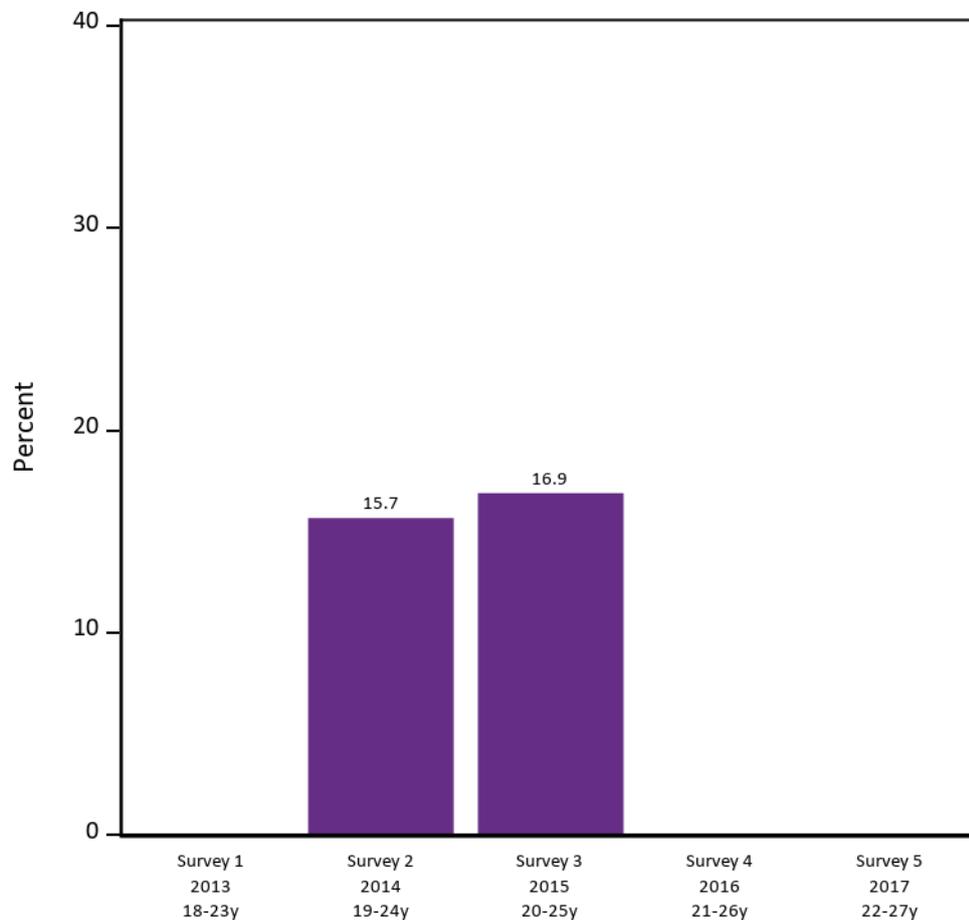


Figure 3-104 Women who consulted a community nurse, practice nurse or nurse practitioner: Survey 2 and 3 (N = 5,524).

In the 12 months before Survey 2 and Survey 3, less than 20% of women had consulted a community nurse, practice nurse or nurse practitioner

QUESTION: Have you consulted the following services for your own health in the last 12 months:

- A physiotherapist?

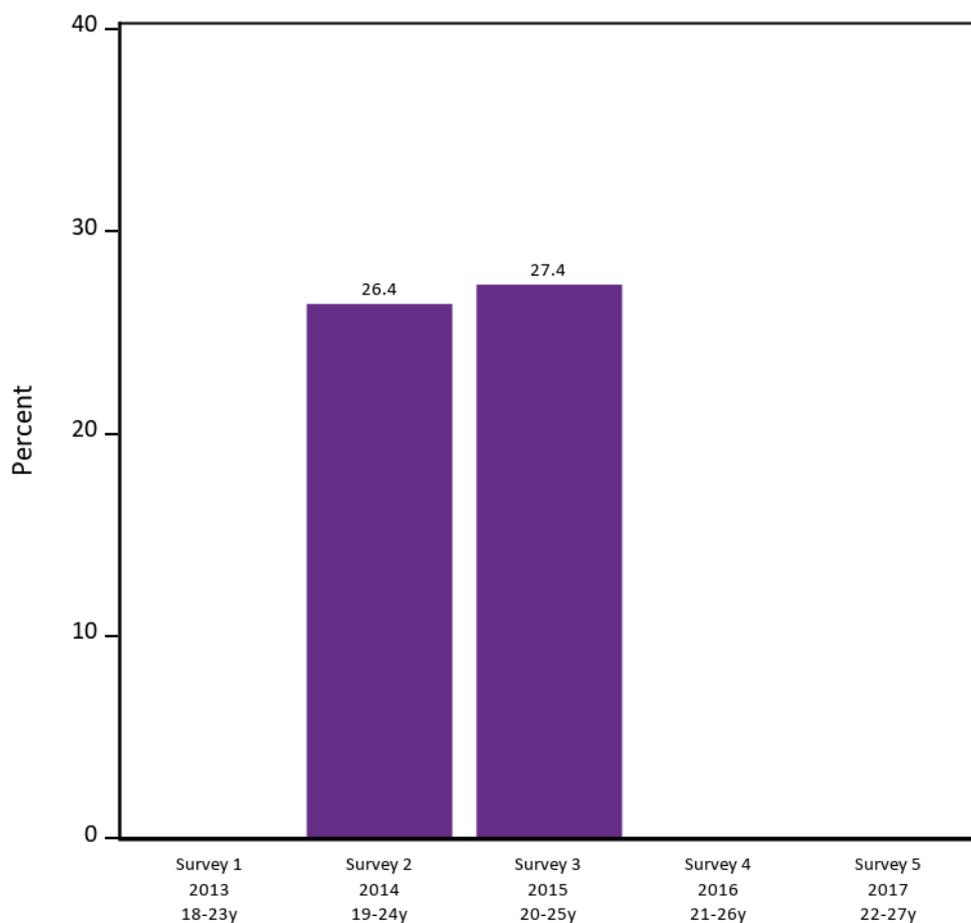


Figure 3-105 Women who consulted a physiotherapist: Survey 2 and 3 (N = 5,521).

Just over one quarter of women had consulted a physiotherapist in the 12 months preceding Surveys 2 and 3.

QUESTION: Have you consulted the following services for your own health in the last 12 months:

- A dentist?

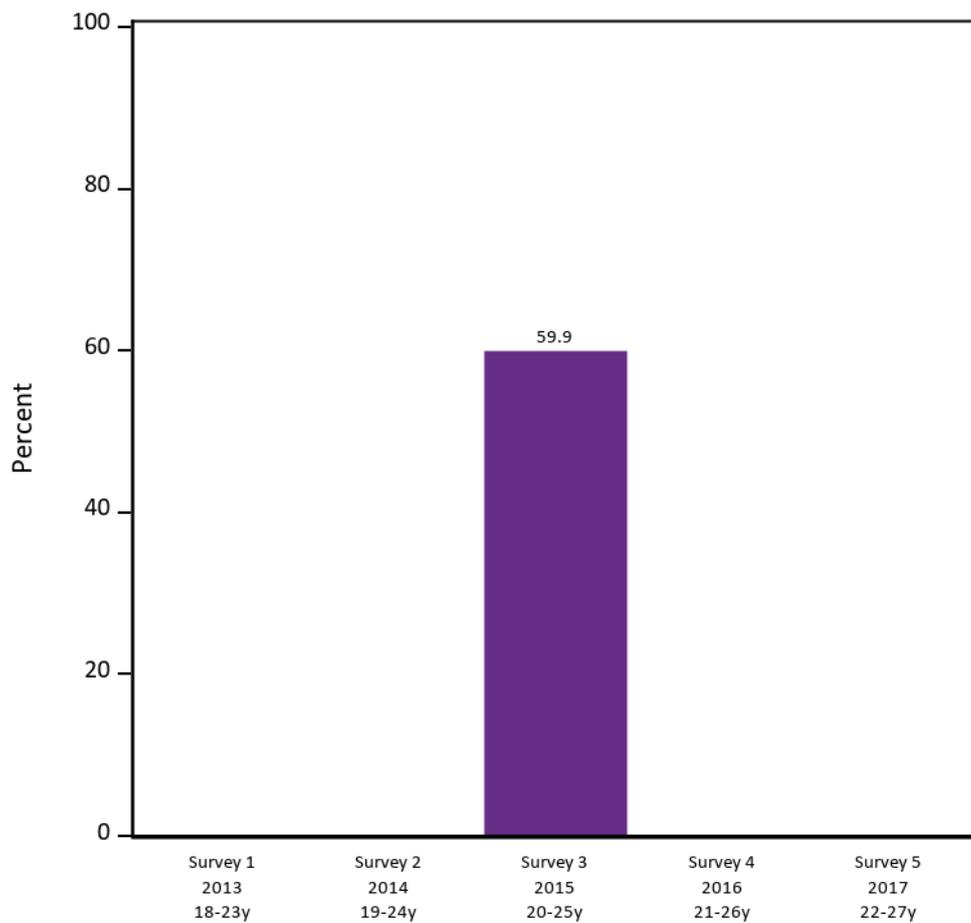


Figure 3-106 Women who had consulted a dentist: Survey 3 (N = 5,530).

Just under 60% of women had consulted a dentist in the 12 months prior to Survey 3.

QUESTION: Have you consulted the following services for your own health in the last 12 months:

- An exercise physiologist?

