

# **Australian Longitudinal Study on Women's Health**

**1973-78 COHORT**

**SUMMARY 1996 – 2012**

June 2014

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# 1 INTRODUCTION AND BACKGROUND

The Australian Longitudinal Study on Women's Health (ALSWH) is a longitudinal population-based survey examining the health of over 50,000 Australian women. The Study follows women in four age cohorts, and a summary of the cohort born 1973-78 (now aged 36-41) who were first surveyed aged 18-23 in 1996 is presented here.

The 1973-78 cohort was recruited from the name and address database of the Australian Health Insurance Commission (now Medicare Australia). Sampling was random, except that women living in rural and remote areas were sampled at twice the rate of women in urban areas, in order to capture the heterogeneity of health experiences of women living outside metropolitan areas. All results given in this report have been weighted to account for the over-sampling of women in rural and remote areas. The cohort has been surveyed six times since 1996 and details of survey dates and response rates are shown in Table 1-1. Surveys 1 – 5 were offered as paper surveys only, and were mailed to participants. For Survey 6 in 2012, participants were also offered the option of completing the survey online.

**Table 1-1 ALSWH 1973-78 cohort - schedule of surveys and response rates 1996 - 2012**

Survey 1 (1996)	Survey 2 (2000)	Survey 3 (2003)	Survey 4 (2006)	Survey 5 (2009)	Survey 6 (2012)
Age 18-23	Age 22-27	Age 25-30	Age 28-33	Age 31-36	Age 34-39
N = 14,247	N = 9,688	N = 9,081	N = 9,145	N = 8,200	N = 8,010

The six surveys of the cohort have covered the main issues affecting the health of young women in contemporary Australian society. Questions have been chosen to reflect national health and social policy concerns, as well as to add to knowledge of women's well-being during this stage of the life-span. Topics have included:

- Socio-demographic factors (including education, employment, household composition)
- Health behaviours and risk factors (such as nutrition, physical activity, smoking, alcohol, and other drugs)
- Mental health (including depression and anxiety)
- Physical health (including health related quality of life, diseases, conditions, symptoms)
- Use of health services (GPs, specialists, hospitals)
- Ease of access to health services and satisfaction with services
- Reproductive health (including contraception, childbirth, fertility problems)
- Time use (including paid and unpaid work, family roles, leisure)
- Interpersonal violence

Standard validated questions from both Australian and overseas sources have been used in the surveys, to allow findings to be compared directly with information from other studies. The research team have also at times had to develop specific survey items, such as the Perceived Stress Questionnaire for Young Women (Bell & Lee, 2002), when there have been no suitable existing questions, thus contributing further to the international research literature.

## 2 COHORT TRAJECTORIES 1996 – 2012

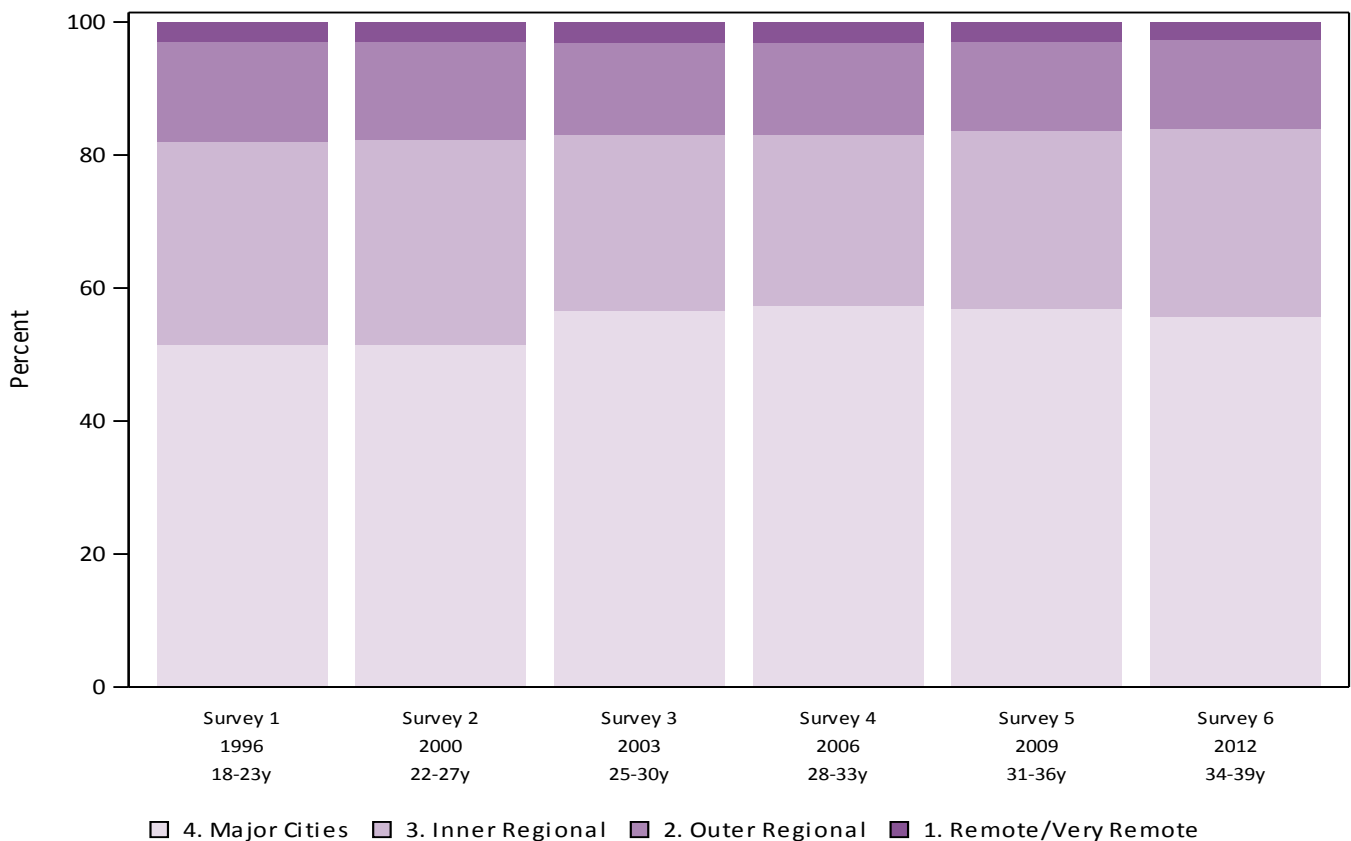
Trajectories show the cohort’s responses to questions asked on surveys during the period 1996 to 2012. For each trajectory, an example survey question has been included – however it is important to note that questions have sometimes changed from survey to survey, and the example question is intended as a guide only. Additionally, each trajectory includes data only from participants who answered the question at every survey shown in the trajectory – for example, in the trajectory for employment (Figure 3), only participants who answered the relevant employment questions at Survey 3, Survey 4, Survey 5 and Survey 6 have been included. Participants who answered the questions at one, two or three of these surveys, but not all of them, have been excluded.

Complete data for every survey, including questions and responses, are available in the ALSWH databooks, available at: <http://www.alswh.org.au/for-researchers/data/data-books>

### 2.1 Sociodemographics

#### 2.1.1 Area of residence

QUESTION: What is your (current) postcode?



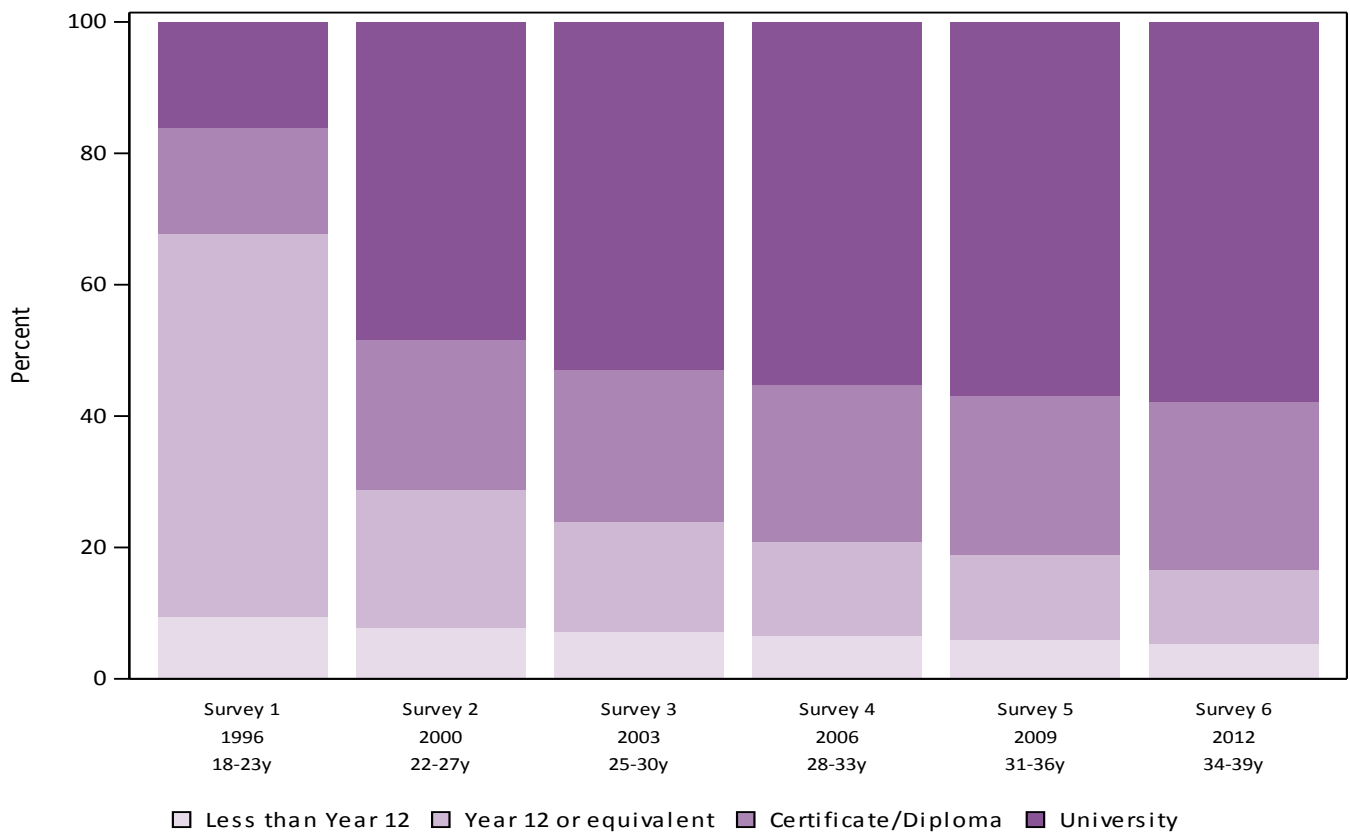
**Figure 2-1 Participant area of residence at time of survey from Survey 1 to Survey 6 (N=4,904).**

Over time, the percentage of women living in outer regional and remote areas remained fairly stable, although from Survey 3, the percentage of women living in major cities increased slightly.

## 2.1.2 Education

QUESTION: What is the highest qualification you have completed?

- No formal qualifications
- School Certificate (Year 10)
- Higher School Certificate (Year 12 equivalent)
- Trade apprenticeship
- Certificate/diploma
- University degree
- Higher university degree



**Figure 2-2 Highest educational qualification from Survey 1 to Survey 6 (N=4,879).**

When first surveyed in 1996, many of the women were commencing higher education. At Survey 1, about 30% of the women reported having a certificate/diploma or university degree; by Survey 6 in 2012, this percentage had increased to 80%. The proportion of women with less than Year 12 qualifications decreased slightly over time, although at Survey 6 about 10% of the women still reported that they had completed less than Year 12.

### 2.1.3 Employment /Occupation

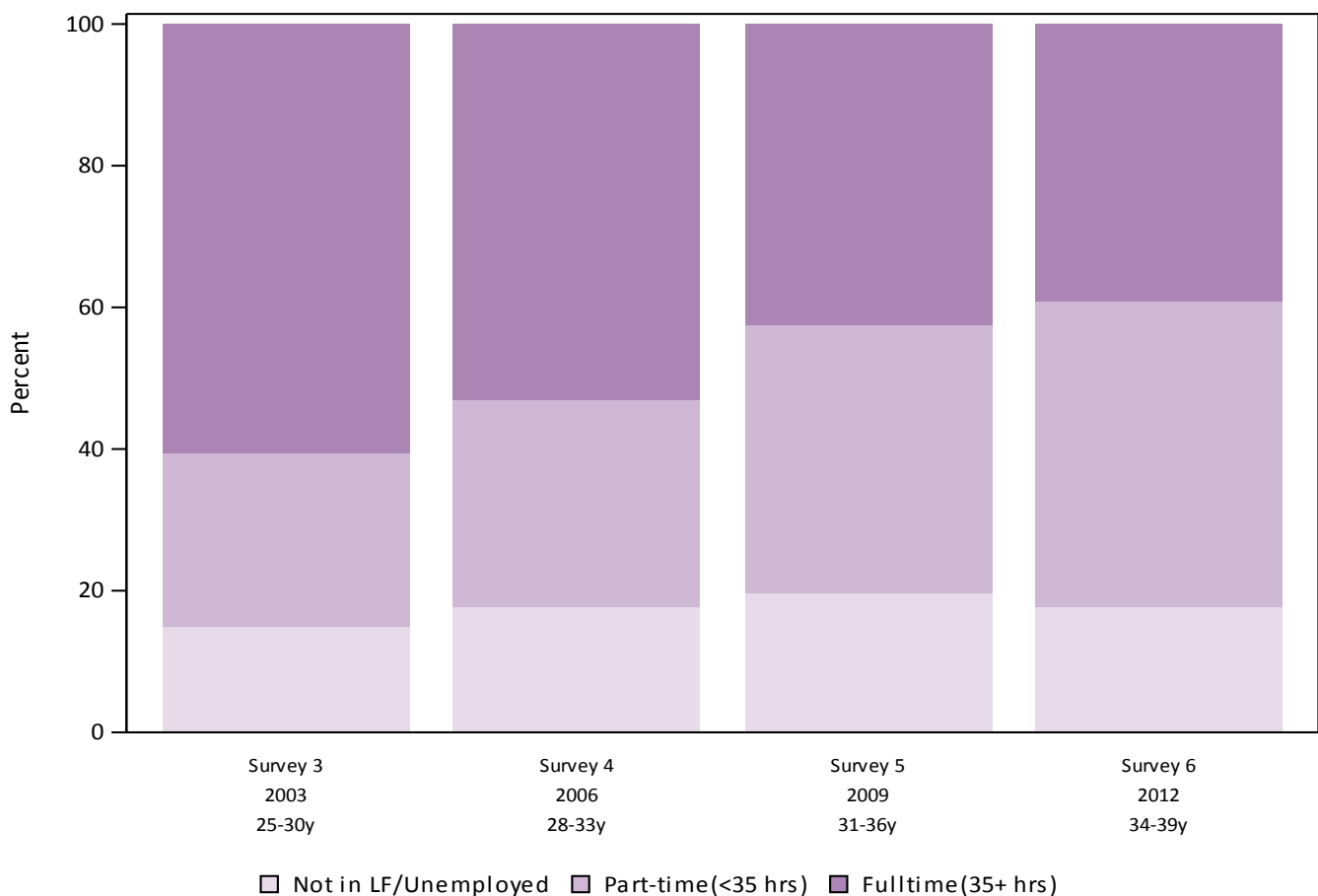
QUESTION: In the LAST WEEK, how much time in total did you spend doing the following things? Full time paid work; Permanent part-time paid work; Casual paid work; Work without pay (e.g. family business).

- 1-15 hours
- 16-24 hours
- 25-34 hours
- 35-40 hours
- 41-48 hours
- 49 hours or more

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 labour force is calculated from responses to each question.

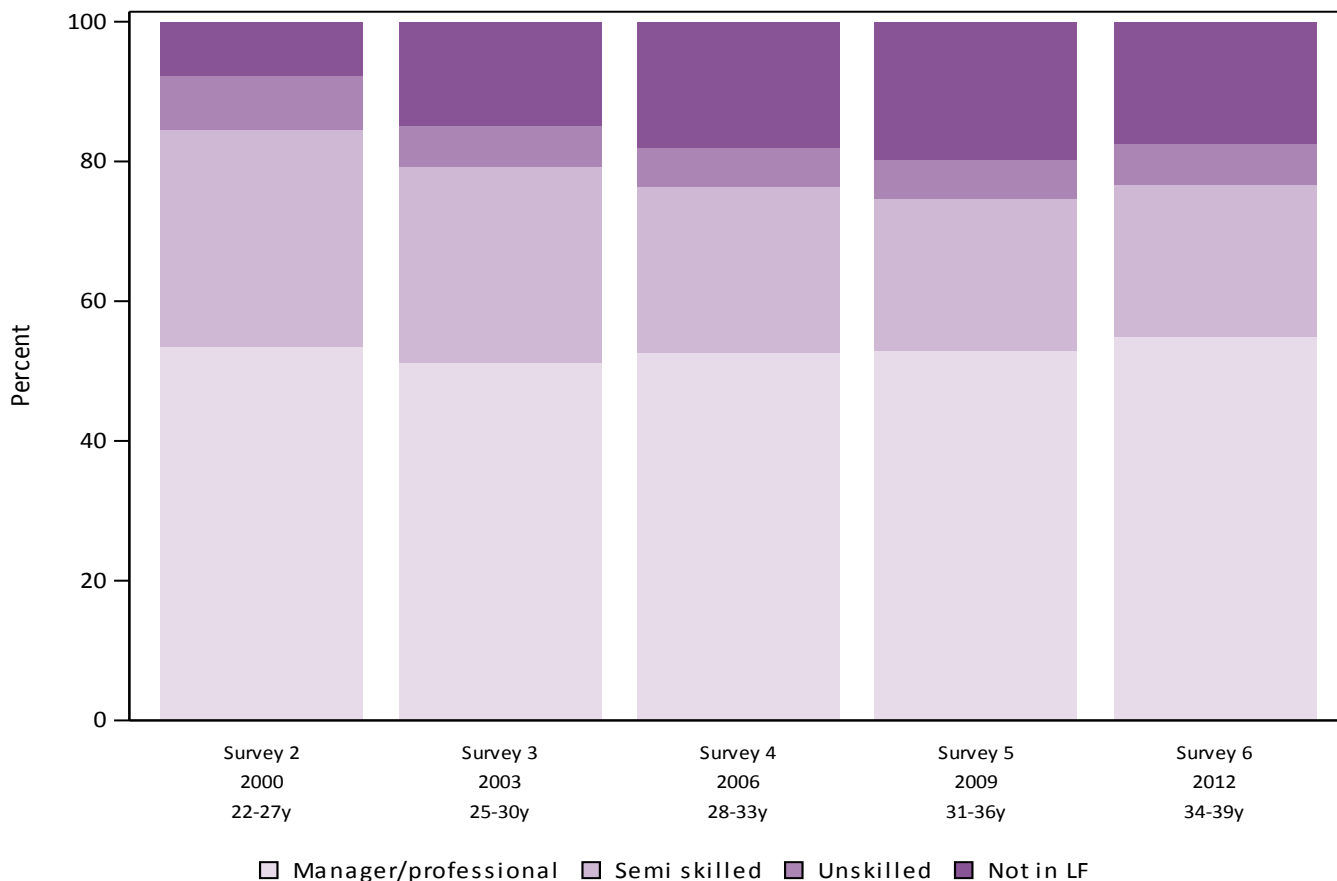


**Figure 2-3 Participation in labour force (LF) from Survey 3 to Survey 6 (N=4,874).**

Note: Due to differences in question format, data from Survey 1 and Survey 2 has not been included. Data from all surveys are available in the survey databooks, available at: <http://www.alswh.org.au/for-researchers/data/data-books>

The number of women who were working full time decreased over time, from about two-thirds at Survey 3 to about 40% of the women at Survey 6. However between 1996 and 2012, the number of women in part time employment increased, probably reflecting a life stage in which the women were having children and adjusting their working hours accordingly.