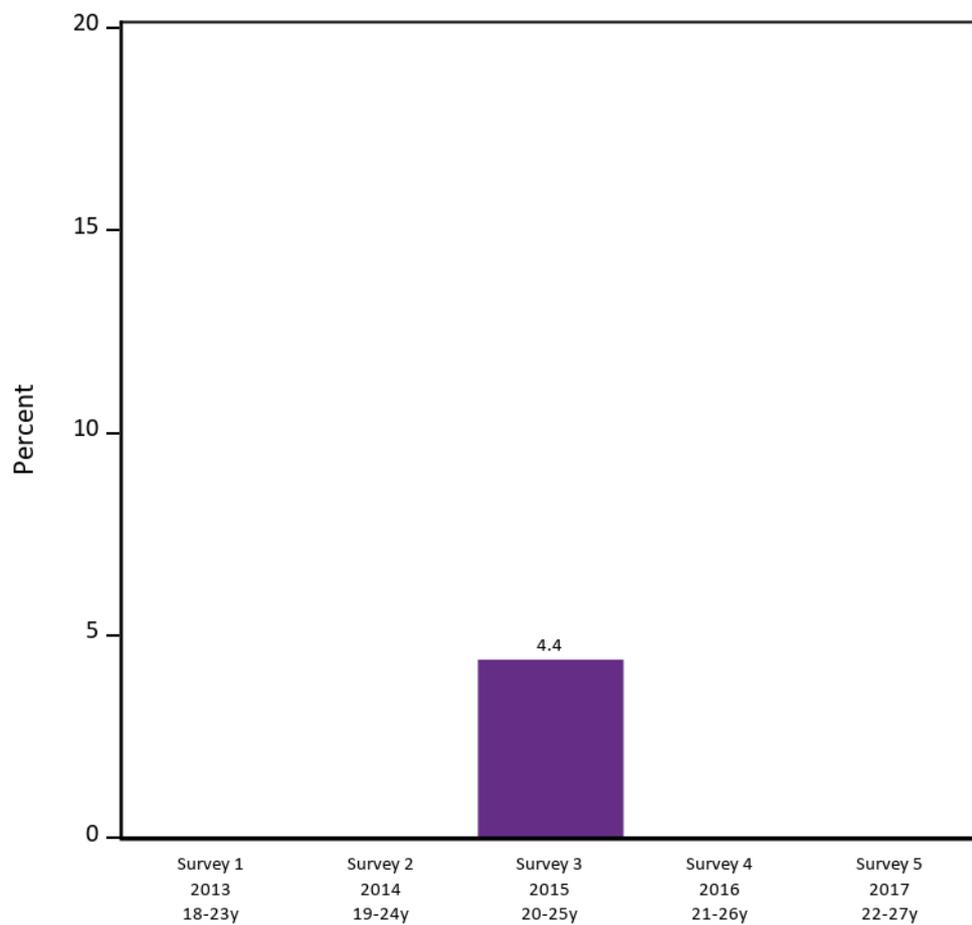


Figure 3-107 Women who consulted an exercise physiologist: Survey 3 (N = 5,527).

Fewer than one in twenty women saw an exercise physiologist in the year before Survey 3.

QUESTION: Have you consulted the following services for your own health in the last 12 months:

- A dietician?

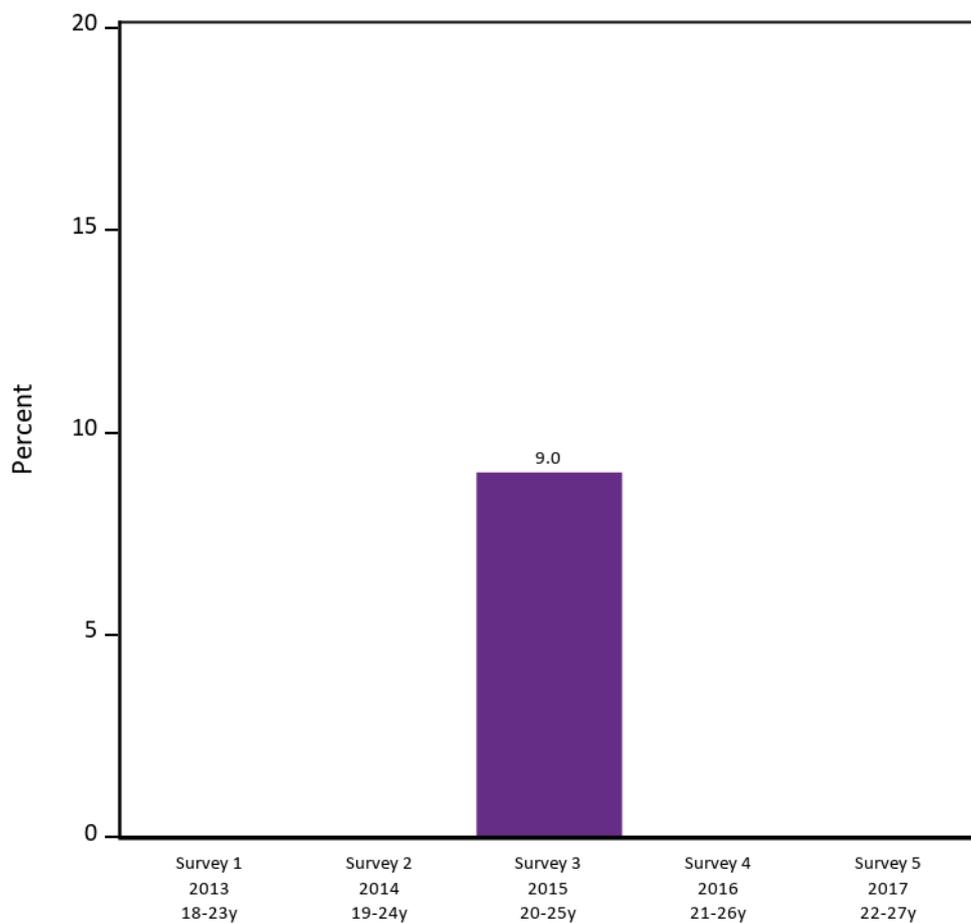


Figure 3-108 Women who had consulted a dietician: Survey 3 (N = 5,527).

Nine percent of the cohort women saw a dietician in the 12 months prior to Survey 3.

3.13.3 Screening

QUESTION: Within the last two years, have you had: A Pap test?

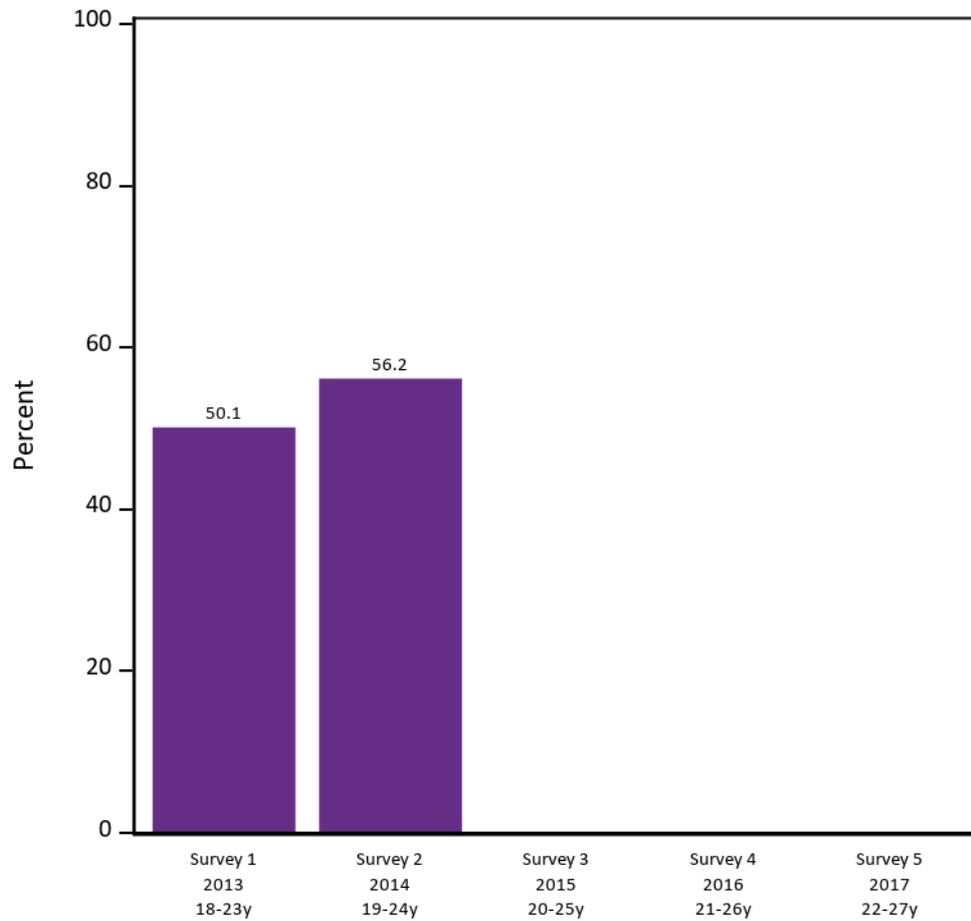


Figure 3-109 Women who reported having a Pap test in the last two years, Surveys 1 and 2 (N = 5,502).

The proportion of women who had a Pap test in the past two years increased from 50% at Survey 1 to 56% at Survey 2 (N=5,502).

QUESTION: Within the last two years, have you had: Your blood pressure checked?

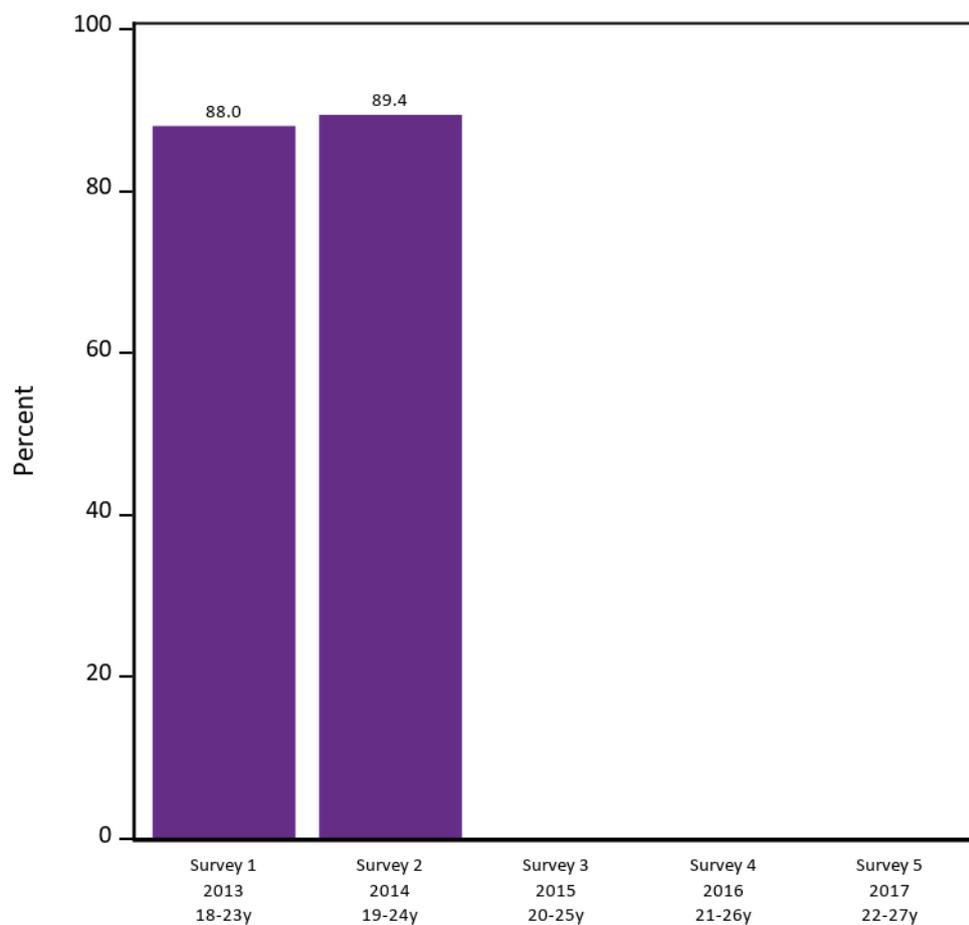


Figure 3-110 Women who reported having their blood pressure checked in the last two years, Surveys 1 and 2 (N = 5,502).

Just under 90% of women had their blood pressure checked in the two years prior to Survey 1 and Survey 2.

QUESTION: Within the last two years, have you had: Your skin checked (e.g., spots, lesions, moles)?

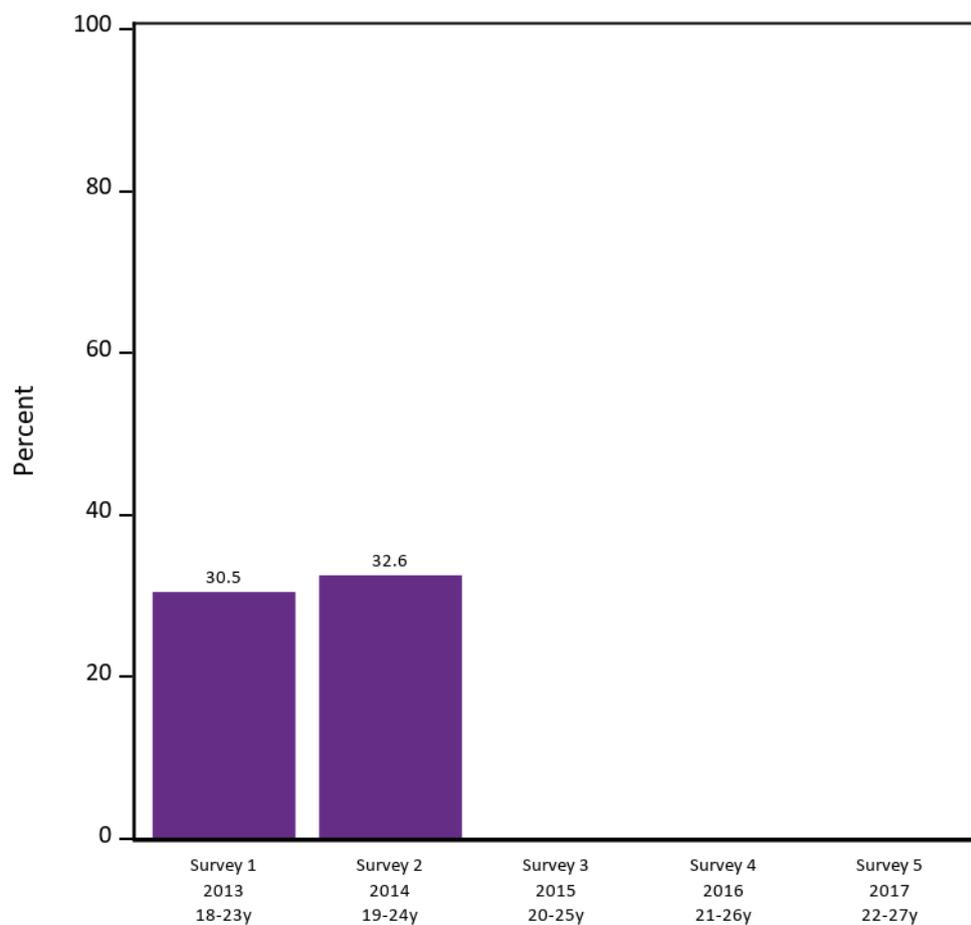


Figure 3-111 Women who reported having their skin checked in the last two years, Surveys 1 and 2 (N = 5,502).

The proportion of women who had their skin checked in the two years before Survey 1 and Survey 2 approached one third.

QUESTION: Within the last two years, have you had: Your weight checked by a health professional?

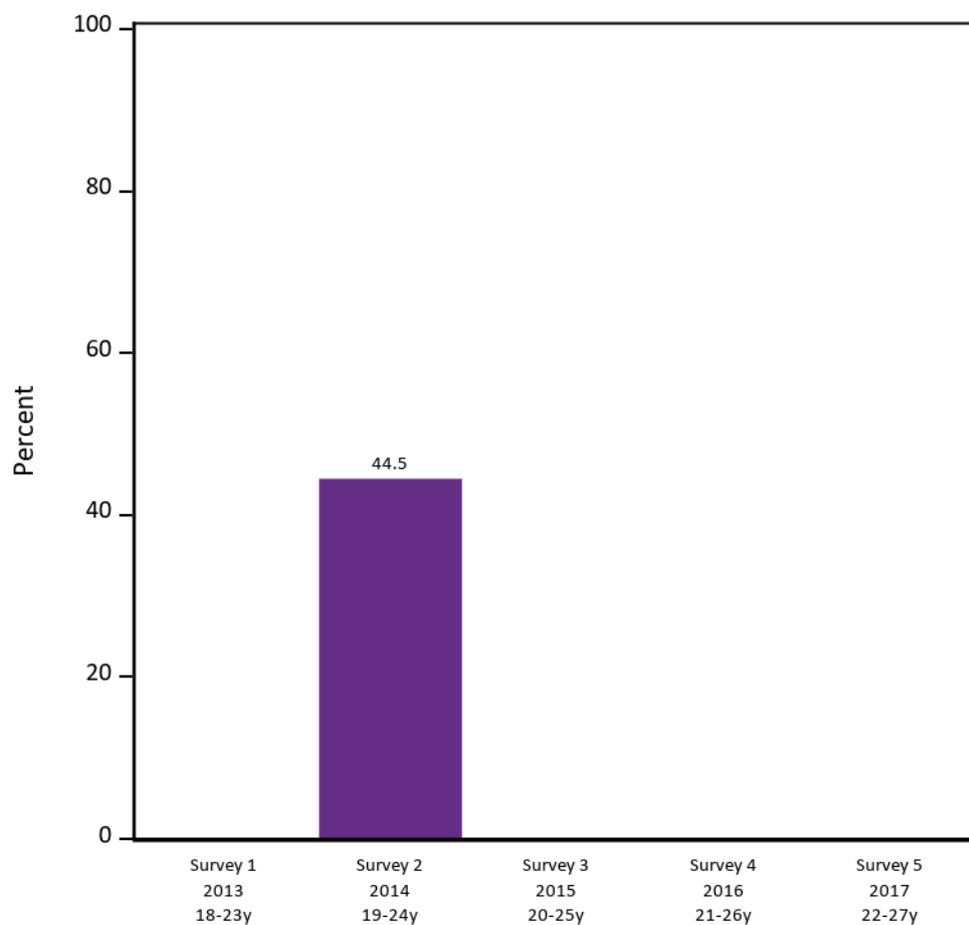


Figure 3-112 Women who reported having their weight checked by a professional in the last two years, Surveys 1 and 2 (N = 5,502).

In the two years prior to Survey 2, 44% of women had their weight checked by a health professional.

QUESTION: Have you ever had a vaccination for HPV (genital warts, cervical cancer)?