QUESTION: What is your main occupation?



**Figure 2-4 Occupation category from Survey 2 to Survey 6 (N=4,788).**

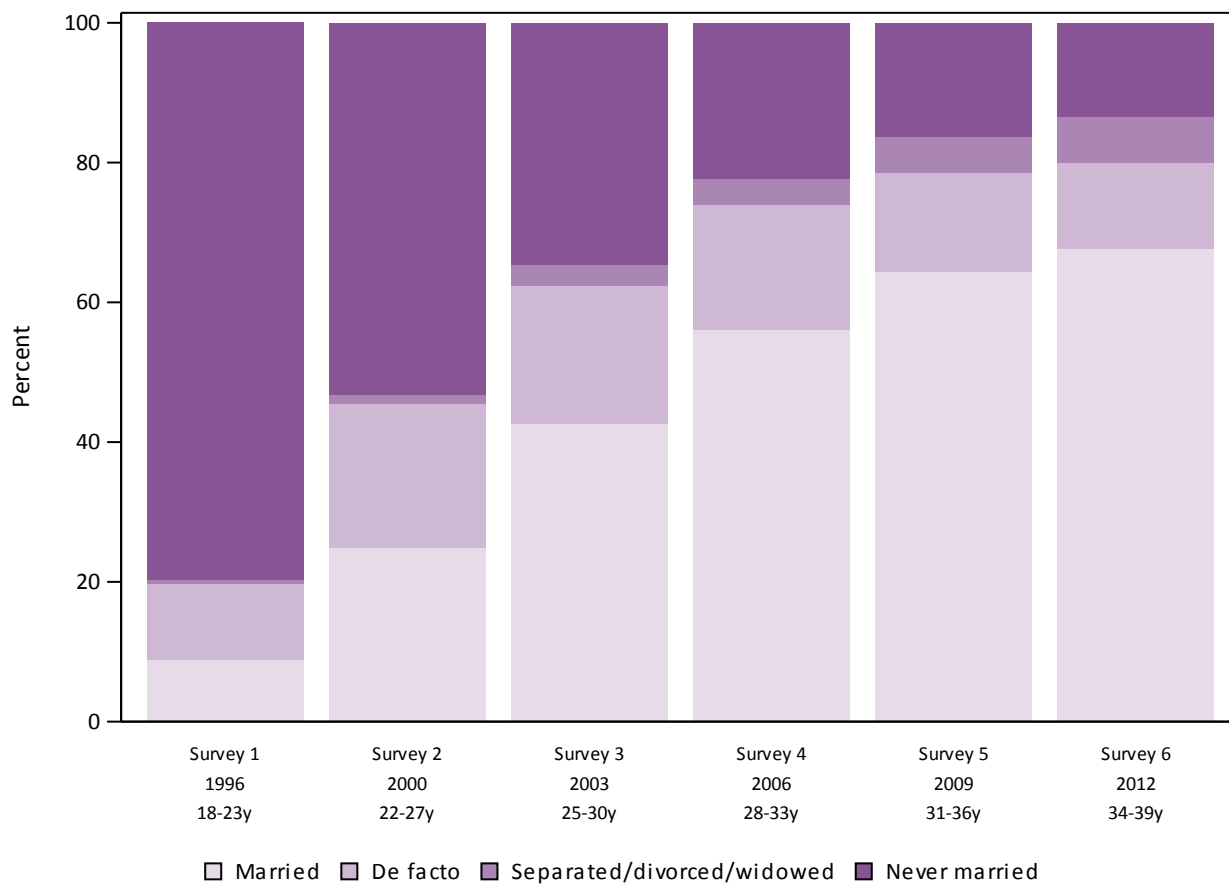
Consistent with the previous figure, Figure 2-4 depicts an increase in the percentage of women who were not in the labour force, again possibly reflective of the women's life stage as they began to establish families.



### 2.1.4 Marital Status/Living arrangements

QUESTION: What is your present (formal registered) marital status? \*(At Survey 2, De Facto (opposite sex) and De Facto (same sex) were replaced by the single option: De Facto).

- Married
- De Facto (opposite sex)\*
- De Facto (same sex)\*
- Separated
- Divorced
- Widowed
- Never married



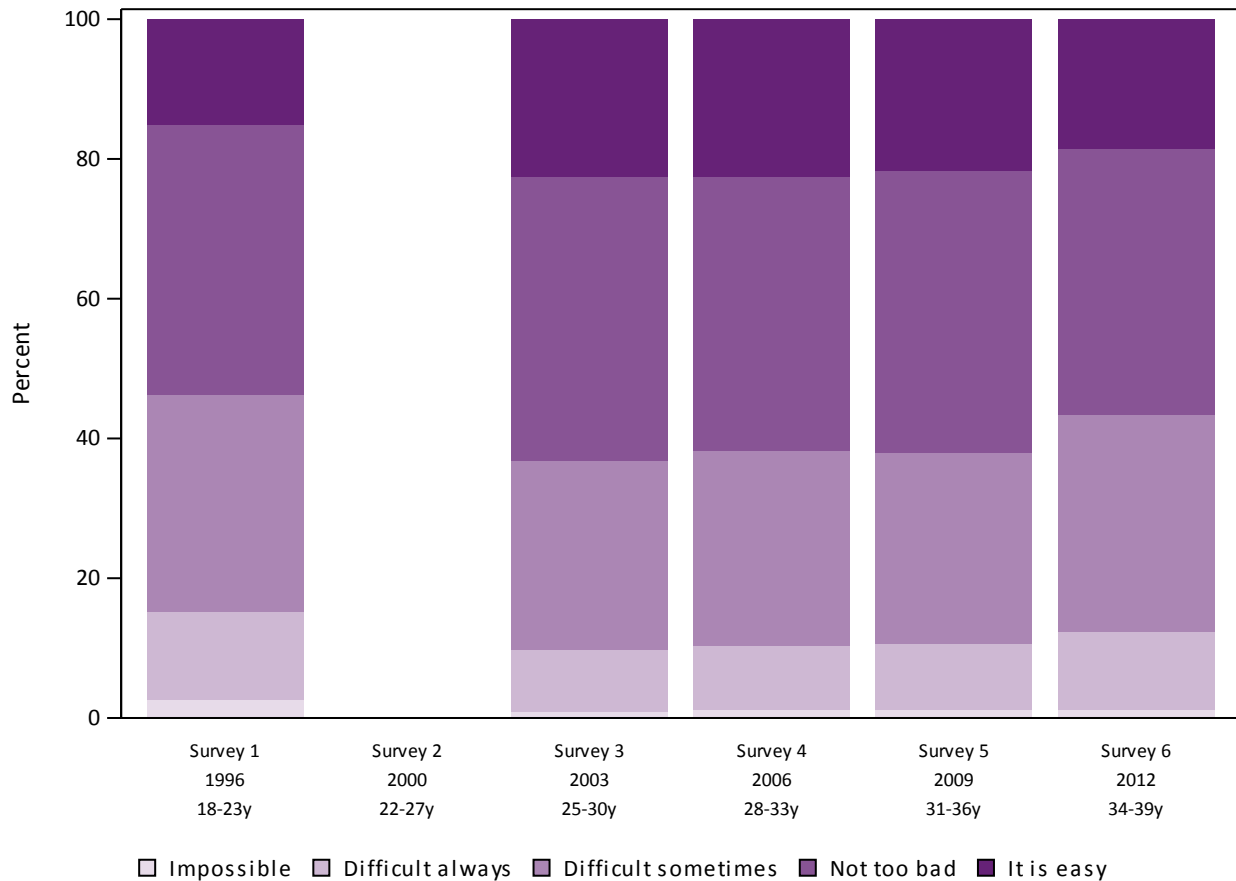
**Figure 2-5 Marital Status from Survey 1 to Survey 6 (N=5,116).**

Most of the women (approximately 80%) at Survey 1 had never been married and by Survey 6 in 2012 most were married (approximately 70%), or in a de facto relationship (approximately 10%). The percentage of women who were either married or in a de facto relationship increased over sixteen years, although at each survey marriage was the more common relationship response. The proportion of women who reported that they were separated, divorced or widowed increased over time, and by Survey 6 only about 15% of women had never been married.

### 2.1.5 Ability to manage on income

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

- It is impossible
- Difficult all the time
- Difficult some of the time
- Not too bad
- It is easy



**Figure 2-6 Ability to manage on income from Survey 1 to Survey 6 (N=5,639).**

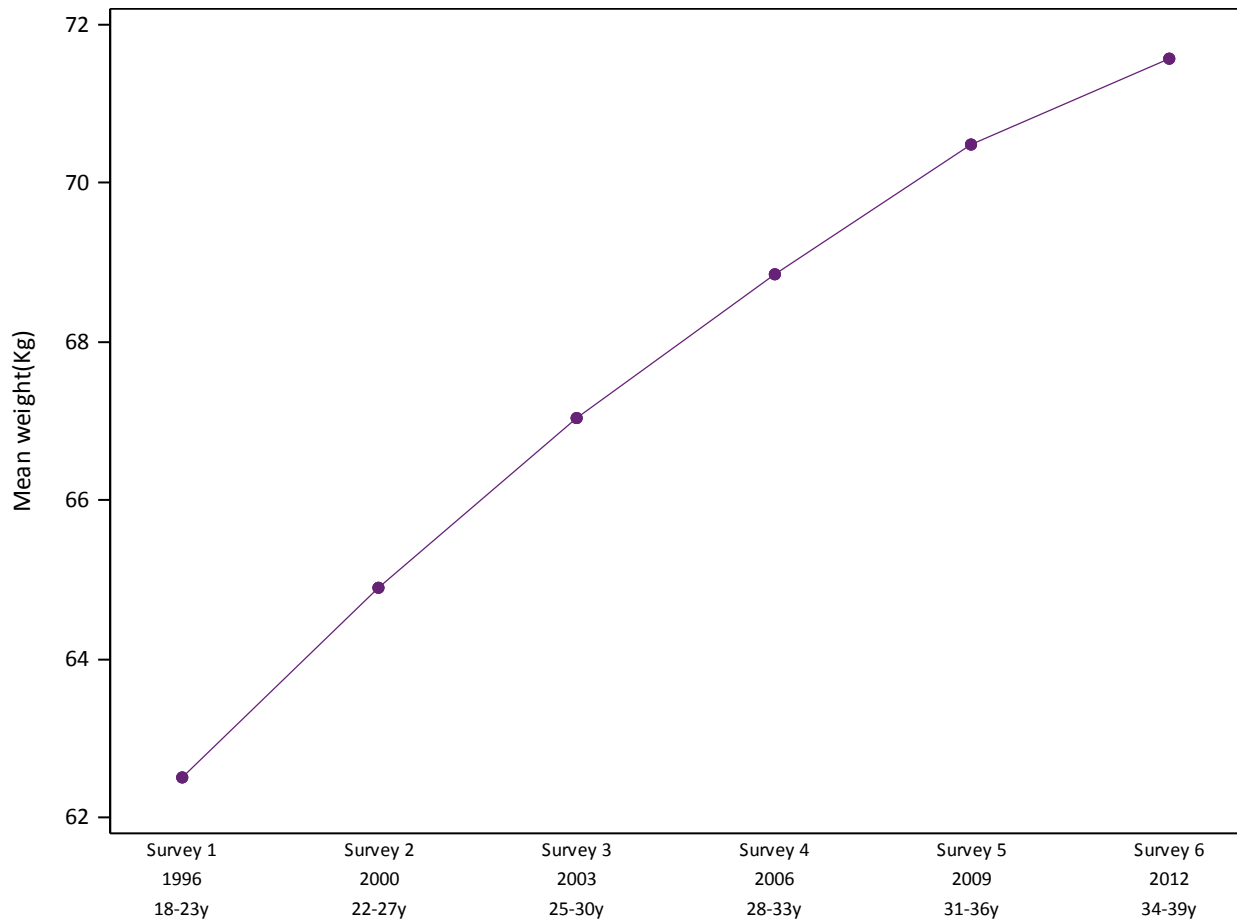
*Note:* Question was not asked at Survey 2

Most of the women found it easy or not too bad managing on their income at Survey 1, and this remained consistent across Surveys 3, 4 and 5 (Item was not included at Survey 2). By Survey 6, when the women were aged 34-39, somewhat more of them were reporting difficulties always or sometimes, and fewer responded ‘it is easy’. This change may reflect an increase in the percentage of women in part time work and decrease of those in full time work.

## 2.2 Lifestyle

### 2.2.1 Weight and Body Mass Index (BMI)

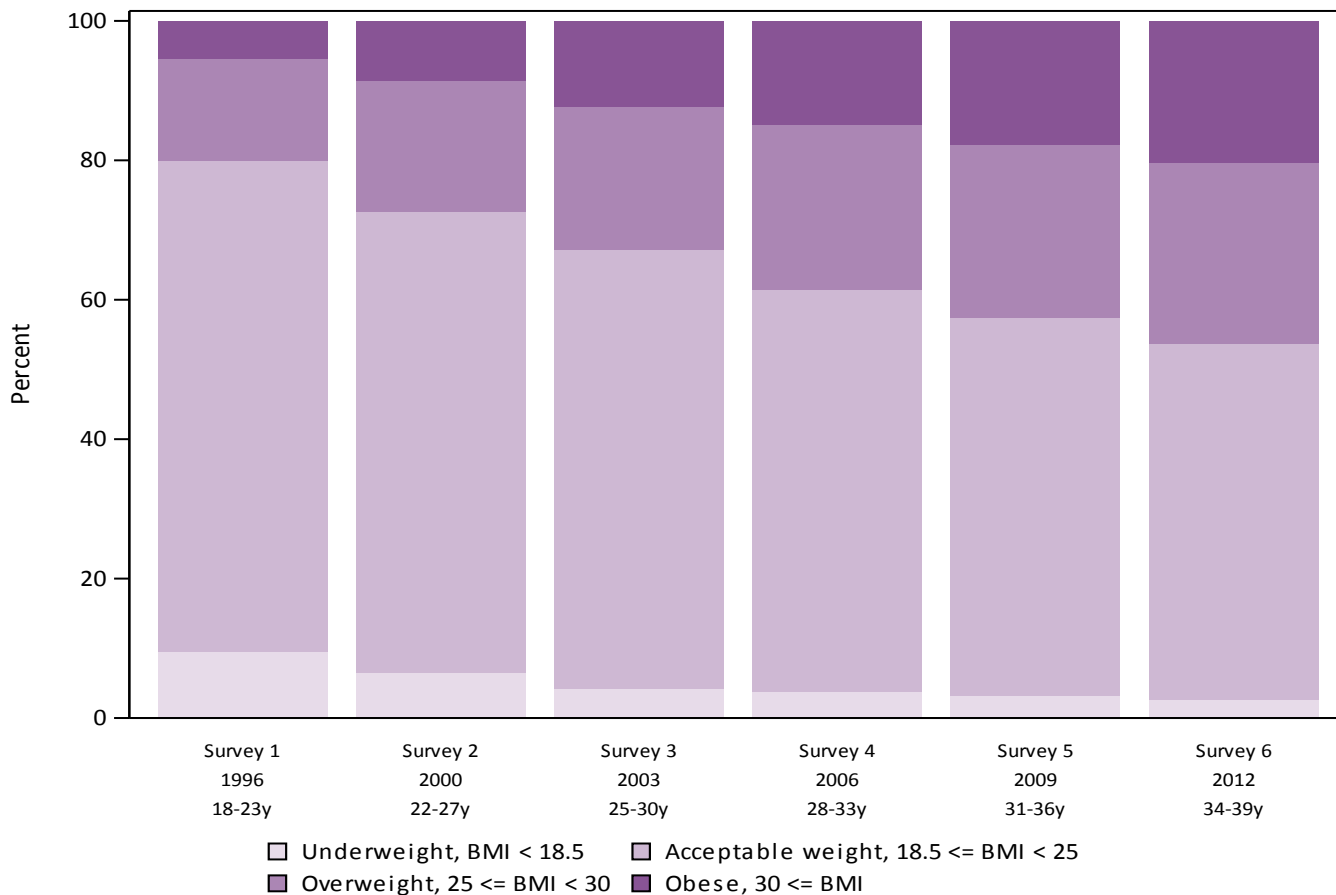
QUESTION: How much do you weigh without clothes or shoes? (Surveys 4-6 have included instructions for pregnant women to supply pre-pregnancy weight, estimating if they were unsure).



**Figure 2-7 Participant weight from Survey 1 to Survey 6 (N=4,105).**

QUESTION: How tall are you without shoes? + QUESTION: How much do you weigh without clothes or shoes? (Surveys 4-6 have included instructions for pregnant women to supply pre-pregnancy weight, estimating if they were unsure).