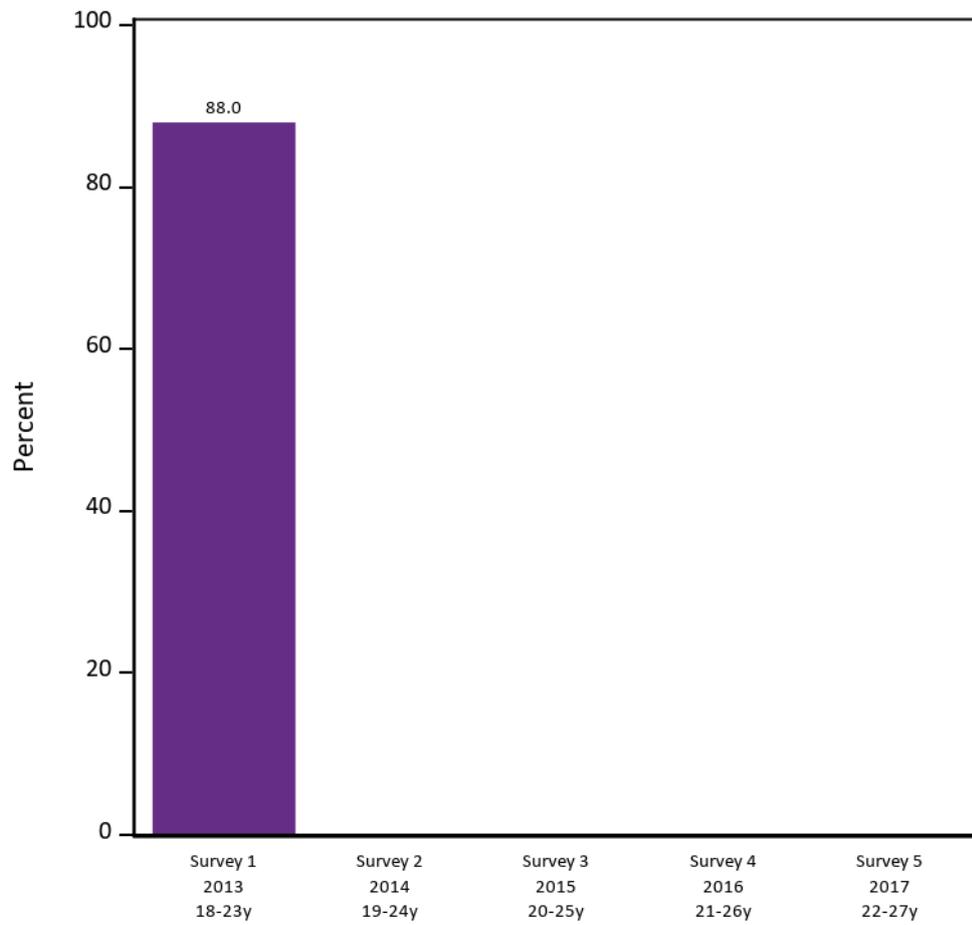


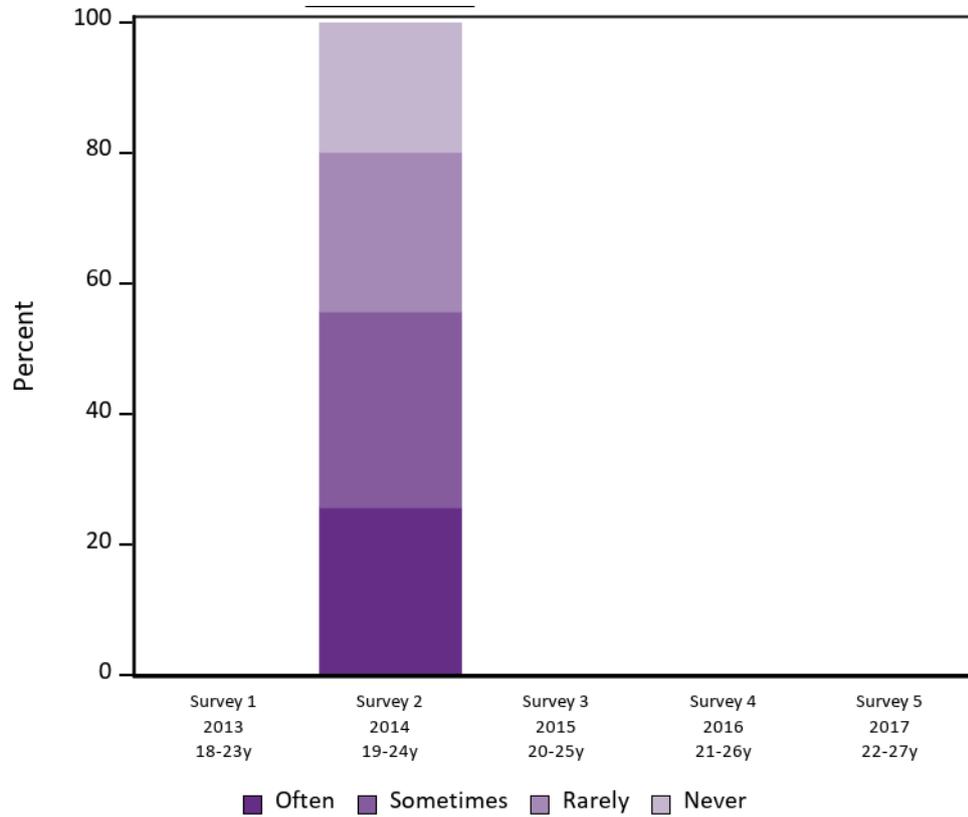
Figure 3-113 Women who reported having had an HPV vaccination at Survey 1 (N = 5,508).

At Survey 1, 88% of women reported having had an HPV vaccination.

3.14 Complementary and Alternative Medicines

QUESTION: How often have you used the following therapies for your own health in the last 12 months?

- Vitamins / minerals



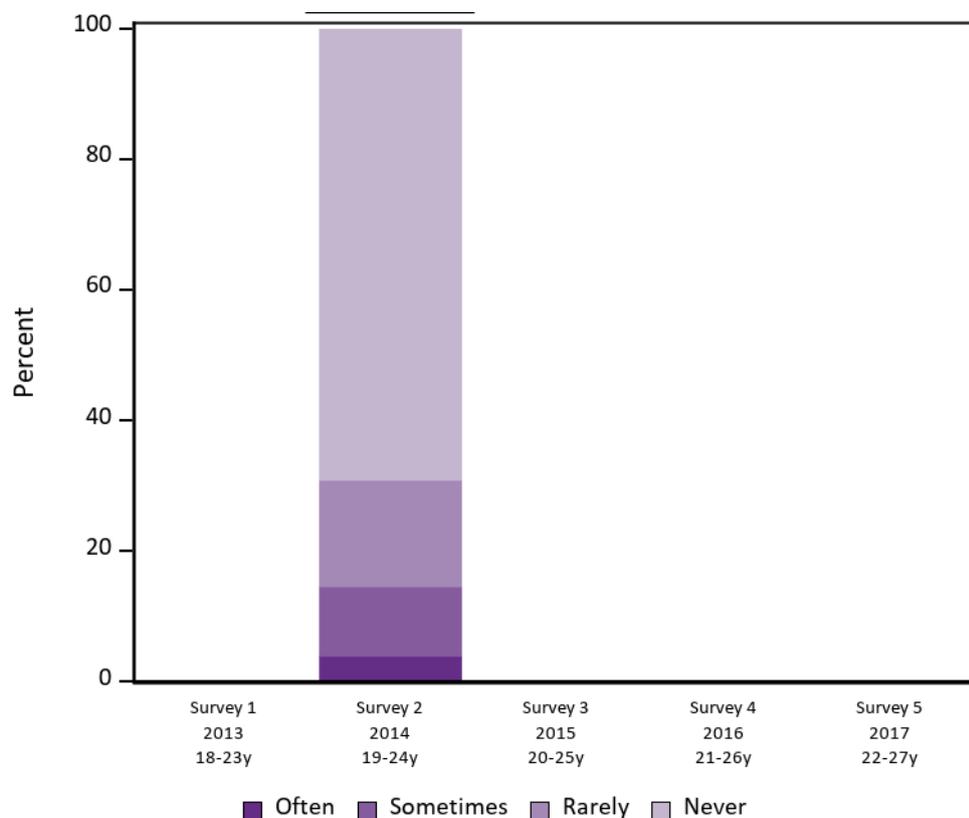
	Survey 1	Survey 2
Never		19.8
Rarely		24.5
Sometimes		30.0
Often		25.8

Figure 3-114 Use of vitamins and minerals, Survey 2 (N = 5,535).

1 in 4 women reported *often* using vitamins and minerals in the past 12 months, and 1 in 5 women *never* used vitamins and minerals.

QUESTION: How often have you used the following therapies for your own health in the last 12 months?

- Herbal medicines



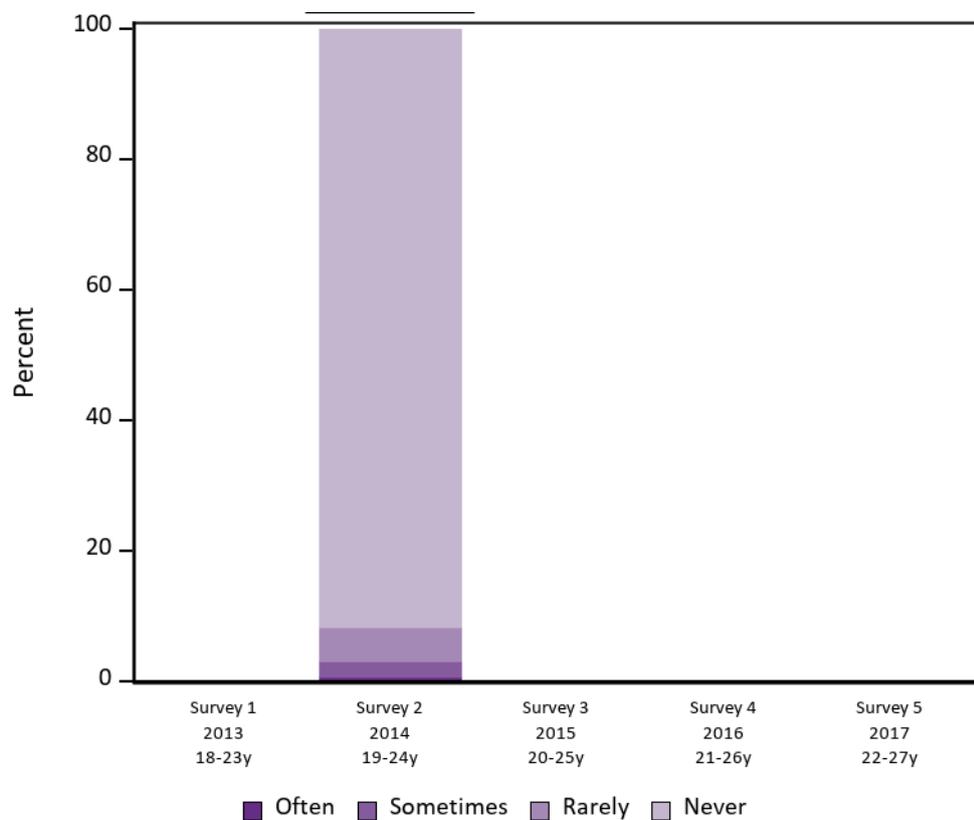
	Survey 1	Survey 2
Never		69.1
Rarely		16.3
Sometimes		10.6
Often		4.0

Figure 3-115 Herbal medicine use reported by women at Survey 2 (N = 5,535).

Over 85% of women either *never* used, or only *rarely* used, herbal medicines in the 12 months prior to Survey 2.

QUESTION: How often have you used the following therapies for your own health in the last 12 months?

- Chinese medicines



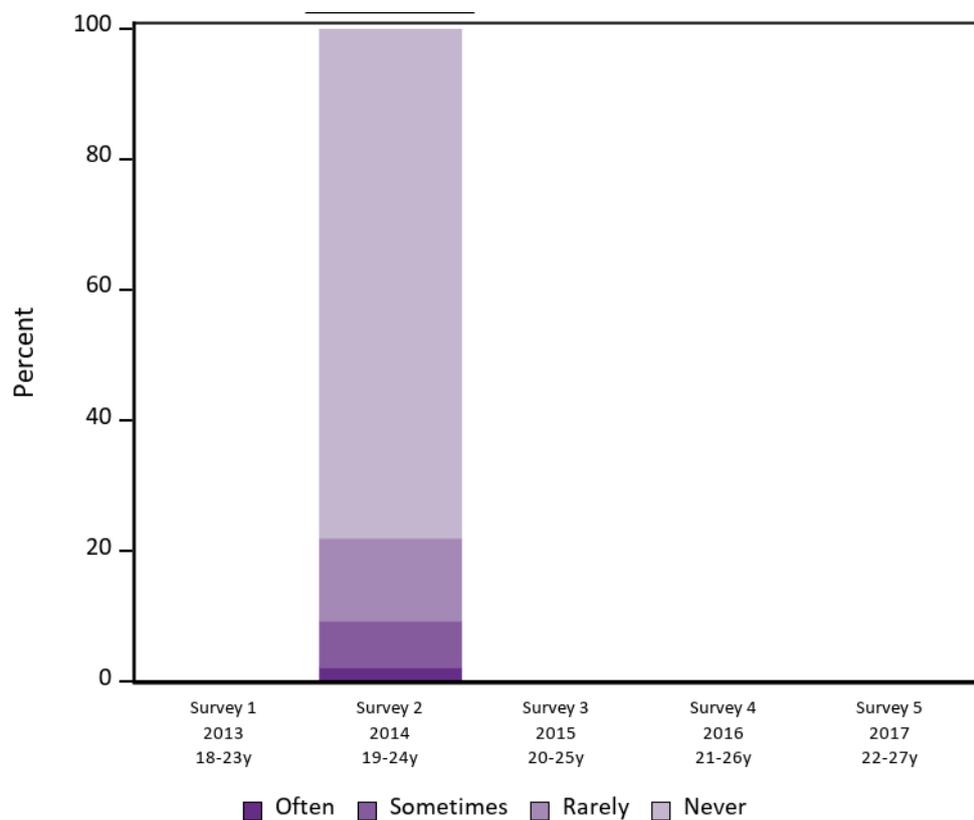
	Survey 1	Survey 2
Never		91.7
Rarely		5.2
Sometimes		2.4
Often		0.7

Figure 3-116 Use of Chinese medicines reported by women at Survey 2 (N = 5,535).