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



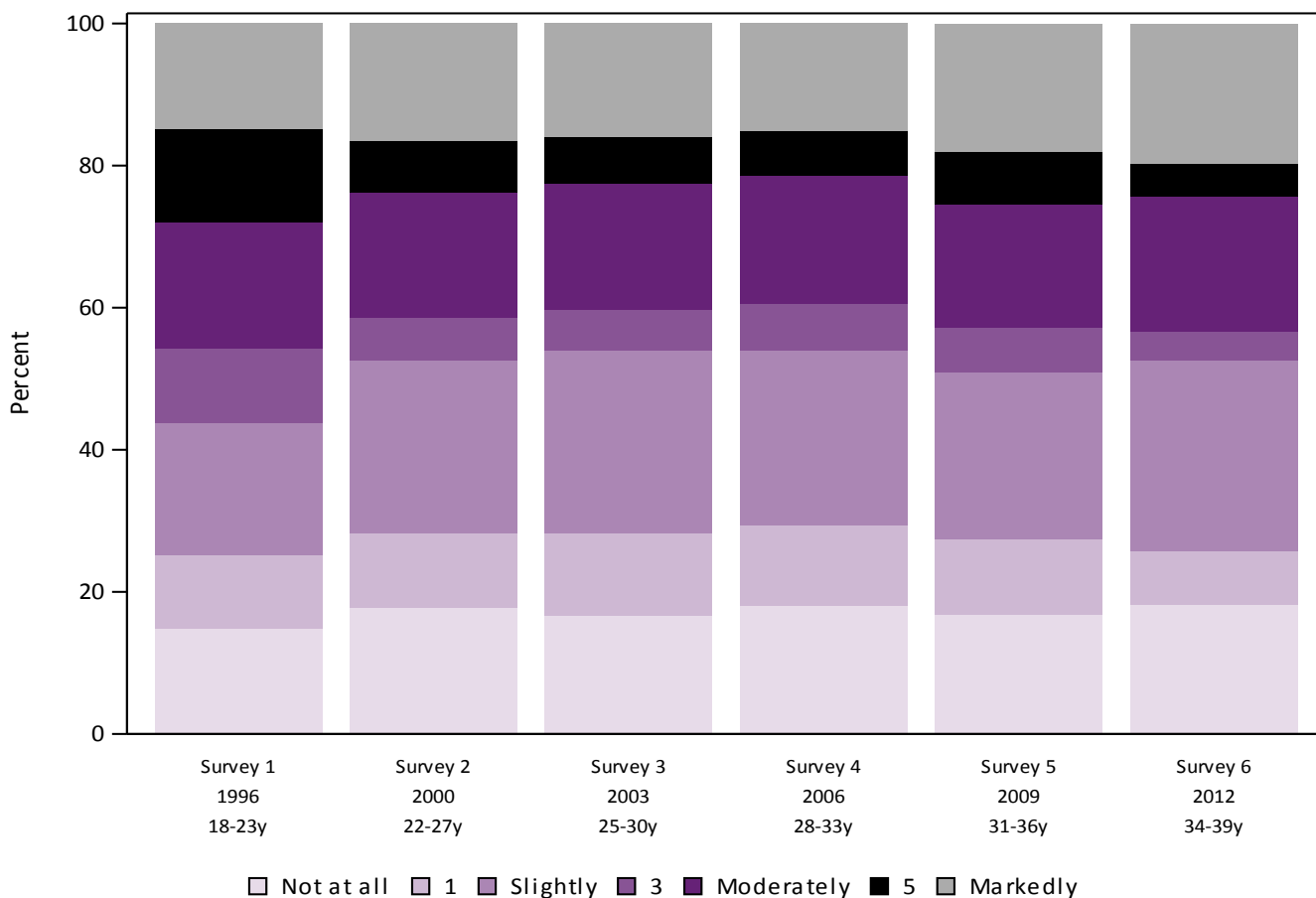
**Figure 2-8 Body Mass Index (BMI) from Survey 1 to Survey 6 (N=4,064).**

There is a marked increase in weight over time and a concomitant increase in the percentage of women whose BMI was within the overweight or obese categories, from 20% at Survey 1 to around 45% by Survey 6. A small percentage of women reported being underweight at Survey 1 and this has fallen steadily over the five subsequent surveys.

### 2.2.2 Satisfaction with weight

QUESTION: In the past month, how dissatisfied have you felt about your weight? (Responses 1, 3, and 5 allowed participants to respond in between categories.)

- 0. Not at all
- 1.
- 2. Slightly
- 3.
- 4. Moderately
- 5.
- 6. Markedly



**Figure 2-9 Satisfaction with weight from Survey 1 to Survey 6 (categories 1, 3, and 5 lie between their adjacent named levels) (N=5,052).**

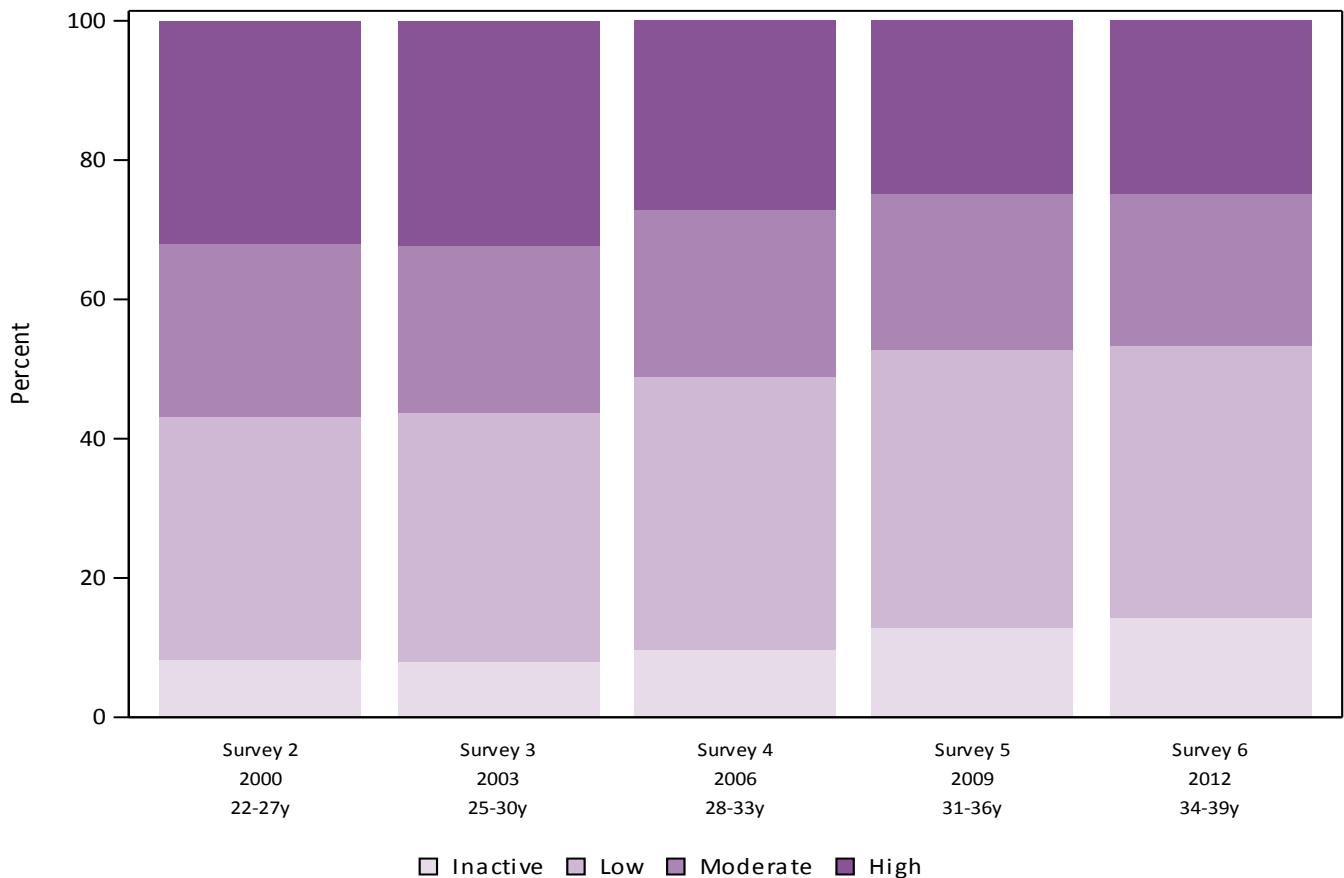
Across all six surveys, most women were dissatisfied with their weight, with more than 40% of women reporting that they were at least moderately dissatisfied. Additional detail about this question can be found in Table 5-1 in Appendix A.

### 2.2.3 Physical Activity

QUESTION: How many times did you do each type of activity last week? Only count the number of times the activity lasted for longer than 10 minutes.

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

QUESTION: How much time did you spend altogether on each?

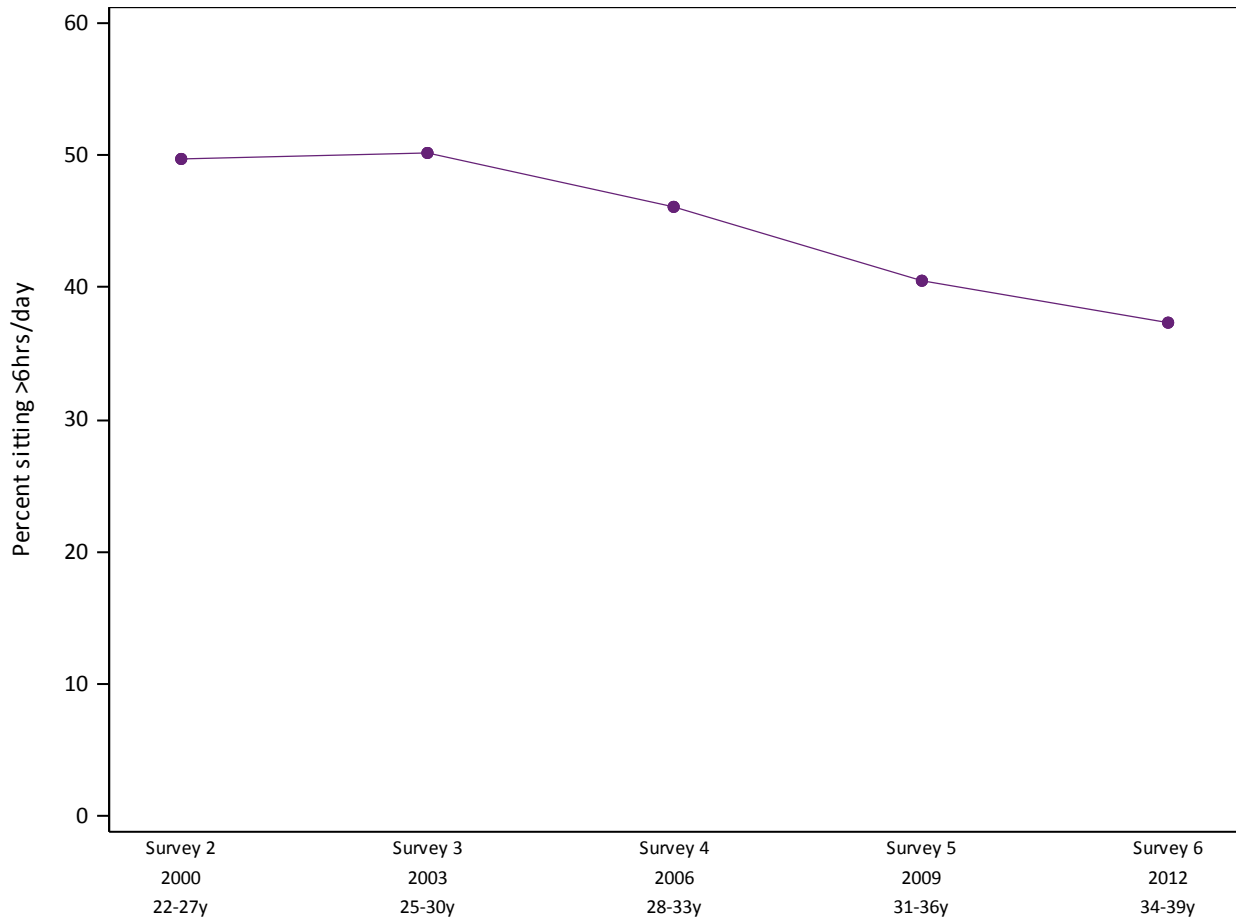


**Figure 2-10 Physical Activity from Survey 2 to Survey 6 (N = 4,665).**

*Note:* Physical activity questions asked on Survey 1 are not comparable with those asked on subsequent surveys, and have not been included.

A decreasing percentage of women report moderate or high levels of physical activity, although this seems to stabilise from Survey 5. Over time an increasing percentage of women reported that they were sedentary or did either none or low levels of physical activity, with over half of the women in these categories by Survey 5. Details of how levels of physical activity are calculated, and further breakdown of physical activity by BMI category can be found in Table 5-2 in Appendix A.

QUESTION: Now think about all of the time you spend sitting during each day while at home, at work, while getting from place to place or during your spare time. How many hours in total do you typically spend sitting down while doing things like visiting friends, driving, reading, watching television, or working at a desk or computer on a usual week/weekend day?

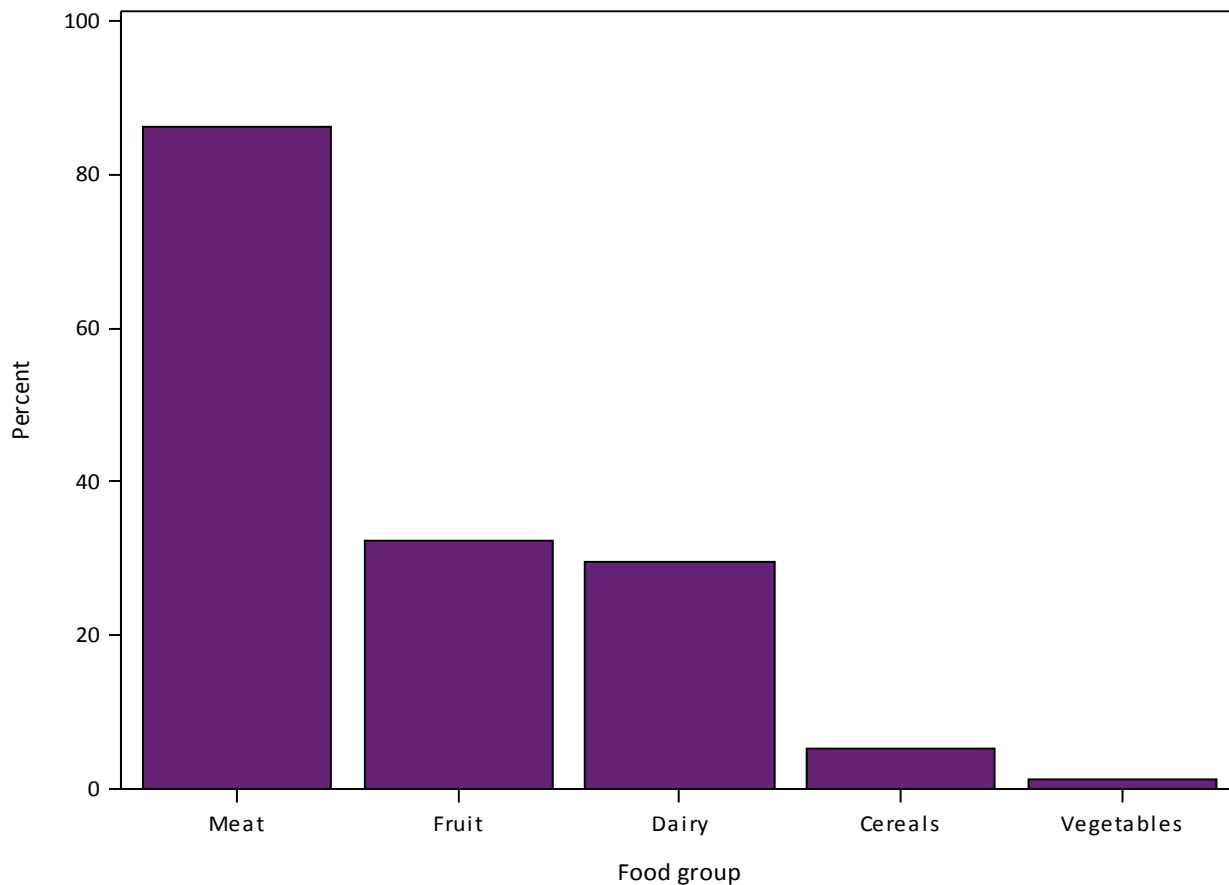


**Figure 2-11 Percentage of women sitting more than 6 hours/day from Survey 2 to Survey 6 (N=4,265).**

While an increasing percentage of women were classified as inactive or with only low levels of physical activity (Figure 2-10), Figure 2-11 indicates that since Survey 3 the women have reported progressively less sitting time.

## 2.2.4 Diet and Nutrition

The diet of women born 1973-78 was examined most recently in a food-frequency questionnaire (FFQ) included in Survey 5 (2009), when the cohort were 31-36 years old. The FFQ asked how often, on average, women had eaten specific types of food. How well young women meet recommended dietary guidelines as set out in the 2003 Australian Guide to Healthy Eating is shown here. The findings have been split into two groups: women who were not pregnant at Survey 5 and women who were pregnant at Survey 5.



\*Meat food group includes meat substitutes.

**Figure 2-12 Percentage of young women in 2009 who were not pregnant who met dietary guidelines for each food group as set out in the *Australian Guide to Healthy Eating*; (N = 5760).**

The majority of young women who were not pregnant did not meet guidelines for any food group (Figure 2-12), except *Meat and meat substitutes*, where 86% met the guidelines. Only around a third reached the intake guidelines for *Fruit* and *Dairy* and the recommended intakes for *Cereals* and *Vegetables* were met by only five per cent or less of the young women. On average less than three serves of *Cereals* (2.0) and *Vegetables* (2.1) were consumed per day, or less than half of the suggested intakes for these food groups (Table 2-1). In contrast, only one in ten did not exceed the guidelines for the *Extras* group (typically nutrient poor, high fat or high-energy food items); average daily intake of *Extras* was more than three and a half serves (3.7) and the guideline is 2.5 serves.

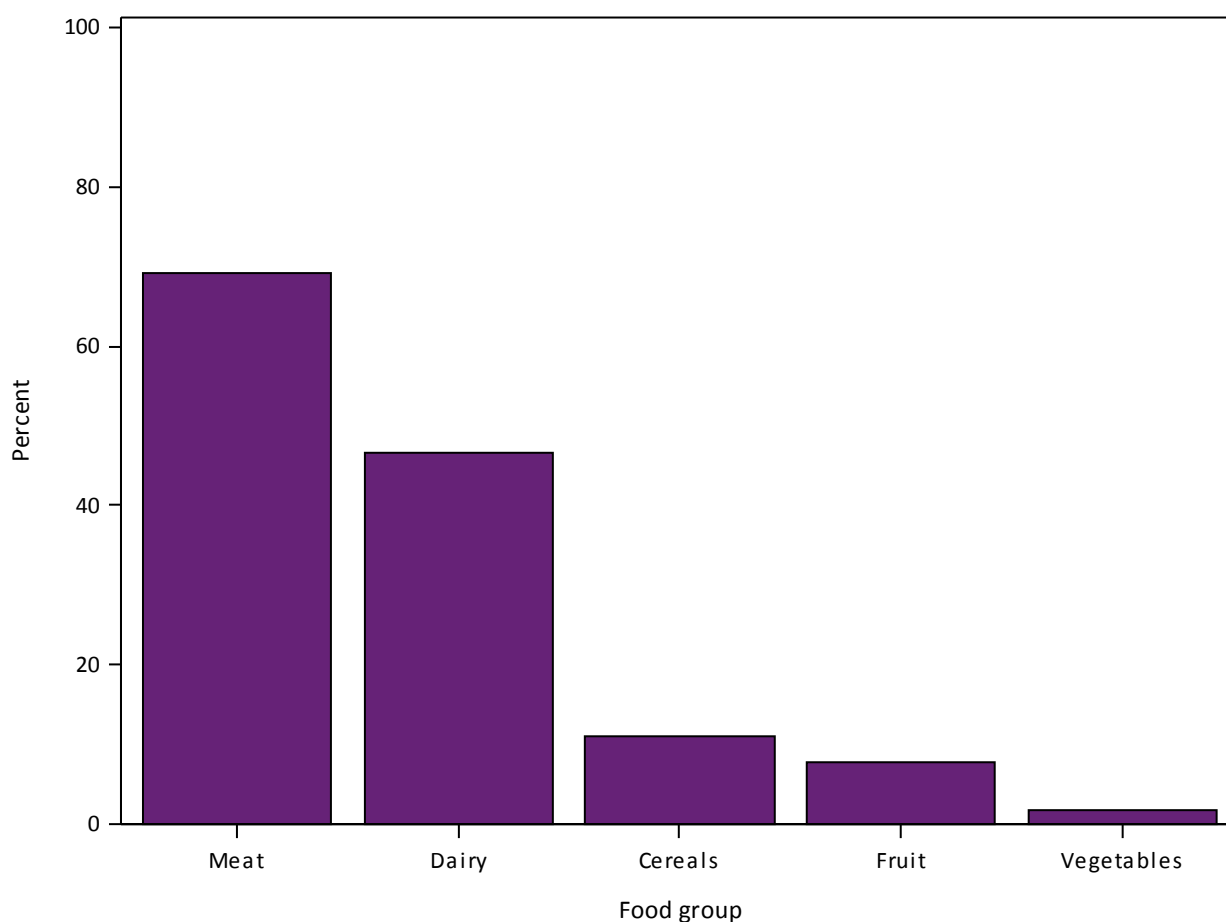


**Table 2-1 Intake in servings per day of food groups for young who were not pregnant in 2009 (N = 3981).**

Food group	Median (IQR) <sup>2</sup>	Guideline (19-60 years)
Cereals	2.0 (1.4-2.7)	4-9 serves
Vegetables	2.1 (1.5-2.7)	≥5 serves
Fruit	1.5 (0.9-2.3)	≥2 serves
Dairy	1.6 (1.2-2.1)	≥2 serves
Meat (& meat substitutes)	1.7 (1.3-2.4)	≥1 serves
Extras	3.7 (2.6-5.1)	≤2.5 serve

<sup>1</sup>SD, standard deviation

<sup>2</sup>IQR, interquartile range, middle 50% of intake quartiles



\*Meat food group includes meat substitutes.

**Figure 2-13 Percentage of pregnant women in 2009 who met dietary guidelines for each food group as set out in the 2003 Australian Guide to Healthy Eating; (N = 1999).**

Young women who were pregnant showed a similar pattern to other young women except that more (47%) met the recommended consumption of *Dairy* foods. Only about one in ten, however, followed the guidelines for intakes of *Cereals* (11% met guidelines) and *Fruit* (8% met guidelines), and on average consumption of each was 2.6 or less serves of each per day (2.6 and 2.0 serves respectively). Less than 2% of young pregnant women reached the

recommended intake of *Vegetables*, and on average they consumed only 2.2 serves of vegetables per day compared with the suggested minimum intake of five serves recommended in guidelines.

**Table 2-2 Intake in servings per day for 5 food groups for young women who were pregnant in 2009 at Survey 5 (N = 1999)**

Food group	Median (IQR) <sup>2</sup>	Guideline for pregnant women
Cereals	2.6 (2.0 – 3.2)	4-6 serves
Vegetables	2.2 (1.7 – 2.8)	≥5 serves
Fruit	2.0 (1.2 – 2.9)	≥4 serves
Dairy	1.9 (1.5 – 2.4)	≥2 serves
Meat (& meat substitutes)	1.8 (1.4 – 2.4)	≥1.5 serves
Extras	4.1 (2.9 – 5.5)	≤2.5 serve

<sup>1</sup>SD, standard deviation

<sup>2</sup>IQR, interquartile range, middle 50% of intake quartiles

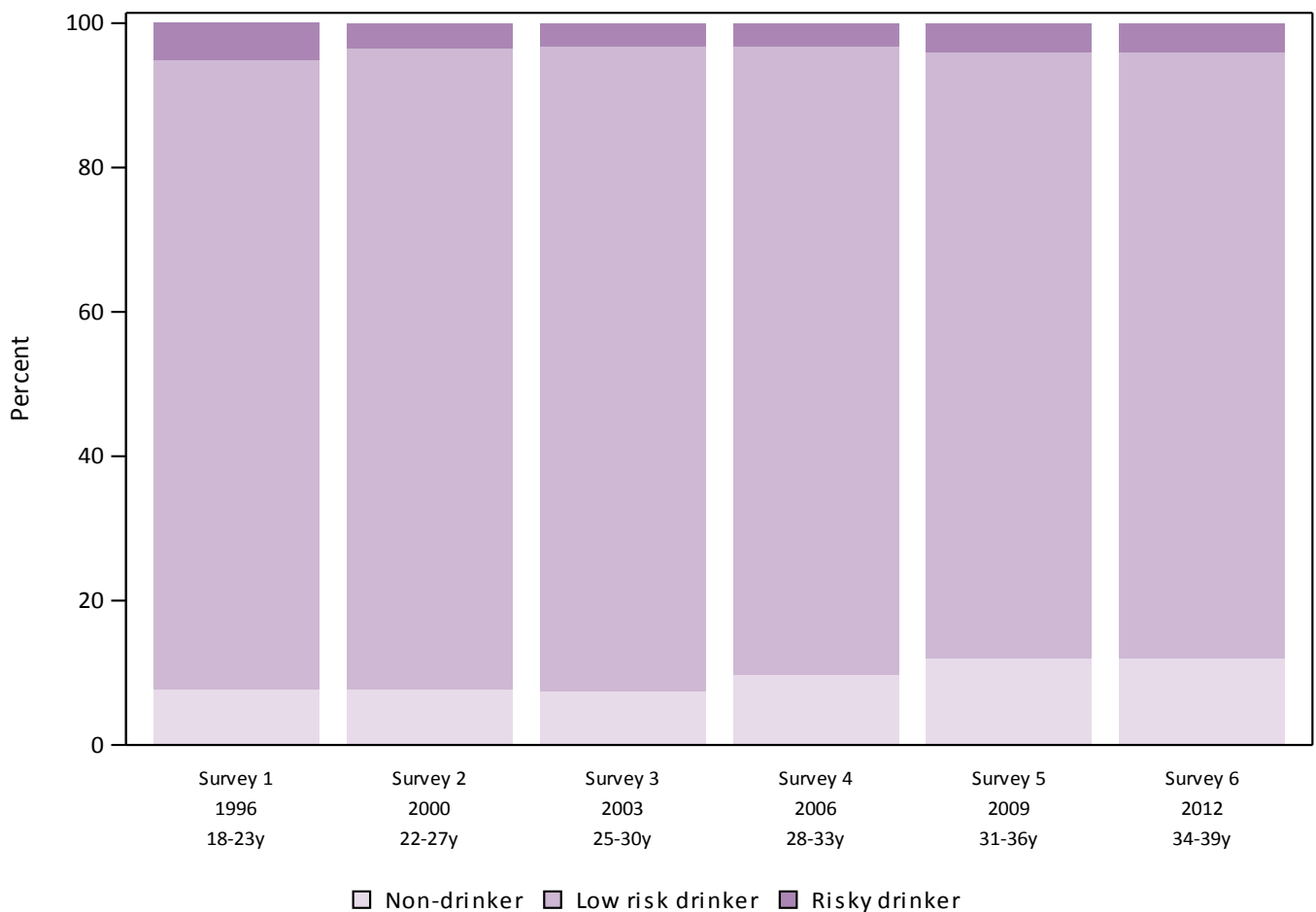
### 2.2.5 Smoking and alcohol use

QUESTION: How often do you usually drink alcohol? Never, rarely, less than once a week, 1-2 days a week, 3-4 days a week, 5-6 days a week, every day.

QUESTION: On a day when you drink alcohol, how many drinks do you usually have? 1-2, 3 or 4, 5-8, 9 or more.

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.

Alcohol consumption is calculated from responses to each question.



**Figure 2-14 Alcohol consumption from Survey 1 to Survey 6 (N=5,060).**

*Note:* Low risk drinker includes up to 2 drinks per day and rarely drinks; Risky drinker includes 3 to 4 drinks per day and 5 or more drinks per day. Categories are based on 2002 NHMRC guidelines.

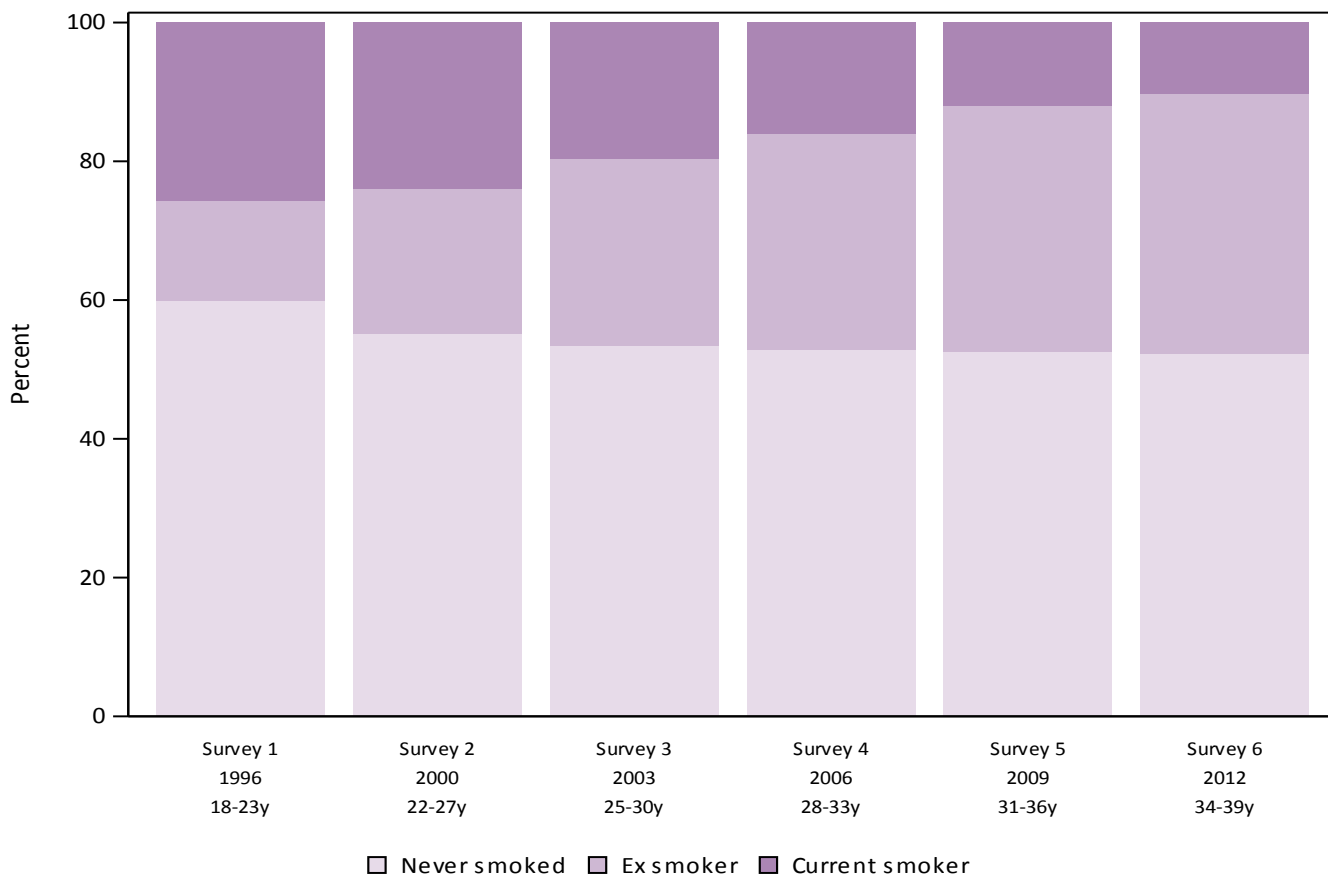
Most of these younger women drank alcohol at low risk levels across all surveys. Levels of risky alcohol consumption were relatively low at Survey 1 and showed a small decline from Survey 1 to Survey 6. During that time, the percentage of women who were categorised as non-drinkers increased, possibly as a result of the women starting families and eliminating alcohol while they were pregnant.

QUESTION: How often do you currently smoke cigarettes, or any tobacco products?

- Daily
- At least weekly (but not daily)
- Less often than weekly
- Not at all

QUESTION: In your lifetime, would you have smoked 100 cigarettes or less? Yes/No.

Responses to each question are used in calculations of smoking prevalence.

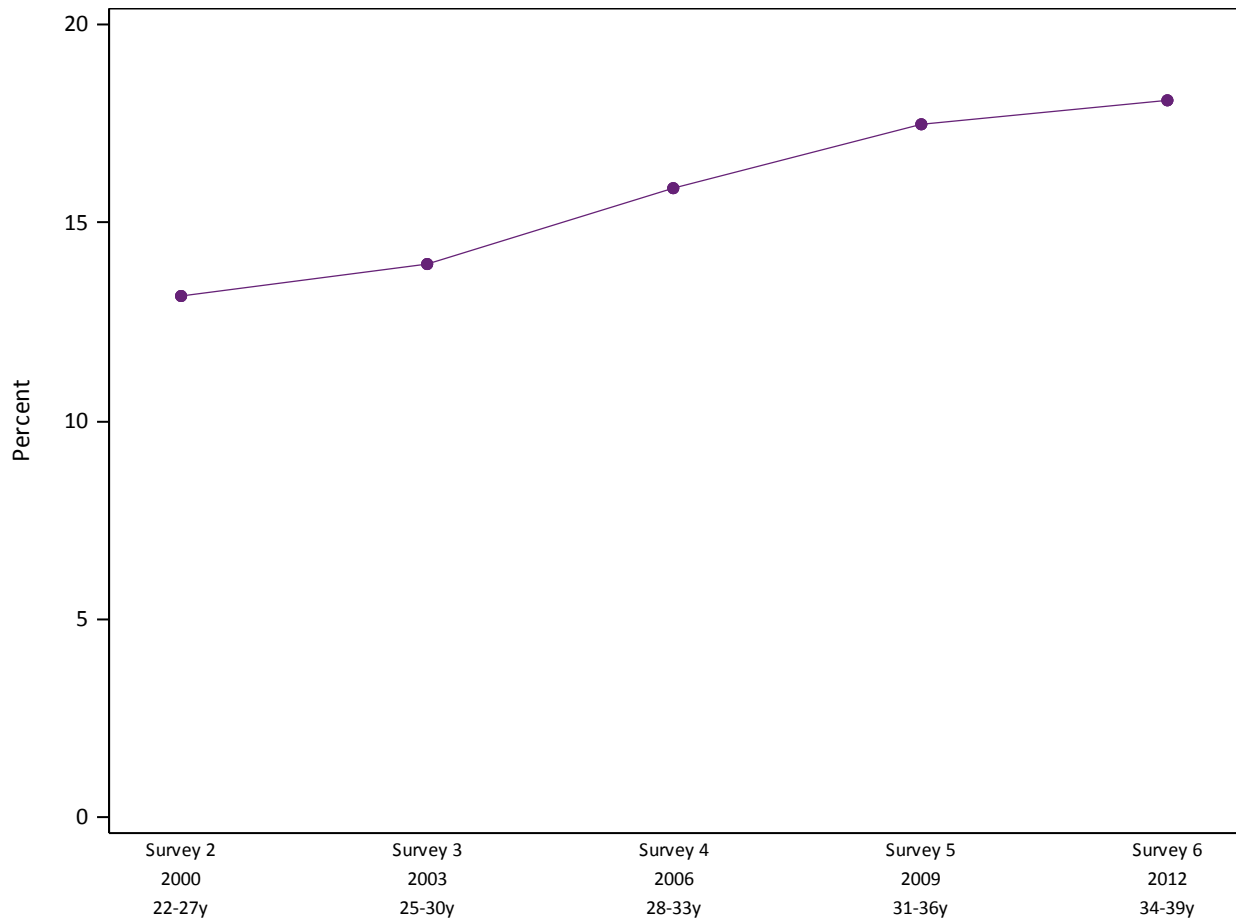


**Figure 2-15 Smoking prevalence from Survey 1 to Survey 6 (N=4,946).**

About a quarter of the women were current smokers at Survey 1, but by Survey 6 the percentage of women who reported they were current smokers had declined to about 10%. The percentage of women who had never smoked decreased slightly from Survey 1 to Survey 3 and then levelled off, while those who regarded themselves as ex-smokers increased throughout the Study period.

### 2.3 Mental Health

QUESTION: In the last 3 years, have you been diagnosed or treated for depression?



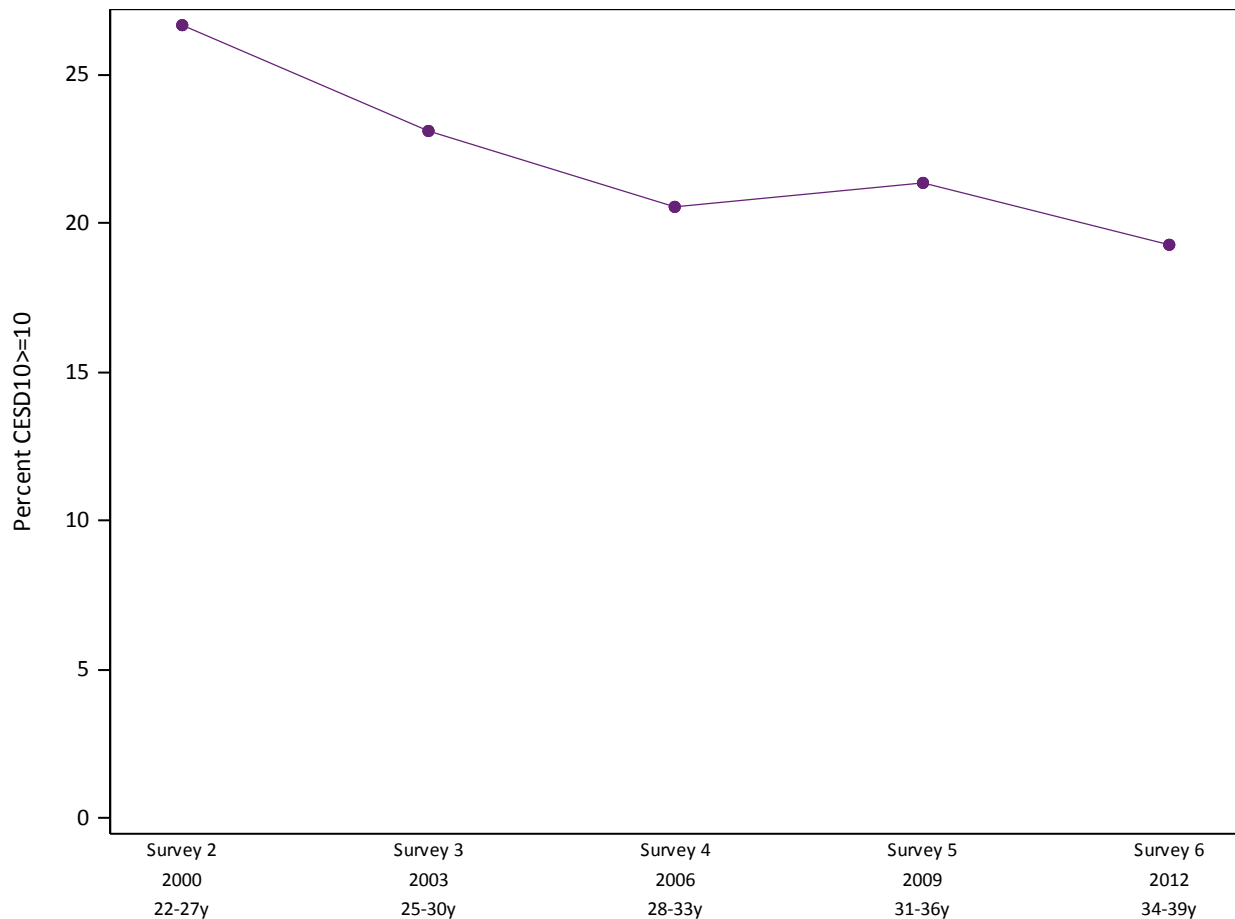
**Figure 2-16 Percentage of women who reported having diagnosis or treatment for depression from Survey 2 to Survey 6 (N=4,431).**

Between Survey 2 in 2000 and Survey 6 in 2012, the percentage of women reporting that they had been diagnosed with or treated for depression in the past three years increased from 13% to 18%.