Just over 8% of women used Chinese medicines in the 12 months prior to Survey 2.

QUESTION: How often have you used the following therapies for your own health in the last 12 months?

- Aromatherapy oils



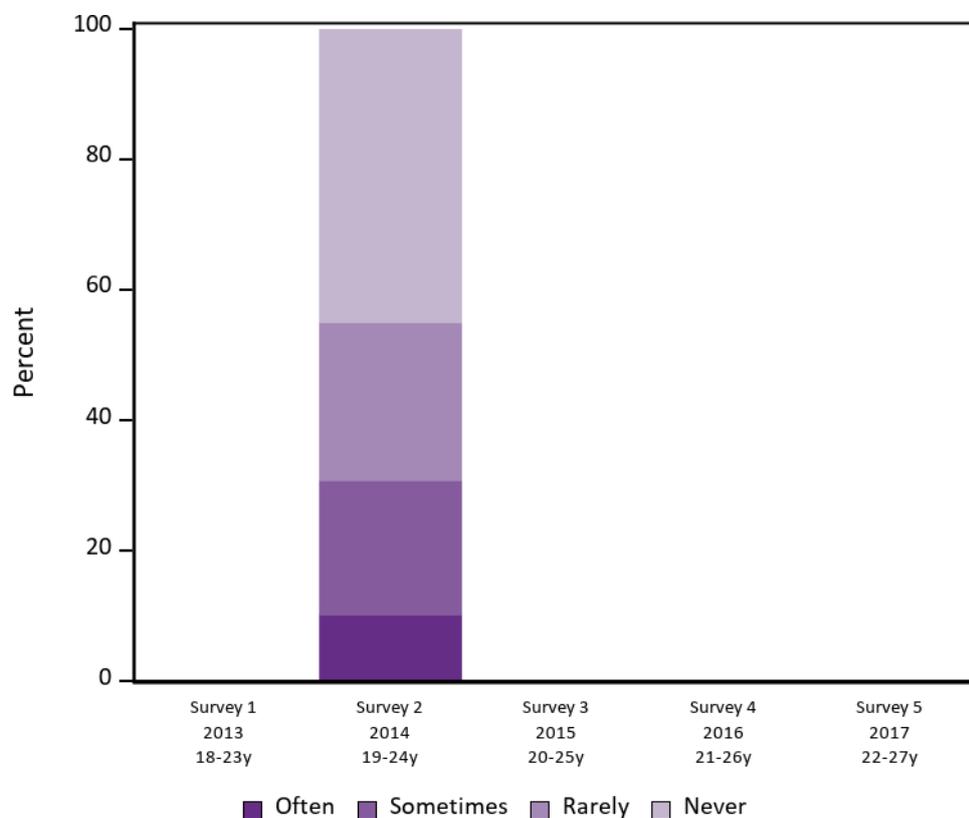
	Survey 1	Survey 2
Never		77.9
Rarely		12.7
Sometimes		7.1
Often		2.2

Figure 3-117 Use of aromatherapy oils reported by women at Survey 2 (N = 5,535).

90% of women reported *never* or *rarely* using aromatherapy oils in the 12 months prior to Survey 2.

QUESTION: How often have you used the following therapies for your own health in the last 12 months?

- Yoga or meditation?



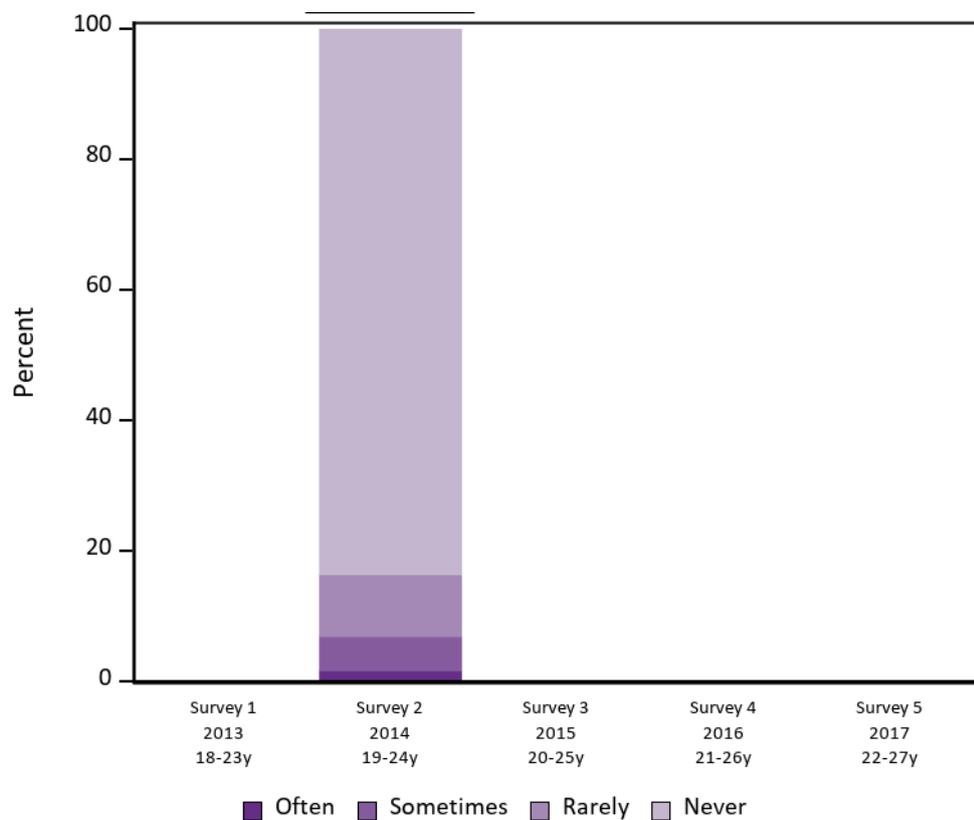
	Survey 1	Survey 2
Never		44.9
Rarely		24.2
Sometimes		20.6
Often		10.2

Figure 3-118 Yoga or meditation therapy reported by women at Survey 2 (N = 5,535).

95% cent of women used yoga or meditation therapy in the 12 months prior to Survey 2.

QUESTION: How often have you used the following therapies for your own health in the last 12 months?

- Other alternative therapies



	Survey 1	Survey 2
Never		83.5
Rarely		9.5
Sometimes		5.3
Often		1.7

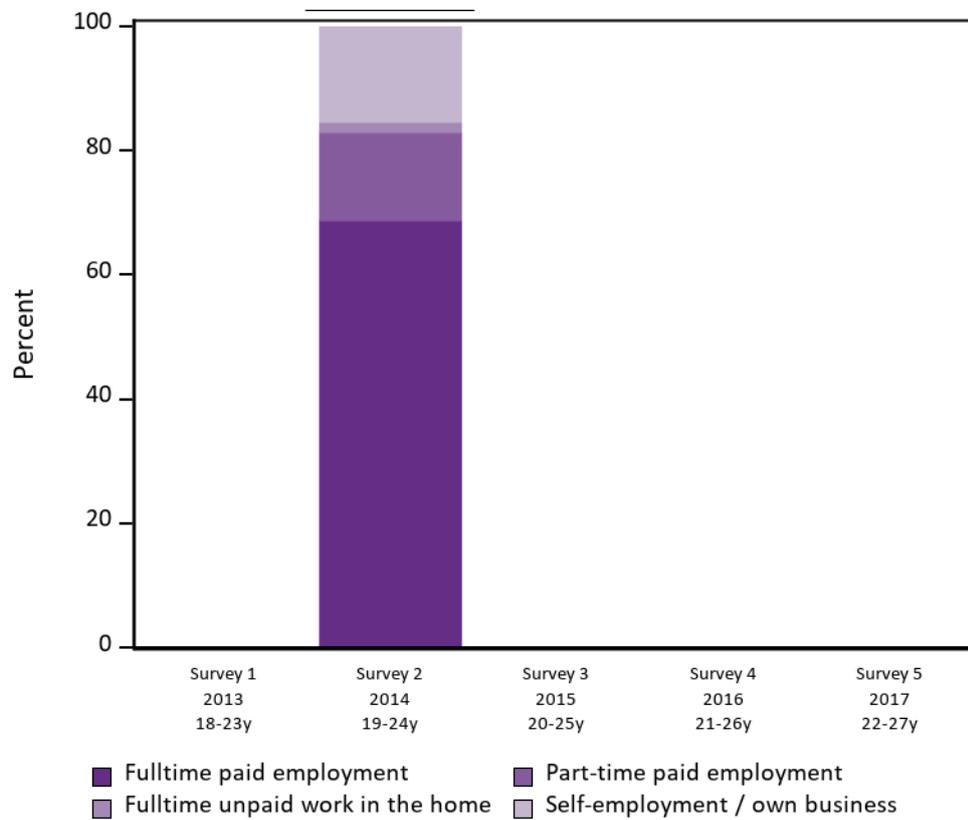
Figure 3-119 Use of other alternative therapies reported by women at Survey 2 (N = 5,535).

More than 15% of women used other alternative therapies in the 12 months prior to Survey 2.

3.15 Aspirations

3.15.1 Employment

QUESTION: When you are 40, would you like to be in full-time paid employment, part-time paid employment, full-time unpaid work in the home or self-employment/own business?