## Centre for Epidemiologic Studies Depression Scale - 10 item version (CESD10)

QUESTION: Below is a list of how you might have felt or behaved. Please indicate how often you have felt this way DURING THE LAST WEEK. (Rarely or none of the time, less than 1 day; Some or a little of the time, 1-2 days; Occasionally or a moderate amount of the time 3-4 days; Most or all of the time, 5-7 days).

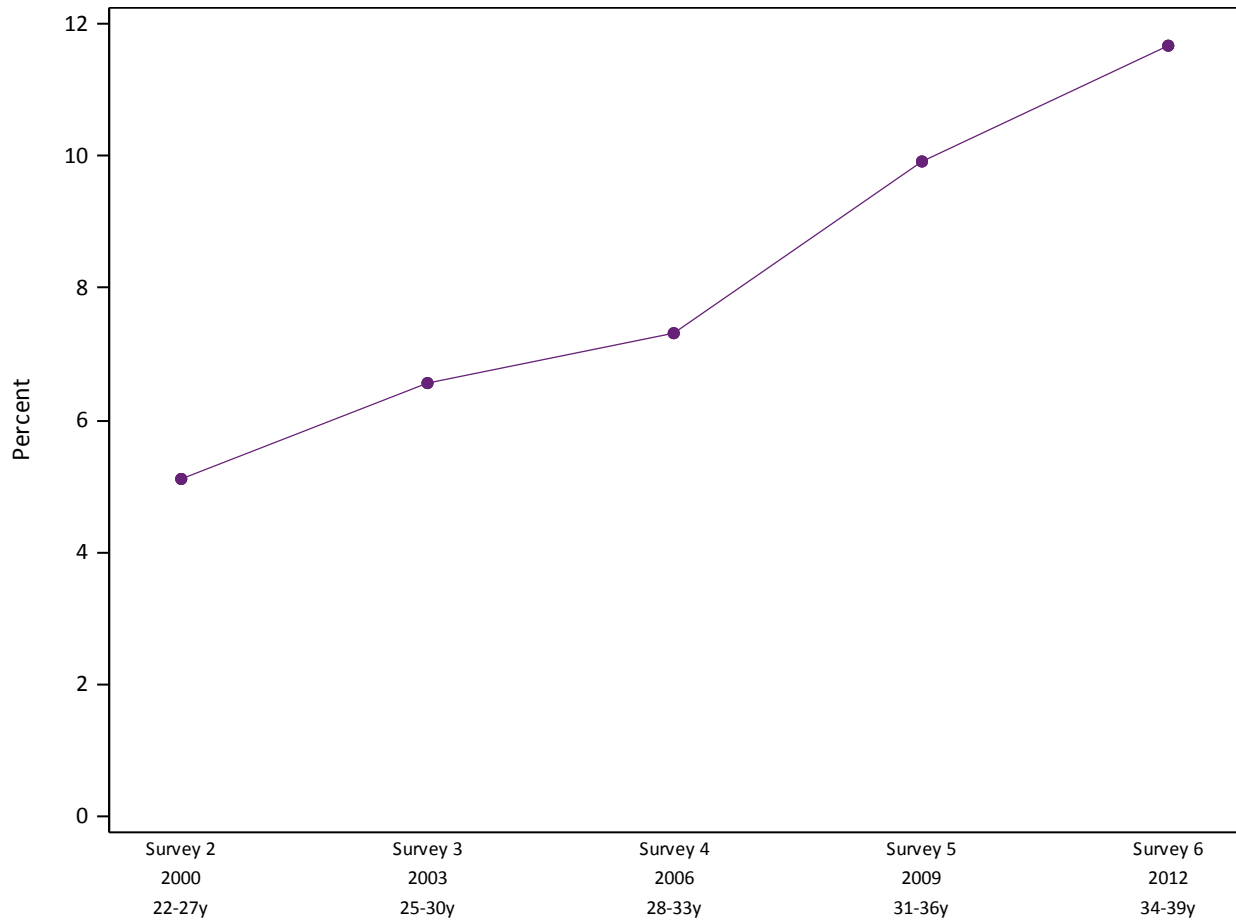
- I was bothered by things that don't usually bother me
- I had trouble keeping my mind on what I was doing
- I felt depressed
- I felt that everything I did was an effort
- I felt hopeful about the future
- I felt fearful
- My sleep was restless
- I was happy
- I felt lonely
- I could not 'get going'



**Figure 2-17 Percentage of women with a CESD10 score  $\geq 10$  from Survey 2 to Survey 6 (N=4,862).**

The CESD10 measures symptoms of depression, with a score of 10 or more indicating that symptom severity is reaching clinically significant levels. While an increasing percentage of women reported a diagnosis or treatment of depression, self-reported symptoms of depression, as measured by the CESD10, declined over time. This could be an indicator of successful treatment and/or reflect a decrease in psychological distress associated with increasing age.

QUESTION: In the last 3 years, have you been diagnosed or treated for anxiety?



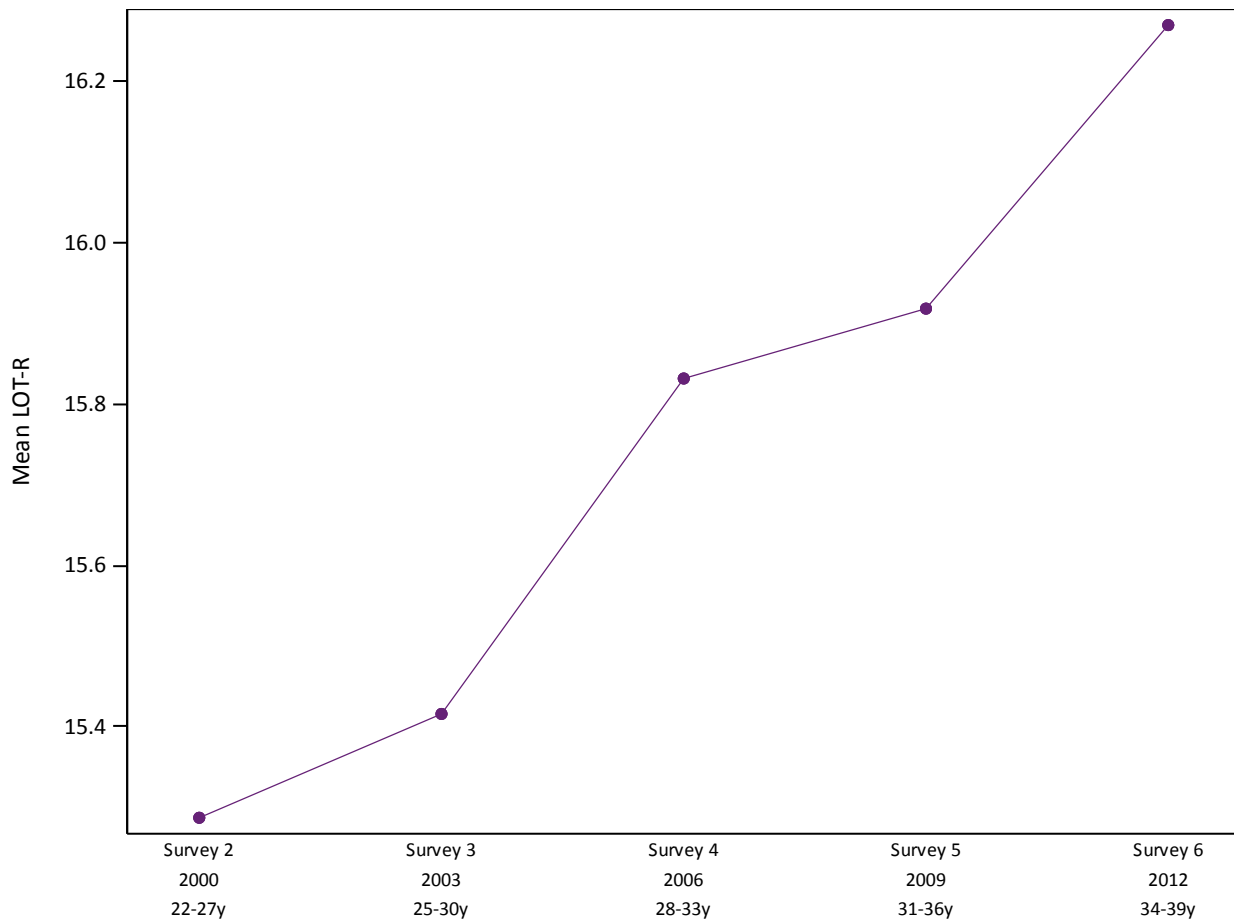
**Figure 2-18 Percentage of women diagnosed with or treated for anxiety from Survey 2 to Survey 6 (N=4,431).**

Consistent with the increasing percentage of women who were diagnosed with and treated for depression, the percentage who reported that they had been diagnosed with or treated for anxiety increased over time. This suggests that more women who are experiencing mental health problems may be accessing appropriate treatment.

## Revised Life Orientation Test (LOT-R)

QUESTION: Thinking about your current approach to life, please indicate how much you think each statement describes you:

- In uncertain times, I usually expect the best
- If something can go wrong for me, it will
- I'm always optimistic about my future
- I hardly ever expect things to go my way
- I rarely count on good things happening to me
- Overall, I expect more good things to happen to me than bad



**Figure 2-19 Optimism as indicated by Mean Revised Life Orientation Test (LOT-R) Scores from Survey 2 to Survey 6 (N=5,086).**

The increase in optimism scores, as indicated by the mean scores from the Revised Life Orientation Test (LOT-R), is reflective of increasing psychological health among the cohort. Optimism is a variable that reflects the extent to which women have favourable expectations for their future and has been associated with indicators of better physical and mental health.



QUESTION: In the past week, have you been feeling that life isn't worth living?

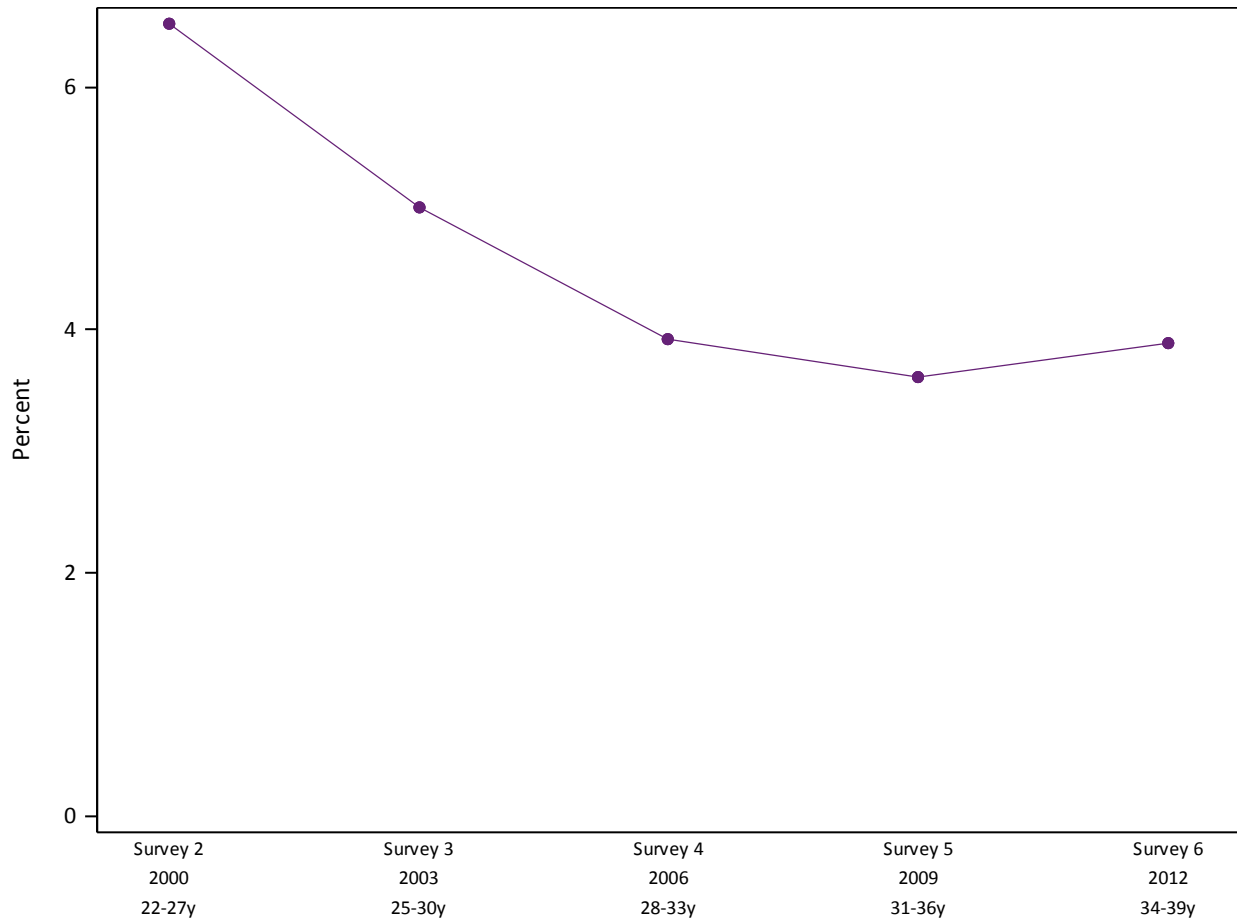
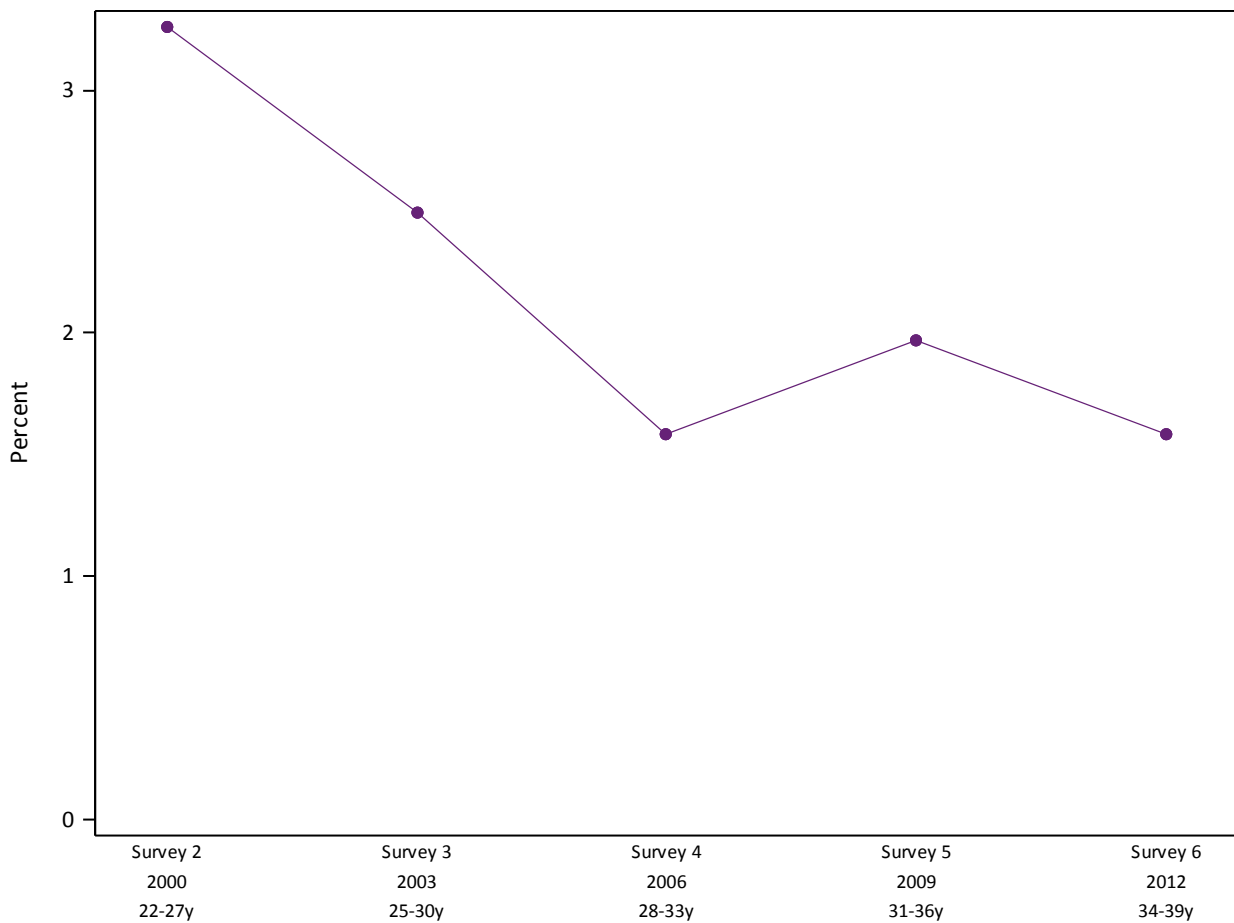


Figure 2-20 Percentage of women with suicidal ideation in the past week from Survey 1 to Survey 6 (N=5,122).

QUESTION: In the past 6 months have you ever deliberately hurt yourself or done anything that you knew might have harmed or even killed you?



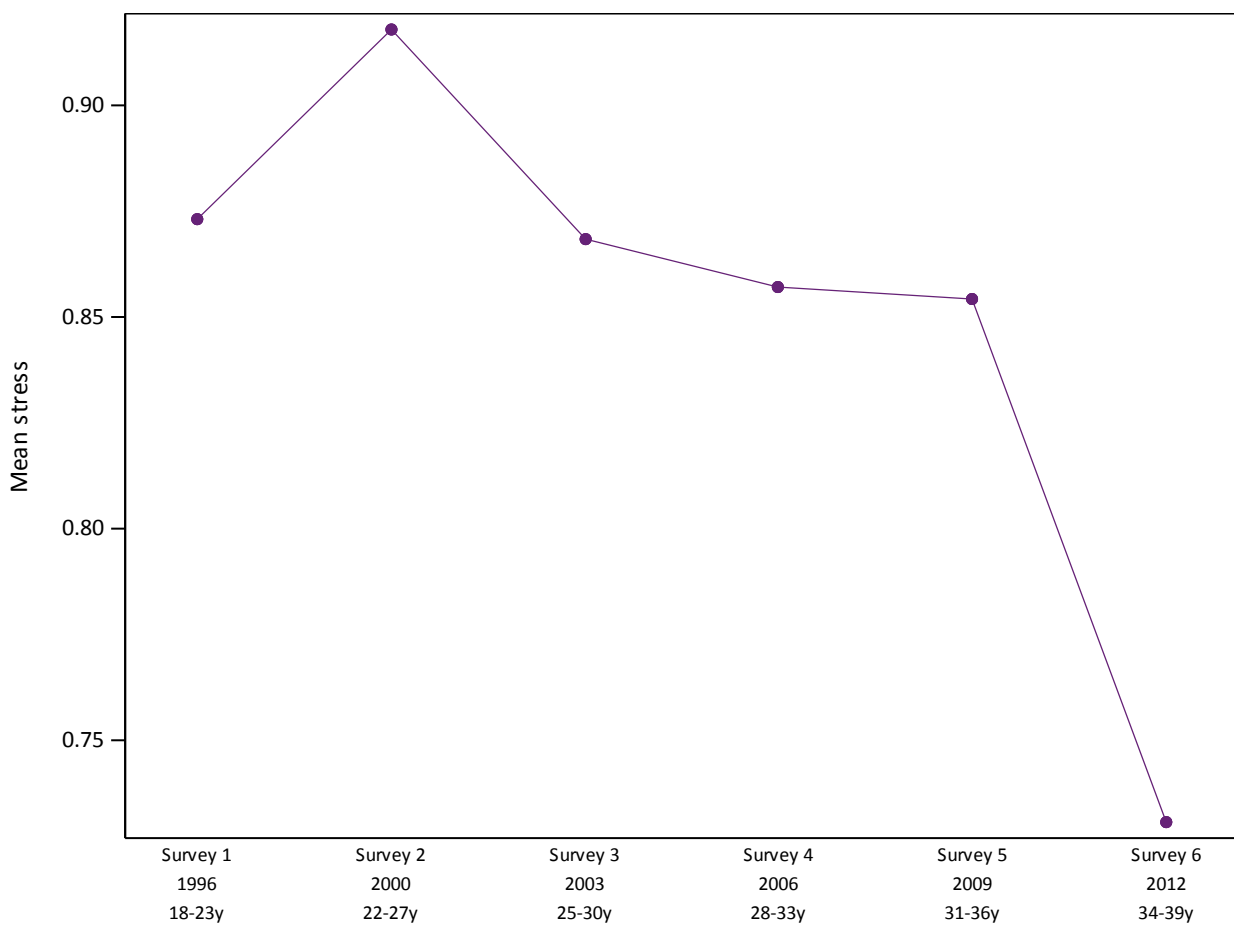
**Figure 2-21 Percentage of women with self-harming behaviours from Survey 1 to Survey 6 (N=5,123).**

Figure 2-20 and Figure 2-21 reflect a decline in the percentage of women reporting suicidal thoughts and self-harming behaviours over time. Again, this is consistent with the generally improving psychological health among this cohort from Survey 2 to Survey 6. This improvement is congruent with the literature which indicates that mental health generally improves with increasing age, as the women become more established in their lives and careers.

### 2.3.1 STRESS

QUESTION: Over the last 12 months, how stressed have you felt about the following areas of your life:

- Own health
- Health of other family members
- Work/Employment
- Living arrangements
- Study
- Money
- Relationship with parents
- Relationship with partner/spouse
- Relationship with other family members
- Relationship with friends
- Motherhood/children

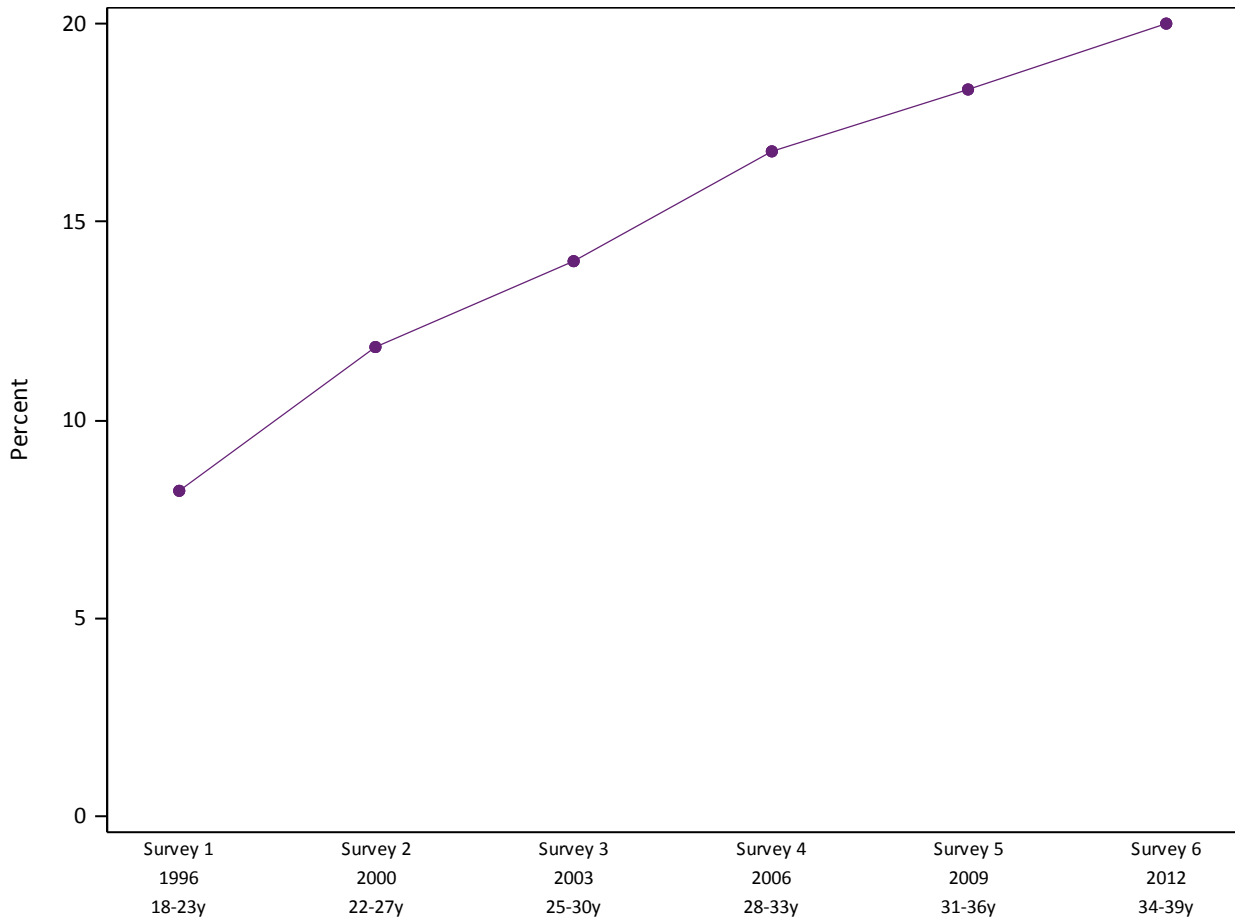


**Figure 2-22 Mean stress score over the previous 12 months from Survey 1 to Survey 6 (N=5,148).**

Consistent with improvements in self-reported mental health and optimism, the women's stress decreased, as indicated by the mean scores from the Perceived Stress Scale, especially between Survey 5 and Survey 6.

### 2.3.2 Abuse

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



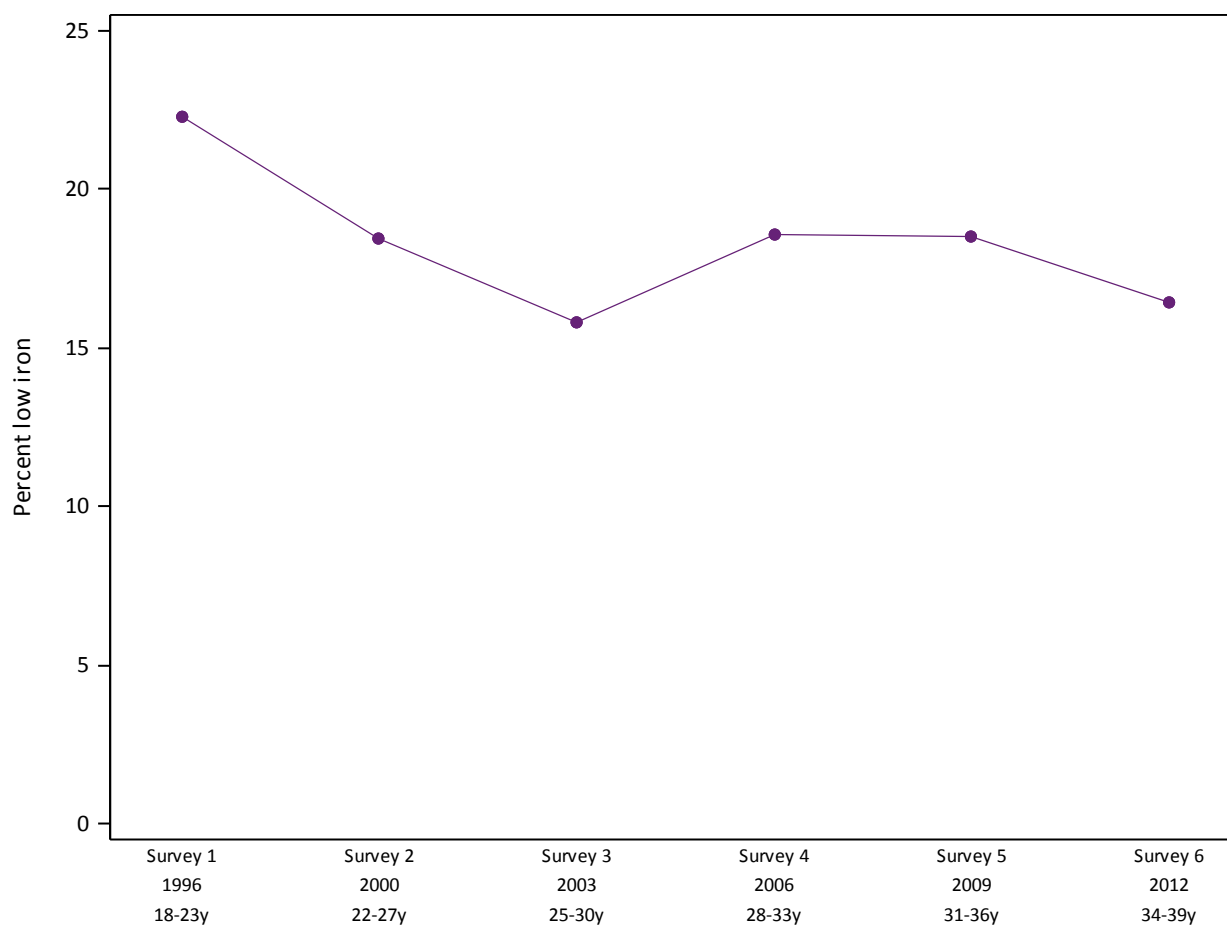
**Figure 2-23 Percentage with history of abuse from partner or spouse from Survey 1 to Survey 6 (N=4,848).**

Around 9% of women reported having ever been in a violent relationship with a partner or spouse at Survey 1 and this figure rose to around 20% of women by Survey 6.

## 2.4 Physical health conditions

### 2.4.1 Anaemia/iron deficiency

QUESTION: In the last 3 years, have you been diagnosed or treated for low iron?



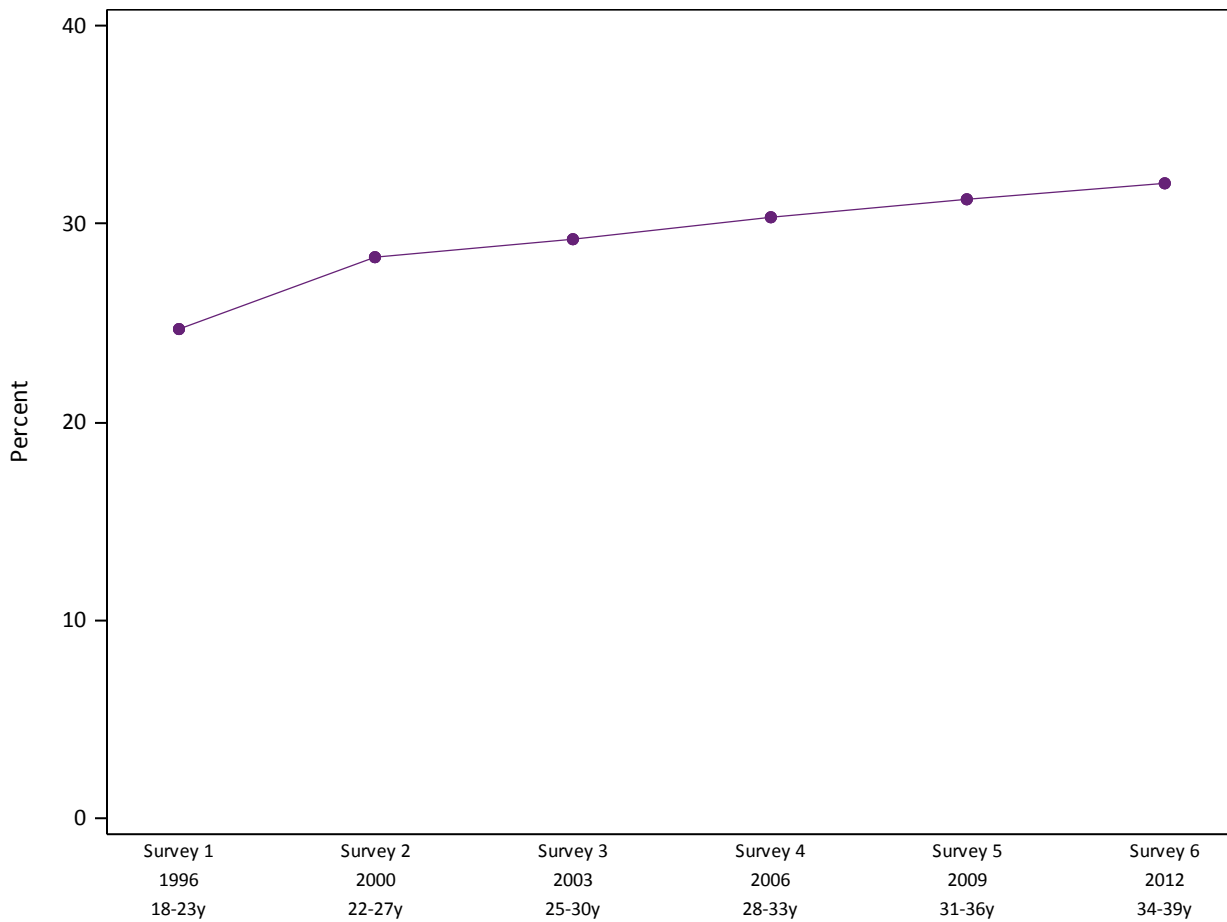
**Figure 2-24 Percentage of women with low iron levels from Survey 1 to Survey 6 (N=4,403).**

Note: At Survey 1, women were asked if they had 'ever' had low iron levels, and at Survey 2, they were asked if they had had low iron levels 'in the last four years' (i.e., since Survey 1 in 1996).

At Survey 1, almost a quarter of the women reported a diagnosis of or treatment for low iron levels. This percentage decreased until Survey 4, at which time it increased and plateaued with a possible decline at Survey 6. The cause of these fluctuations is uncertain, but may be related to pregnancy and childbirth.

## 2.4.2 Asthma

QUESTION: In the last 3 years, have you been diagnosed or treated for asthma?



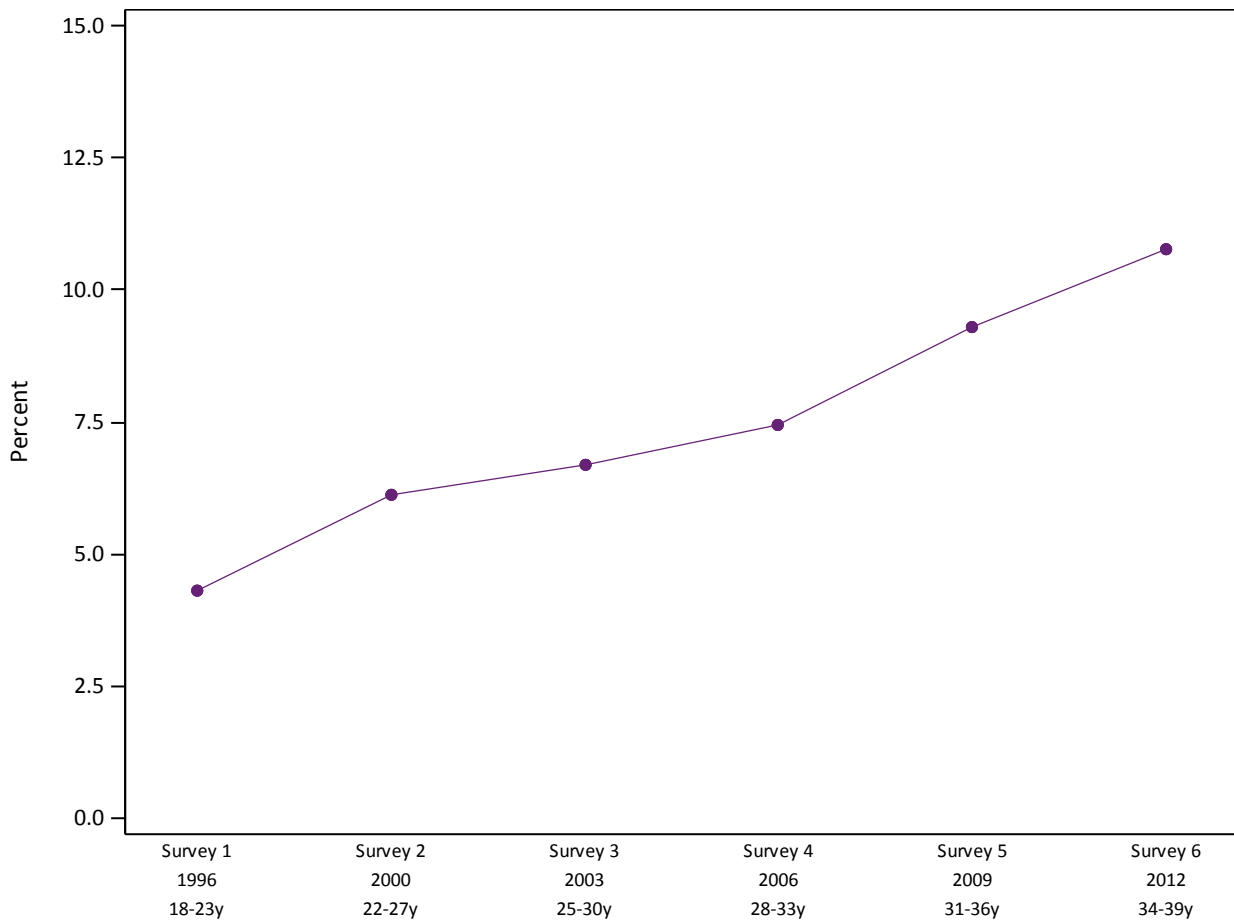
**Figure 2-25 Percentage of women with asthma from Survey 1 to Survey 6 (N=7,777).**

*Note:* At Survey 1, women were asked if they had 'ever' had asthma, and at Survey 2, they were asked if they had had asthma 'in the last four years' (i.e., since Survey 1 in 1996).

At Survey 1, the women reported if they had ever been diagnosed with asthma and about a quarter responded positively. In subsequent surveys, the question asked whether asthma had been diagnosed since the previous survey, so increasing percentages of women report being diagnosed between Survey 2 and Survey 6.

### 2.4.3 Hypertension

QUESTION: In the last 3 years, have you been diagnosed or treated for hypertension?