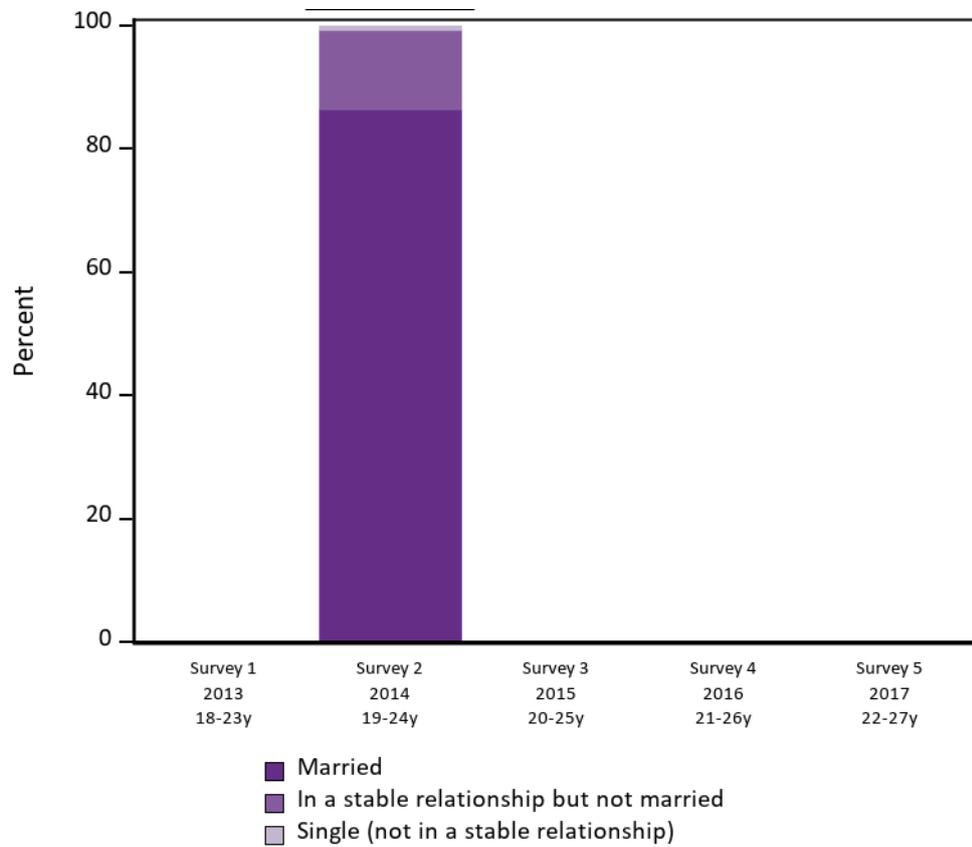
	Survey 1	Survey 2
Self-employment/own business		15.3
Fulltime unpaid work in the home		1.7
Part-time paid employment		14.2
Fulltime paid employment		68.8

Figure 3-120 Aspirations for employment at age 40 (N = 5,511).

The majority of women aspired to be in fulltime paid employment at age 40. Less than 2% of women aspired to fulltime unpaid work in the home.

3.15.2 Relationship

QUESTION: When you are 40, would you like to be married, in a stable relationship but not married or single (not in a stable relationship)?



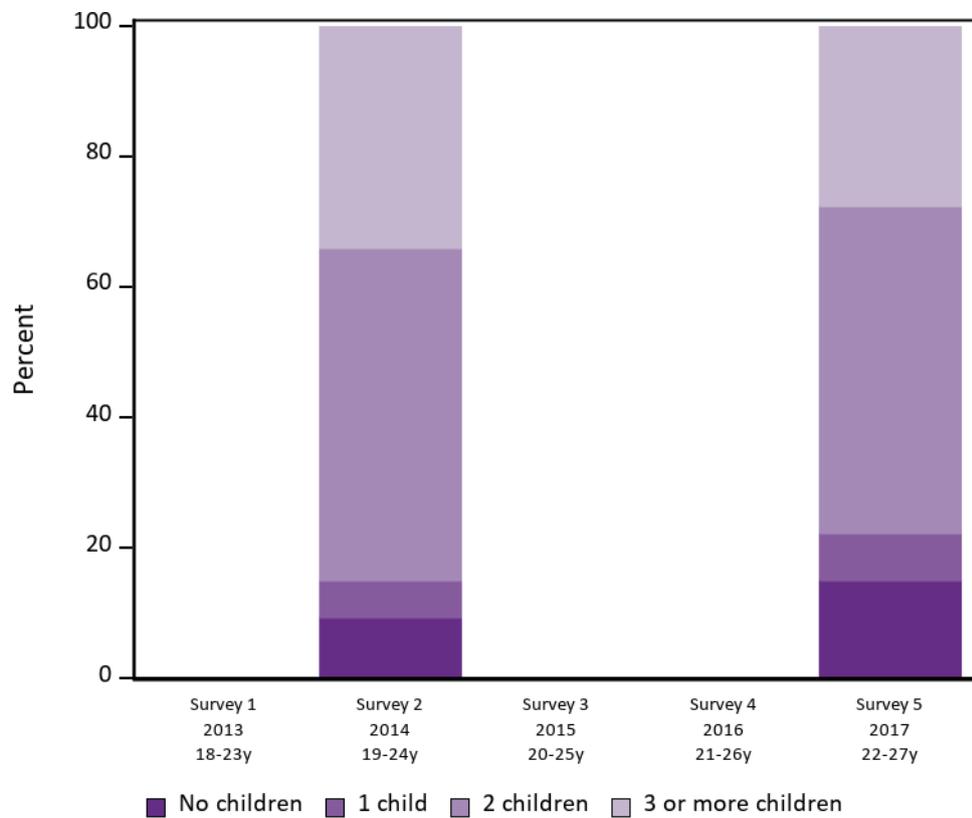
	Survey 1	Survey 2
Single (not in stable relationship)		0.7
Stable relationship, not married		12.9
Married		86.5

Figure 3-121 Aspirations for relationship at age 40 (N = 5,512).

At Survey 2, more than 85% of women aspired to be married at age 40. Less than 1% of women hoped to be single.

3.15.3 Children

QUESTION: When you are 40, would you like to have 0, 1, 2 or 3 or more children?



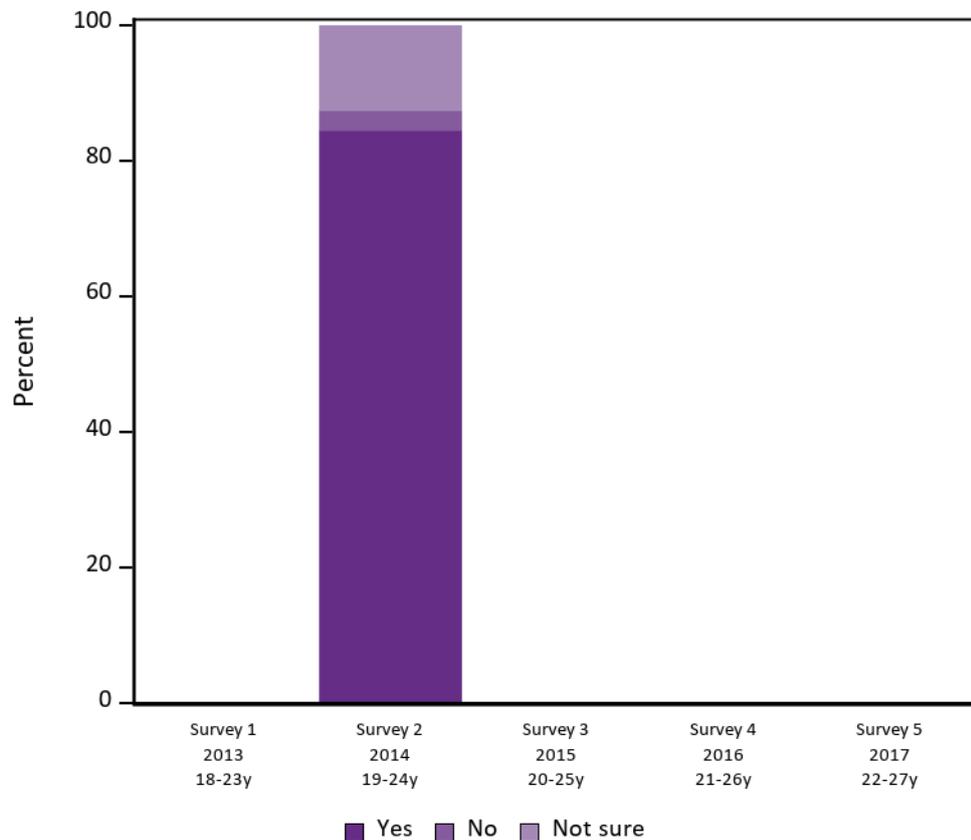
	Survey 1	Survey 2	Survey 3	Survey 4
3 or more children		34.0		27.6
2 children		51.0		50.2
1 child		5.7		7.2
No children		9.3		15.0

Figure 3-122 Aspirations for children at age 40 (N = 5,489).

The frequency of aspiring to have three or more children decreased between Survey 2 and Survey 5, and the frequency of aspiring to have no children increased by almost the same amount as that decrease.

3.15.4 Education

QUESTION: When you are 40, would you like to have more educational qualifications than you have now? Yes, no or not sure.



	Survey 1	Survey 2
Not sure		12.5
No, don't want more qualifications than now		2.9
Yes, more qualifications than now		84.6

Figure 3-123 Aspirations for education at age 40 (N = 5,513).

At Survey 2, less than 3% of women said they did not want to have more educational qualifications by the time they were 40, although 1 in 8 women were not sure if they wanted more qualifications.

4 CURRENT ACTIVITY

4.1 Projects using 1989-95 cohort data

4.1.1 Recruitment/methodology:

Completed projects

- A494: How to recruit and retain a new cohort of women aged 18-23 years for an online longitudinal survey (Project leader: Deborah Loxton, University of Newcastle).
- A510: Recruiting young women to a longitudinal health study in the 21st century (Project leader: Deborah Loxton, University of Newcastle).
- A503: Consent to data linkage in women aged 18-23 in 2012-13 (Project leader: Deirdre McLaughlin, University of Queensland).
- A576: Attrition in the 1989-95 cohort (Project leader: Deborah Loxton, University of Newcastle)

4.1.2 Health comparisons – 1973-78 and 1989-95 cohorts:

Completed projects

- A493: Comparison of health behaviours of 18-23 year olds 1996 and 2012-13. Health behaviours include smoking, alcohol consumption, illicit drug use, patterns of physical activity and height, weight and body mass index (Project leader: Jennifer Powers, University of Newcastle).
- A495: Comparison of violence among 18-23 year old women in 1996 and 2012-13 (Project leader: Deborah Loxton, University of Newcastle).
- A497: Changes over time in the sexual and reproductive health of 18-23 year women: Comparison of key indicators between ALSWH 1973-78 cohort in 1996 and the New Young Cohort in 2013 (Project leader: Jayne Lucke, La Trobe University).
- A500: Then and now differences in socio-demographic characteristics among young women born in 1989-95 and 1973-78 (Project leader: Leigh Tooth, University of Queensland).
- A501: Differences in physical health symptoms among young women born in 1989-95 and 1973-78 (Project leader: Gita Mishra, University of Queensland).