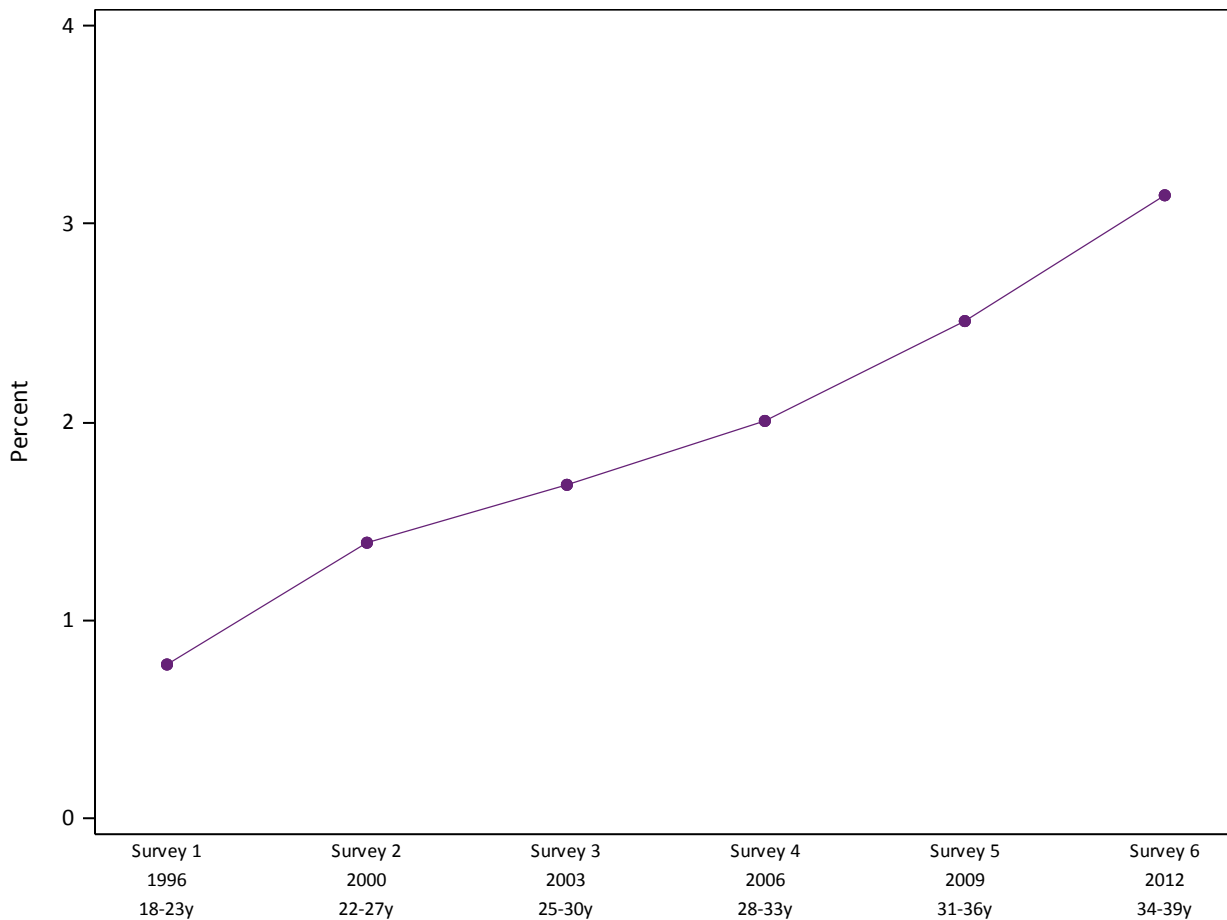
**Figure 2-26 Percentage of women with hypertension from Survey 1 to Survey 6 (N=7,783).**

*Note:* At Survey 1, women were asked if they had 'ever' had hypertension, and at Survey 2, they were asked if they had had hypertension 'in the last four years' (i.e., since Survey 1 in 1996). Gestational hypertension has been asked as a separate question since Survey 2, and is not included in this figure.

Hypertension was relatively uncommon at Survey 1 when the women were asked if they had ever been diagnosed with hypertension. However, the percentage of women being diagnosed with this condition increased at subsequent surveys, so that by Survey 6 in 2012, 11% of the women reported that they had been diagnosed or treated for hypertension in the past three years.

#### 2.4.4 Diabetes

QUESTION: In the last 3 years, have you been diagnosed or treated for diabetes?



**Figure 2-27 Percentage of women with diabetes from Survey 1 to Survey 6 (N=7,828).**

*Note:* At Survey 1, women were asked if they had 'ever' had diabetes, and at Survey 2, they were asked if they had had diabetes 'in the last four years' (i.e., since Survey 1 in 1996). Gestational diabetes has been asked as a separate question since Survey 2, and is not included in this figure.

An increasing percentage of women have reported being diagnosed with diabetes in the past three years since Survey 1 when the women were asked if they had ever been diagnosed or treated for diabetes. Obesity is an established risk factor for the development of type two diabetes and the increase in diagnosed diabetes is consistent with the increasing BMI of the cohort. A breakdown of diabetes by BMI category is available in Table 5-3 in Appendix A.

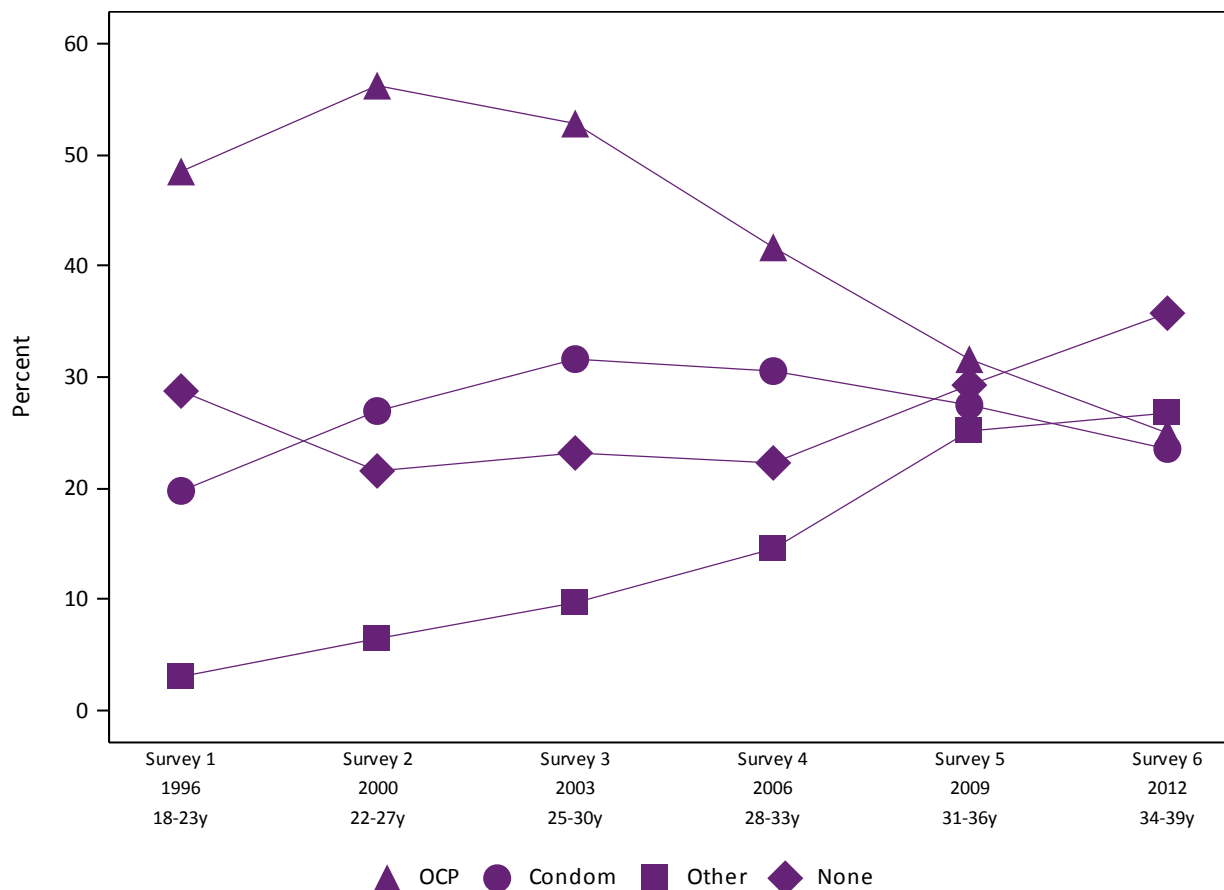


## 2.5 Reproductive health

### 2.5.1 Contraceptive use

QUESTION: What sort/forms of contraception do you use now?

- Oral contraceptive pill
- Condoms
- Other (has differed across surveys - options have included: withdrawal, injection, IUD, vaginal ring, implant, safe period method, emergency contraceptive pill, and other)
- No contraceptive use



**Figure 2-28 Percentages of women using the oral contraceptive pill, condoms, other forms of contraception, or no contraception from Survey 1 to Survey 6 (4,916).**

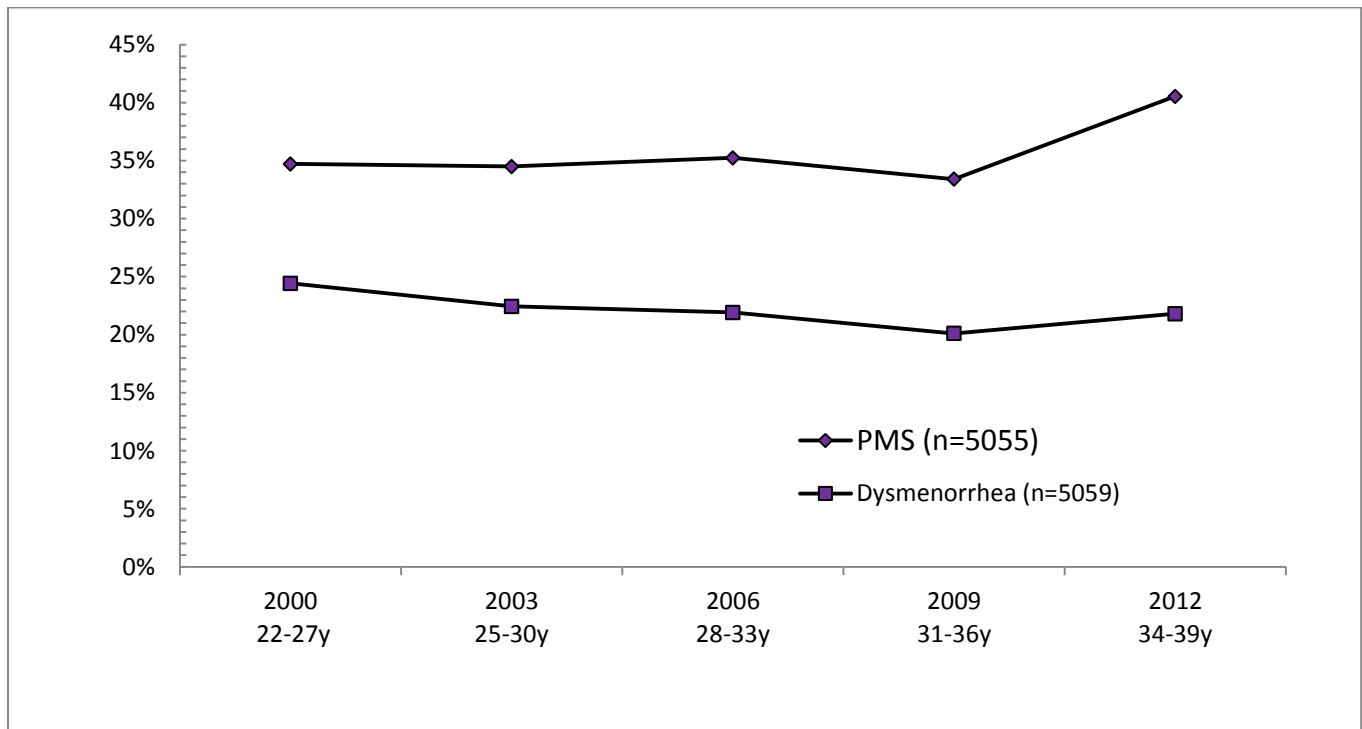
*Note:* Excludes women who reported they were trying to fall pregnant.

Over time the use of the contraceptive pill and condoms decreased as other forms of contraceptive (e.g., long acting reversible contraceptives) became available and more popular.

**Table 2-3 Percentage of Women using Long-Acting Reversible Contraception (LARC) at Survey 5 and Survey 6**

Question stem: What forms of contraception do you use now?	Survey 5	Survey 6
• I use an implant (e.g., Implanon)	2.6%	2.7% (215 women)
• I use a copper intrauterine device (IUD)	0.5 %	0.7 % (53 women)
• I use a progesterone intrauterine device (IUD; e.g., Mirena)	4.7 %	7.7 % (618 women)
• I use an injection (e.g., Depo provera)	1 %	1.2 % (94 women)
• I use a vaginal ring (e.g., Nuvaring)	0.4 %	0.4 % (29 women)

## 2.5.2 Premenstrual syndrome (PMS) and dysmenorrhea



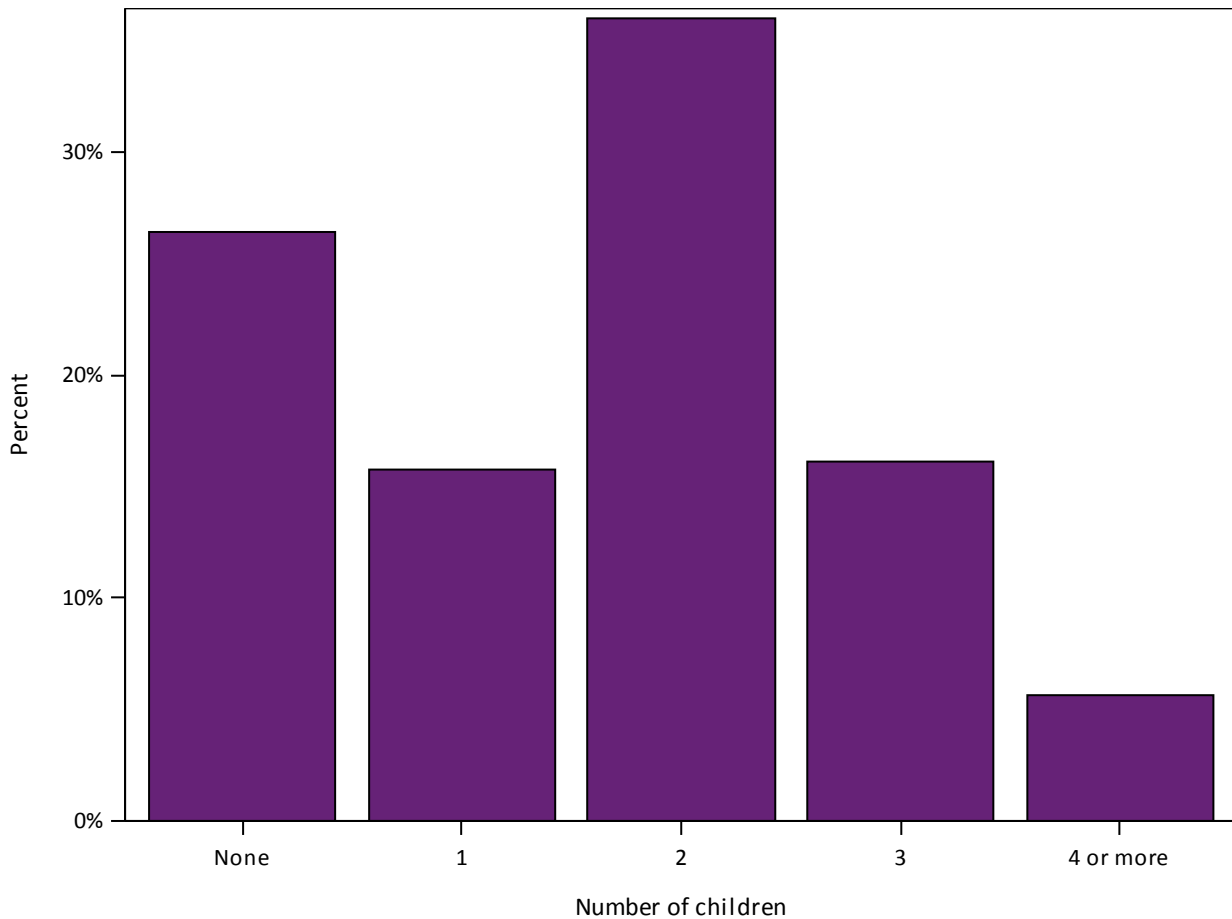
**Figure 2-29 Percentage of women with PMS and dysmenorrhea from Survey 2 to Survey 6.**

ALSWH data show premenstrual syndrome (PMS) and dysmenorrhea (painful periods) are common menstrual symptoms among Australian women. As seen in Figure 2-29, both have relatively stable prevalence over time. From Survey 2 (2000), when women were aged 22 to 27 years, to Survey 6 (2012) when they were aged 34 to 39 years, PMS varied between 33-41% and dysmenorrhea between 21-26%.

### 2.5.3 Demographics – age at first birth, number and spacing of children

#### Number of children

Figure 2-30 shows the number of children at Survey 6. 8,010 women responded to Survey 6 – of these, 27.1% did not have children, 15.7% had one child, 35.6% had two children and 21.6% had three or more children.



**Figure 2-30 Number of children at Survey 6 in 2012 (N = 8,010).**

#### Fertility issues (self or partner tried unsuccessfully for more than 12 months)

Of the women with no children, 71% had never tried to get pregnant, while 17% had tried unsuccessfully for at least 12 months to get pregnant (including due to fertility problems of the partner). Among the 5,839 women who responded to Survey 6 and had children, 82% had not experienced issues with fertility.

#### Multiple births

In 2012, 2.6% (n = 208) of the women had had a multiple birth.

#### Age at birth of first child

Among the 5,839 women who responded to Survey 6 and had children, the mean age at birth of first child was 28.8 years (IQR: 25.9 – 32.3 years). With increasing parity the mean age at birth of first child decreased – one child (n=1,258) 31.9 years, two (n=2,855) children 29.1 years, three or more children (n=1,726) 26.0 years.