4.1.3 Health services:

- A594: The value of continuity of care in Australian general practice (Project leader: Michael Wright, University Technology Sydney).
- A750: Do access, quality and cost of GP services influence a patient's decision to visit ED? (Project leader: Anton Pak, The University of Queensland).
- A757: The health system costs of women who experience domestic violence (Project leader: Jananie William, Australian National University).
- A767: Minority stress, and access to health care for non- heterosexual women (Project leader: Meredith Burgess, The University of Queensland).

Completed projects

- A496: Access to and use of health services and health information by women in the New Young Cohort in 2013 (Project leader: Annette Dobson, The University of Queensland).

4.1.4 Weight, nutrition and physical activity:

- A654: Investigating the association between weight status, weight change, and headache in young Australian women (Project leader: Sonja Kubik, Griffith University).

- A664: Portion size selection and variability of commonly consumed foods (Project leader: Janet Cade, University of Leeds).
- A728: Understanding the relationships between weight gain, physical activity and indicators of women's reproductive health (Project leader: Gabriela Mena, The University of Queensland).

Completed projects

- A571: Are women who drink more caffeinated drinks engaging in more physical activity? (Project leader: Tina Skinner, The University of Queensland).
- A557: Dietary behaviours among young women: Associations with socio-demographics, health behaviours and stress (Project leader: Ingrid Rowlands, The University of Queensland).

4.1.5 Mental health:

- A694: Brain-gut vs gut-brain: Longitudinal patterns of gastrointestinal and mental health disorders (Project leader: Alissa Beath, Macquarie University).
- A695: A longitudinal investigation of the somatisation construct in a nationally representative sample of younger women (Project leader: Anastasia Ejova, The University of Auckland).
- A732: Mapping the K10 to the SF-36 in young Australian women and investigating intra- and inter-cohort trends (Project leader: Annette Dobson, The University of Queensland).

Completed projects

- A558: The reliability and validity of the Kessler Psychological Distress Scale (K-10) for the New Young Cohort (Project leader: Ingrid Rowlands, The University of Queensland).
- A580: Lifestyle variables as a major correlate of depression among young Australian women (Project leader: Deborah Loxton, The University of Newcastle).
- A581: Contributing factors of self-harm in young Australian women (Project leader: Deborah Loxton, The University of Newcastle).
- A582: Factors contributing to diagnosed anxiety among Australian females aged 18-23 (Project leader: Deborah Loxton, The University of Newcastle).
- A583: Factors associated with suicidal ideation in young Australian females aged 18-23 (Project leader: Deborah Loxton, The University of Newcastle).

4.1.6 Reproductive health:

- A696: Unintended pregnancy and contraceptive use in women with chronic disease: providing an evidence-base for Australia (Project leader: Melissa Harris, The University of Newcastle)
- A690: The direct and indirect costs associated with endometriosis in Australia (Project leader: Gita Mishra, The University of Queensland).
- A693: Disparities in choice of contraception method and patterns of utilization: socio-demographic characteristics, pregnancy intentions, and family size aspirations (Project leader: Gita Mishra, The University of Queensland).
- A743: Adverse pregnancy outcomes among women in Australia (Project leader: Habtamu Bizuayehu, The University of Newcastle).
- A744: The relationships between menstrual problems and endometriosis over time (Project leader: Sifan Cao, The University of Queensland)
- A745: Associations of menstrual problems and endometriosis with adverse pregnancy outcomes (Project leader: Sifan Cao, The University of Queensland).

- A753: Patterns of contraception use in 1989-95 cohort (Project leader: Jayne Lucke, La Trobe University).
- A755: Generational differences in mental, sexual, reproductive, maternal and child health among Australian sexual minority women (lesbian, bisexual, mostly heterosexual). (Project leader: Leah East, University of New England).
- A764A: Psychological impacts of polycystic ovary syndrome (PCOS) in Australian women (Project leader: Anju Joham, Monash University).
- A766: Trends and costs of health service resource use related to alcohol use and behavioural risk factors among pregnant women (Project leader: Xenia Dolja-Gore, The University of Newcastle).
- A776: Habitual lifestyle of Australian women with PCOS (Project leader: Anju Joham, Monash University).
- A778: Parity and mode of birth and their relationship to general and gynaecological health (Project leader: Deborah Davis, University of Canberra).
- A781: Endometriosis in Australia: prevalence and hospitalisations (Project leader: Lynelle Moon, Australian Institute of Health and Welfare).
- A785: Reproductive events and workforce participation across the life course (Project leader: Leigh Tooth, The University of Queensland).

COMPLETED PROJECTS

- A576: The impact of gynaecological conditions on young women's psychological and social wellbeing (Project leader: Ingrid Rowlands, The University of Queensland).
- A579: Stoppers, starters and switchers: Young women's use of contraceptives and the relationship to physical and reproductive health (Project leader: Ingrid Rowlands, The University of Queensland).

4.1.7 Alcohol, tobacco and other drugs:

- A701A: Electronic cigarette and conventional cigarette smoking among Australian women (Project leader: Alemu Sufa Melka, The University of Newcastle)
- A729: Prevalence and predictors of alcohol risk behaviours (Project leader: Julie Byles, The University of Newcastle)

4.1.8 Violence and abuse:

- A495C: Comparison of violence among 18-23 year old women in 1996 and 2012-13 (Project leader: Deborah Loxton, The University of Newcastle)
- A786: Spatial analysis of family, domestic and sexual violence (FDSV) and childhood trauma among Australian women (Project leader: Deborah Loxton, The University of Newcastle)

4.1.9 Complementary and Alternative Medicine:

- A629: The associations between herbal medicine use and health behaviour - results of a national cross sectional survey of Australian women (Project leader: Romy Lauche, University Technology Sydney).
- A768: Consultations with naturopaths/herbalists and use of supplements/herbal medicines amongst Australian women, 2006-2016 (Project leader: WenBo Peng, University Technology Sydney)

COMPLETED PROJECTS

- A575: A population health examination of yoga and meditation use amongst Australian women (Project leader: Sridhar Maddela, University Technology Sydney).

4.1.10 Other:

- A673: Urinary incontinence in the 1989-95 cohort (Project leader: Wendy Brown, The University of Queensland).
- A697A: Sexual fluidity amongst Australian women over the life course (Project leader: Alice Campbell, The University of Queensland).

COMPLETED PROJECTS

- A566: Cohort profile of the new young cohort of women aged 18-23 in 2012-13 (Project leader: Deborah Loxton, The University of Newcastle).
- A569: Health status and behaviours according to sexual orientation across two generations of young Australian women (Project leader: Ruth McNair, University of Melbourne).

4.2 Outcomes (at September 2019)

4.2.1 Reports:

- Policy briefs from the Australian Longitudinal Study on Women's Health. Report prepared for the Australian Government Department of Health, May 2019.
Authors: Mishra G, Byles J, Dobson A, Chan H-W, Tooth L, Hockey R, Townsend N & Loxton D.
- Domestic violence, risk factors and health. Report prepared for the Australian Government Department of Social Services, August 2018.
Authors: Loxton D, Townsend N, Forder P & Coombe J.
- Measuring domestic violence in longitudinal research. Report prepared for the Department of Social Services, October 2017.
Authors: Loxton D, Townsend N, Cavenagh D & Green L.
- Use, access to, and impact of Medicare services for Australian women: Findings from the Australian Longitudinal Study on Women's Health. Report prepared for the Australian Government Department of Health, June 2017.
Authors: Byles J, Mishra G, Hockey R, Adane A, Chan H, Dolja-Gore X, Forder P, Harris M, Majeed T, Loxton D & Tooth L.
- Future health service use and costs: Insights from the Australian Longitudinal Study on Women's Health. Report prepared for the Australian Government Department of Health, June 2016.
Authors: Mishra G, Chan H, Hockey R, Waller M, Kanesarajah J, Byles J & Dobson A.
- Chronic conditions, physical function and health care use: Findings from the Australian Longitudinal Study on Women's Health. Report prepared for the Australian Government Department of Health, June 2015.
Authors: Byles J, Hockey R, McLaughlin D, Dobson A, Brown W, Loxton D & Mishra G.
- Health and wellbeing of women aged 18 to 23 in 2013 and 1996: Findings from the Australian Longitudinal Study on Women's Health. Report prepared for the Australian Government Department of Health, May 2014.
Authors: Mishra G, Loxton D, Anderson A, Hockey R, Powers J, Brown W, Dobson A, Duffy L, Graves A, Harris M, Harris S, Lucke J, McLaughlin D, Mooney R, Pachana N, Pease S, Tavener M, Thomson C, Tooth L, Townsend N, Tuckerman R & Byles J.

4.2.2 Papers published:

- Loxton D, Harris ML, Forder P, Powers J, Townsend N, Byles J, & Mishra G. (2019). Factors influencing web-based survey response for a longitudinal cohort of young women born between 1989 and 1995. *Journal of Medical Internet Research*, 21(3): e11286.
- Tay CT, Teede HJ, Hill B, Loxton D & Joham AE. (2019). Increased prevalence of eating disorders, low self-esteem, and psychological distress in women with polycystic ovary syndrome: A community-based cohort study. *Fertility and Sterility*, 112(2): 353-361.
- Melka A, Chojenta C, Holliday E & Loxton D. (2019). Adverse childhood experiences and electronic cigarette use among young Australian women. *Preventive Medicine*, 126: 105759.
- Steel A, Munk N, Wardle J, Adams J, Sibbritt D, Lauche R. (2019). Generational differences in complementary medicine use in young Australian women: Repeated cross-sectional dataset analysis from the Australian Longitudinal Study on Women's Health. *Complementary Therapies in Medicine*, 43: 66-72.
- Melka AS, Chojenta CL, Holliday EG & Loxton DJ. (2019). Predictors of E-cigarette use among young Australian women. *American Journal of Preventive Medicine*, 56(2): 293-299.
- Loxton D, Tooth L, Harris M, Forder P, Dobson A, Powers J, Brown W, Byles & Mishra G. (2018). Cohort Profile: The Australian Longitudinal Study on Women's Health (ALSWH) 1989-95 cohort. *International Journal of Epidemiology*, 47(2): 391-392e.
- Cramer H, Sibbritt D, Park CL, Adams J & Lauche R. (2017). Is the practice of yoga or meditation associated with a healthy lifestyle? Results of a national cross-sectional survey of 28,695 Australian Women. *Journal of Psychosomatic Research*, 101: 104-109.
- Townsend N, Powers J & Loxton D. (2017). Bullying among 18 to 23-year-old women in 2013. *Australian and New Zealand Journal of Public Health*, doi: 10.1111/1753-6405.12671.
- Powers J, Loxton D, Anderson A, Dobson A, Mishra G, Hockey R & Brown W. (2017). Changes in smoking, drinking, overweight and physical inactivity in young Australian women 1996-2013. *Health Promotion Journal of Australia*, doi: 10.1071/HE16085.
- Rowlands I, Mishra G, Dobson A, Loxton D, Lucke J & Teede H. (2016). Young women's psychological distress after a diagnosis of polycystic ovary syndrome or endometriosis. *Human Reproduction*, 31(9): 2072-2081.
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- Mishra GD, Hockey R, Powers J, Loxton D, Tooth L, Rowlands I, Byles J & Dobson A. (2014). [Recruitment via the internet and social networking sites: The 1989-1995 cohort of the Australian Longitudinal Study on Women's Health](#). *Journal of Medical Internet Research*, 16(12): Art. No: e279.
- Rowlands I, Dobson A, Loxton D & Mishra G. (2015). Seeking health information online: Association with young Australian women's physical, mental and reproductive health. *Journal of Medical Internet Research*, 18; 17(5): e120.
- Rowlands I, Dobson A & Mishra G. (2015). [Physical health of young, Australian women. A comparison of two national cohorts surveyed 17 years apart](#). *Plos One*, 10(11): e0142088.

- Mishra GD, Hockey R, Powers J, Loxton D, Tooth L, Rowlands I, Byles J & Dobson A. (2015). Recruitment via the internet and social networking sites: The 1989-1995 cohort of the Australian Longitudinal Study on Women's Health. *Journal of Medical Internet Research*, 16(2): e279.
- Harris ML, [Loxton D](#), [Wigginton B](#) & [Lucke JC](#). (2014). Recruiting online: Lessons from a longitudinal survey of contraception and pregnancy intentions of young Australian women. *American Journal of Epidemiology*, 181(10): 737-746.

4.2.3 Conference proceedings:

- Peng W, Wardle J, Cramer H, Mishra G & Lauche R.
Herbal medicines use and healthy lifestyle: A national survey of young Australian women.
BMC Complementary and Alternative Medicine; 2017, 94.

4.3 Current students

Meredith Burgess (PhD Candidate, The University of Queensland)

Supervisors: Dr Francisco Perales and Professor Janeen Baxter, UQ ISSR.

A767: Minority stress, and access to healthcare for non-heterosexual women.

Alice Campbell (PhD Candidate, The University of Queensland)

Supervisors: Dr Francisco Perales and Professor Janeen Baxter

A697: Sexual fluidity amongst Australian women over the life course

Sifan Cao (PhD Candidate, The University of Queensland)

Supervisors: Professor Gita Mishra, Dr Mark Jones and A/Professor Leigh Tooth.

A744: The relationships between menstrual problems and endometriosis over time.

A745: Associations of menstrual problems and endometriosis with adverse pregnancy outcomes.

Dr Chau Thien Tay (PhD Candidate, Monash University)

Supervisors: Dr Anju Joham, Professor Helena Teede, A/Professor Lisa Moran.

A764A: Psychological impacts of polycystic ovary syndrome (PCOS) in Australian women.

A776: Habitual lifestyle of Australian women with PCOS.

Alema Sufa Melka (PhD Candidate, The University of Newcastle)

Supervisors: Dr Catherine Chojenta, Professor Deborah Loxton, Dr Liz Holliday

A701: Substance use and sexual behaviours among young Australian women.

Gabriele Mena (PhD Candidate, The University of Queensland)

Supervisor: Professor Wendy Brown.

A728: Understanding the relationships between weight gain, PA & reproductive health.

Melissa Pereira (PhD Candidate, The University of Newcastle)

Supervisors: Dr Catherine Chojenta, Professor Deborah Loxton, Dr Nicole Reilly

A762: Healthy mother, sustainable nation.

Grace Baxter (Honours student, The University of Queensland)

Supervisor: A/Professor Leigh Tooth

A761: Mental health in young Australian women living in rural and remote areas.

Anton Pak (PhD Candidate, The University of Queensland)

Supervisors: Professor Brenda Gannon and Professor Pravin Trivedi

A750: Do access, quality and cost of GP services influence a patient's decision to visit ED?

Dr Michael Wright (PhD Candidate, University Technology Sydney)

Supervisors: Professor Jane Hall, A/Professor Kees van Gool, Professor Marion Haas

A594: The value of continuity of care in Australian general practice.

5 SUMMARY OF MAJOR CHANGES

This report documents changes in the women's self-reported health and wellbeing from when they were 18-23 to 22-27 years. The changes reflect the women's transitioning life stages, with moderation of late teenage/early adult behaviours, educational attainment and employment opportunities, the development of more stable relationships and reproductive choices. They also reflect the impact of changing patterns of health risk behaviours, exposure to intimate partner violence and childhood abuse and document the early development of chronic disease. As the women of the ALSWH 1989-95 cohort age, the data collected from them and from linked administrative datasets will enable more complex longitudinal analyses that will help to uncover the pathways to disease, reproductive choices, the impact of health services and the factors that underlie and promote good health. The following section summarises some of the significant findings and implications for future research.

Across Surveys 1 to 5, the women showed a general improvement in health behaviours and less participation in activities that may threaten their future health. For example, less risky drinking, increased physical activity levels, increased adherence to healthy dietary guidelines and reduced smoking. Within these health behaviours however, some issues are potentially of concern. While the prevalence of smoking reduced slightly from 14% to 12%, around 9.5% of women reported having used e-cigarettes (vaping). Research with this cohort has shown that while vaping is higher in women who previously smoked cigarettes, who also consume alcohol at risky levels and in those with a history of childhood or partner abuse, it is also prevalent in women who never smoked cigarettes. The health service use and public health implications of vaping require attention. Another issue of concern is that problematic drinking (the consumption of more than 2 standard drinks per day) also remained high at 44% of women at Survey 5, even though it was a decrease from Survey 1 (57%).

Women from this cohort reported a slight improvement in adherence to the five serves a day guideline for vegetable consumption (from 8% to 12%), but a majority of women fail to meet this recommended dietary intake. Adherence to guidelines for fruit consumption (two serves a day) was better, increasing to 38.9% by Survey 5. There is still room for great improvement in the diets of young women.

Women were more likely to adhere to higher levels of physical activity. A steady 70% of women reported participating in moderate or high levels of physical activity across the surveys. While these proportions are pleasing, more concerning has been the decrease in the percent of women in the 'healthy or acceptable' body mass index category according to World Health Organisation guidelines. The percent of women classified as overweight or obese rose from 31% to 44% from Survey 1 to Survey 5. Obesity and overweight have serious health consequences and this cohort will be at higher risk than previous generations of developing chronic conditions and needing more health services at younger ages. Identification of the women at greatest risk of overweight and obesity remains a priority, as does the need for enhancing adherence to diet and physical activity guidelines, as these are among the best methods of reducing weight gain.

While the prevalence of some chronic conditions in this cohort is generally low, by Survey 5 almost 50% reported being diagnosed with or treated for low iron, around 27% reported having asthma, over 15% reported allergies, back pain, skin problems or headaches/migraines and around 10% of women had urinary problems. Of concern also is that one in five women reported having difficulty sleeping, with this percentage remaining steady across the surveys. The combination of obesity and overweight, poor diet,

sleeping problems, risky alcohol consumption, and its impact on mental health and health service use are avenues for future research.

Compared to Survey 1, more women reported mental health problems by Survey 5. Prevalence of ever having anxiety increased from 27% to 38%, and prevalence of ever having depression increased from 33% to 40%. On the positive side, fewer women had very high levels of psychological distress as measured by the Kessler Psychological Distress Scale. Many factors influence mental health and psychological distress, including socio-economic factors, where women live, chronic disease, overweight and obesity, sexual and reproductive issues, physical activity, childhood, relationships, and abuse including bullying. While data from the other ALSWH cohorts shows that mental health tends to improve with age, women of the 1989-95 cohort are showing high prevalence of distress and there is an urgent need for research into strategies to improve diagnosis and management of mental health problems among young women.

At the ages of 22 to 27, about 40% of the women in this cohort were married or in a de facto relationship, with 9% having given birth to at least one child, 4.5% having experienced a miscarriage and 6% a termination. The number of women reporting birth of a child is expected to rise exponentially over the next decade with the women at their peak fertility, and with 85% aspiring to have children by the time they are 40. The impacts of health conditions that may impact fertility (such as Polycystic Ovary Syndrome (PCOS), endometriosis and other menstrual problems), the women's work patterns and aspirations, the women's intimate relationships and socio-economic factors (such as income stability and home ownership) on having children over the next decade will be important to determine. Around 11% of women at Survey 5 reported being of a bisexual, lesbian or asexual orientation. Very little is known about these women's mental, sexual and reproductive health and health service use and how they differ from previous generations.

Sexual health and gynaecological conditions are a significant challenge for women in their 20s and will continue to be so as they enter their peak reproductive years over the next decade. Since Survey 1, women reported an increase in sexually transmitted infections (STIs) such as chlamydia, genital herpes and thrush. Necessary research in this area includes determining the preventative factors for the transmission of these STIs, and the impact of STIs on fertility and pregnancy outcomes, as well as health service use and future sexual health.

Polycystic Ovary Syndrome (PCOS) and endometriosis, conditions which can be significantly debilitating for women and which may negatively impact their fertility, quality of life and employment were reported by 10% and 6% of women respectively in Survey 5. Based on current projections from the other ALSWH cohorts, the prevalence of these conditions will be expected to rise as the women age. Research underway aims to determine the sociodemographic, reproductive, physical and psychosocial characteristics of women with these conditions, the factors associated with time to first diagnosis of endometriosis, and the economic impact of these conditions, particularly with regard to employment and health service use.

Finally, in terms of prevention strategies, uptake of pap smears continued to be generally good for this cohort at 56%, with a third having their skin checked and 88% having had the HPV vaccine. Determining factors associated with the prevention choices that women make, particularly for choices directly aligned with future chronic disease are avenues for more research.