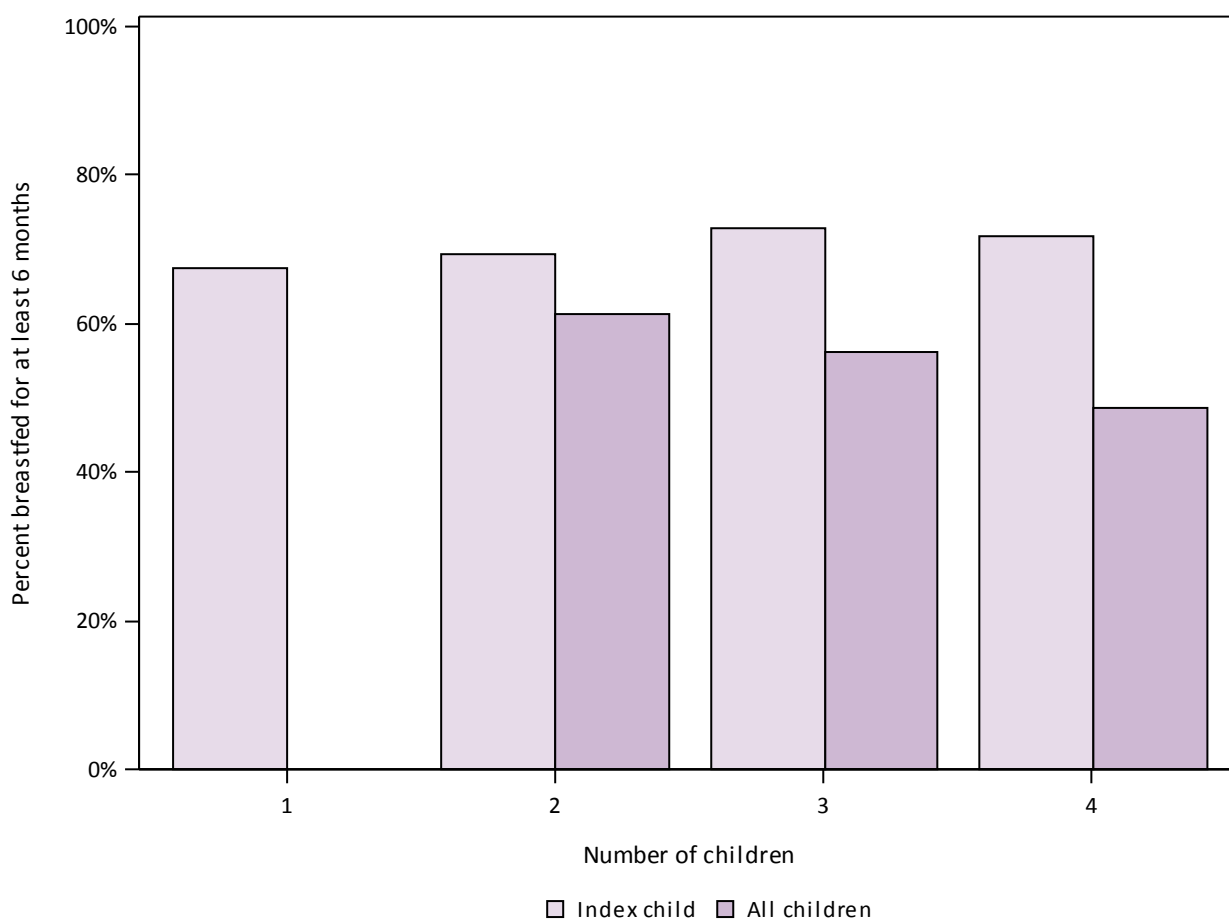
### Birth spacing

The mean birth interval was 33.9 months. Women with 2 children had a similar mean interval of 33.8 months, compared with women with 3 children (34.3 months).

### Breastfeeding

The data below are from 5,839 women who responded to Survey 6 and who had children. The index child refers to the last child born, so for example the first bar refers to the percentage of mothers who breastfed their only child for at least six months, while for women with four children it shows the percentage of mothers who breastfed their youngest child for at least six months.

The percentage of mothers with three or four children who breastfed their youngest child for at least six months was over 70% and slightly higher than for mothers with one child. However, when considering the percentage of women who have breastfed all their children for at least six months, the percentage declined from 68% for those with one child to around 50% of women with four children

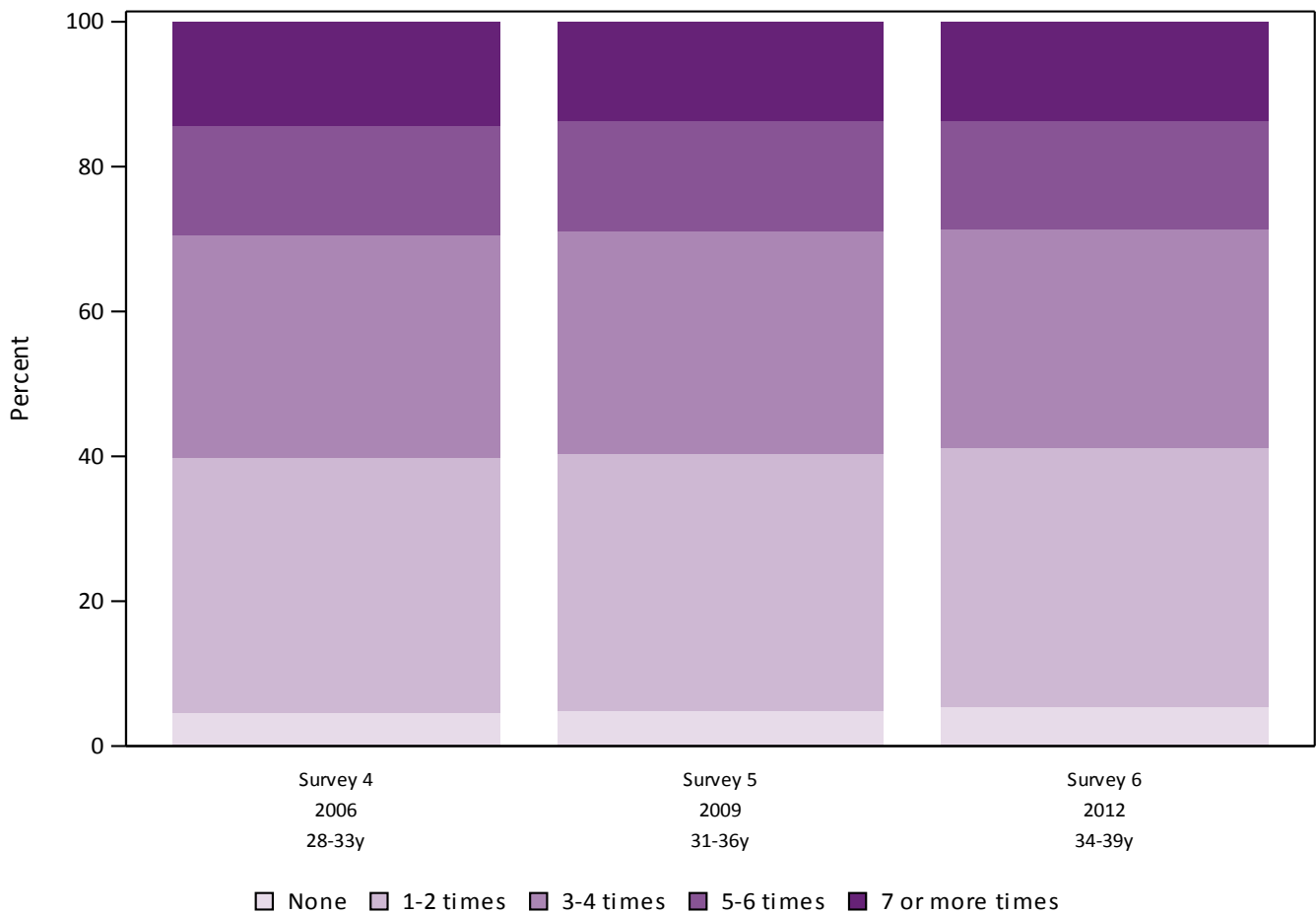


**Figure 2-31 Breastfeeding at Survey 6 in 2012 among women with children (N = 5,839).**

## 2.6 Health service use

### 2.6.1 Doctors (General Practitioners and specialists)

QUESTION: How many times have you consulted a family doctor or another general practitioner for your own health in the last 12 months?



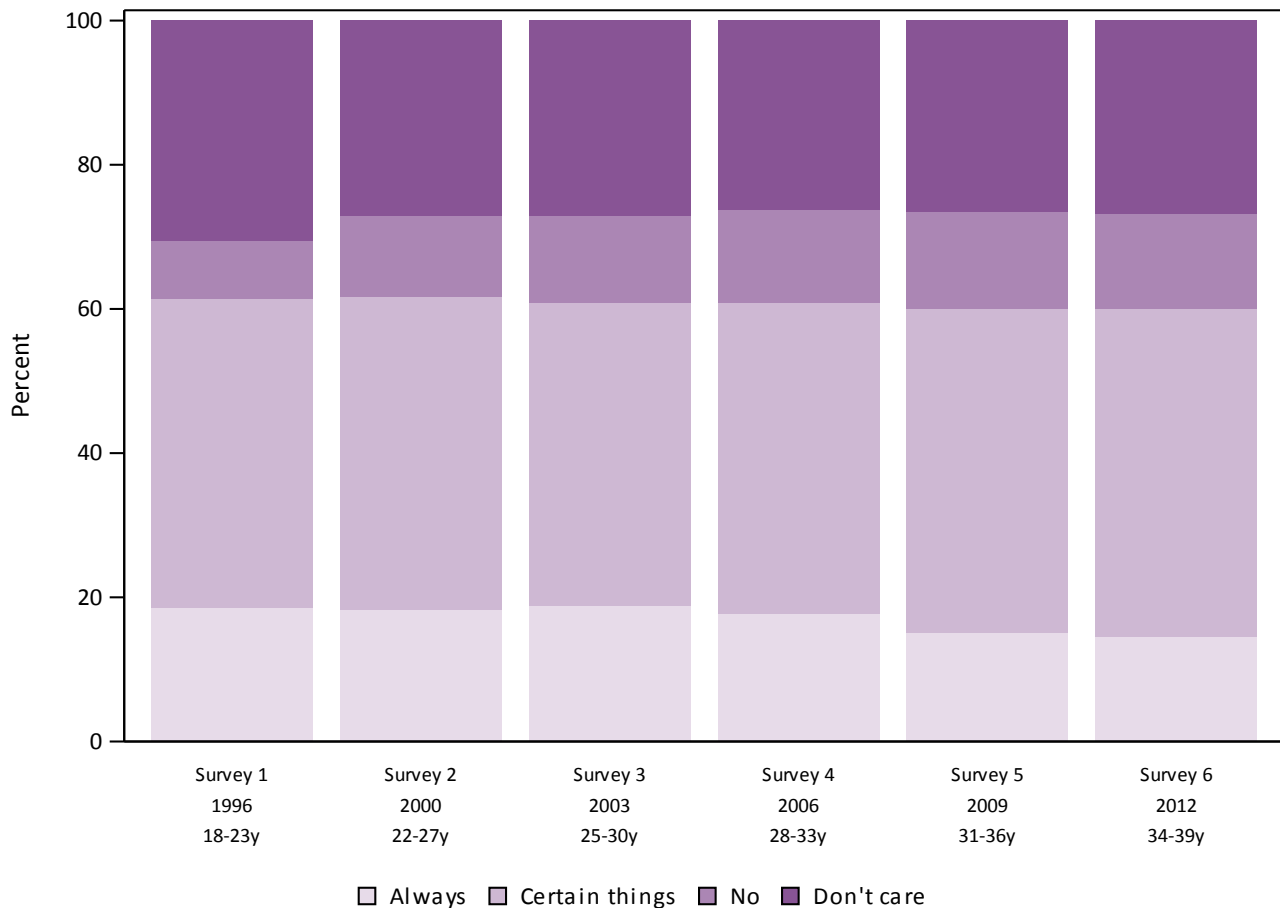
**Figure 2-32 Number of visits to a GP in the last 12 months from Survey 4 to Survey 6 (N=6,374).**

*Note:* Surveys 2 and 3 included two questions about number of GP visits and are not comparable with later surveys.

Little variation was evident in the number of GP visits by the women from Survey 4 to Survey 6 - about 30% reported visiting their GP five or more times in the previous 12 months.

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

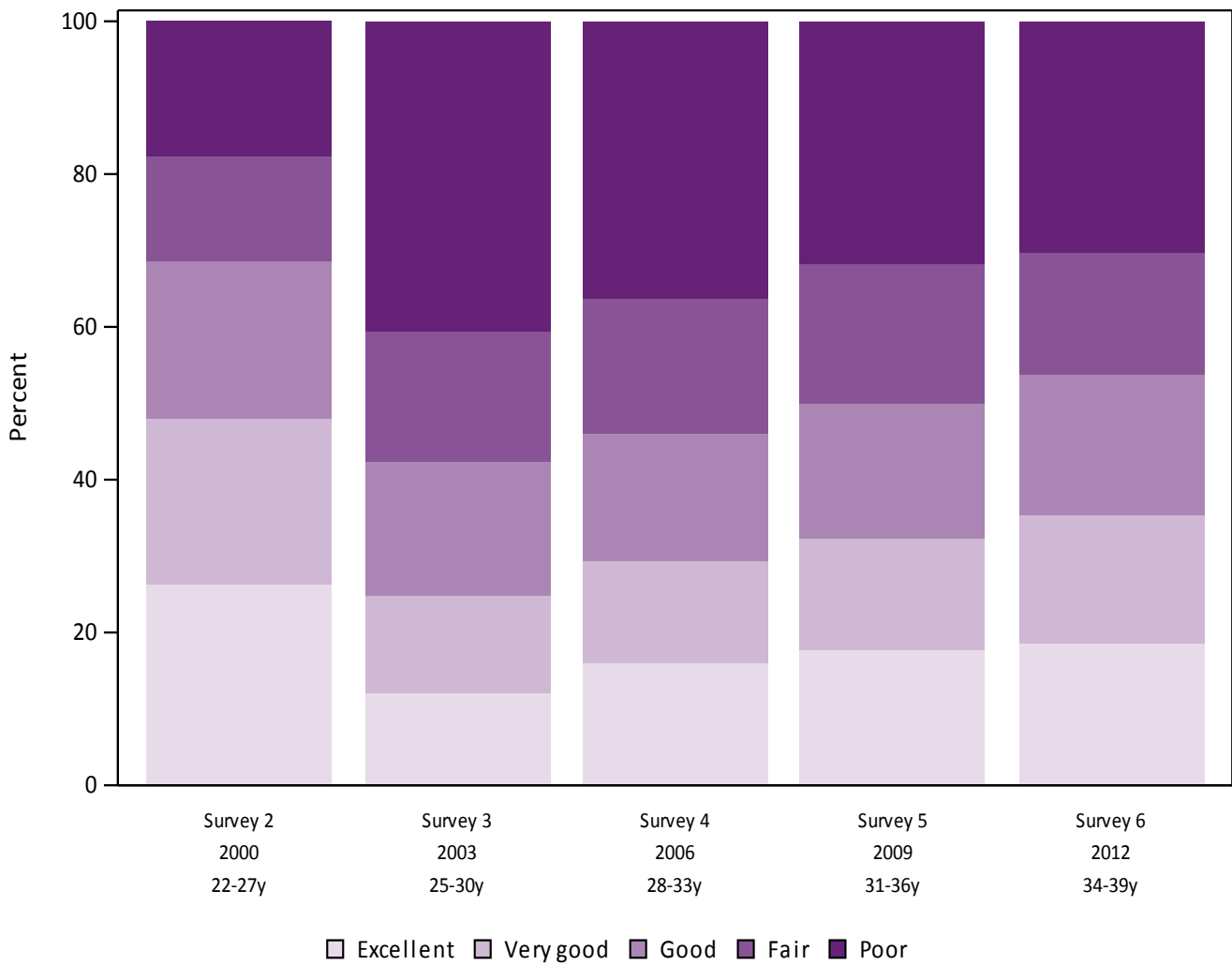
- Yes, always
- Yes, but only for certain things
- No
- Don't care



**Figure 2-33 Preference for female GP from Survey 1 to Survey 6 (N=5,070).**

Between 1996 and 2012, preferences for seeing a female GP remained stable, with about 40% of the women indicating either they had no preference or they didn't care. Over time however, an increasing percentage preferred to see a female GP 'for certain things'.

QUESTION: Thinking about your own health, how would you rate access to a GP who bulk bills?

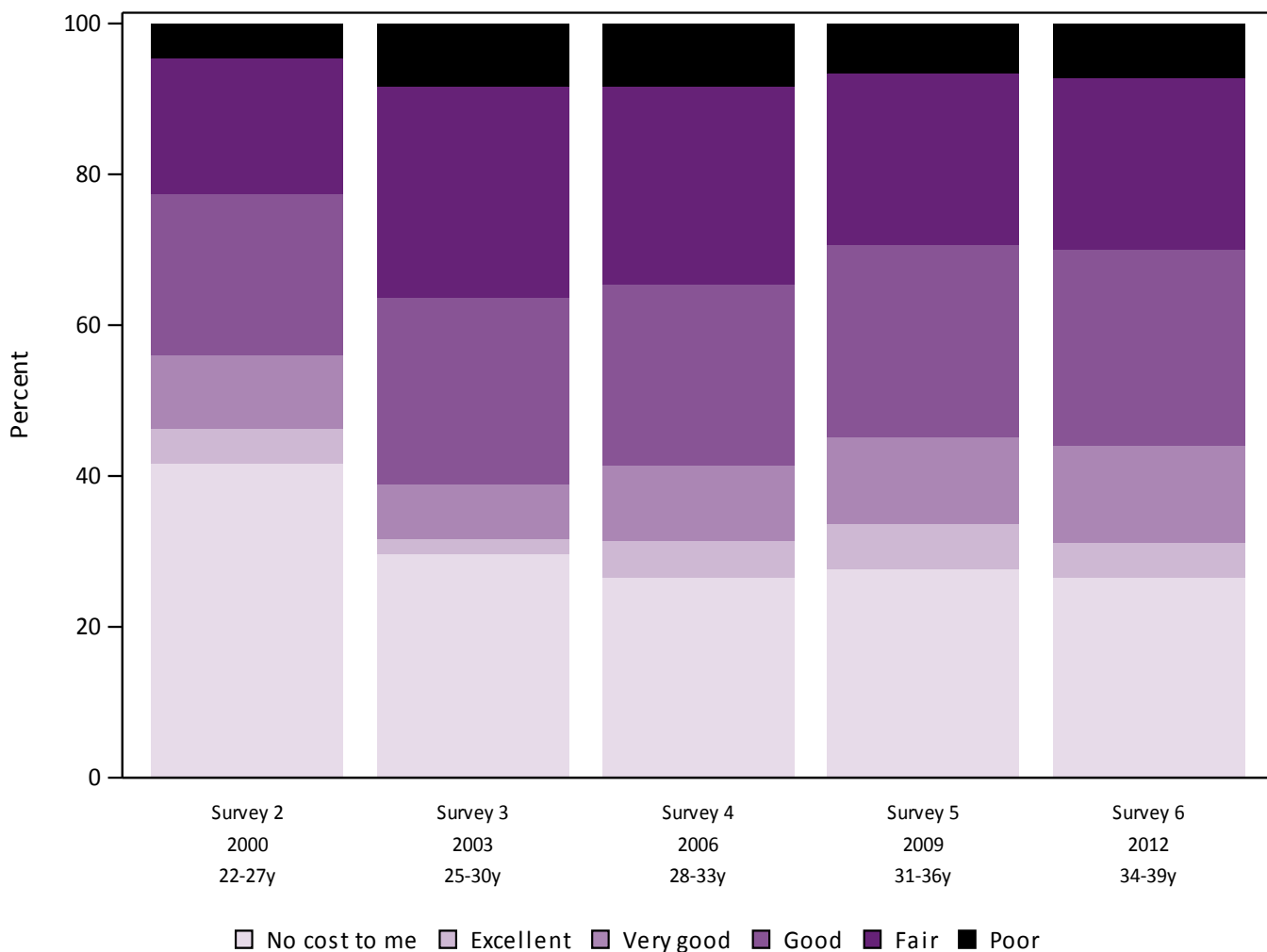


**Figure 2-34 Ratings of access to a bulk-billing GP from Survey 2 to Survey 6 (N=4,675).**

*Note:* This question was not asked at Survey 1.

Women’s rating of their access to a bulk billing GP has improved since Survey 3, when it was rated as poor by about 40% of women. Ratings initially declined from 70% of women who rated access as good or better at Survey 2 to 40% at Survey 3, and thereafter increased to just over 50% of women by Survey 6. Additional details for ratings of access to a bulk billing GP can be found in Table 5-4 in Appendix A.

QUESTION: How would you rate the cost to you of your most recent visit to a GP?



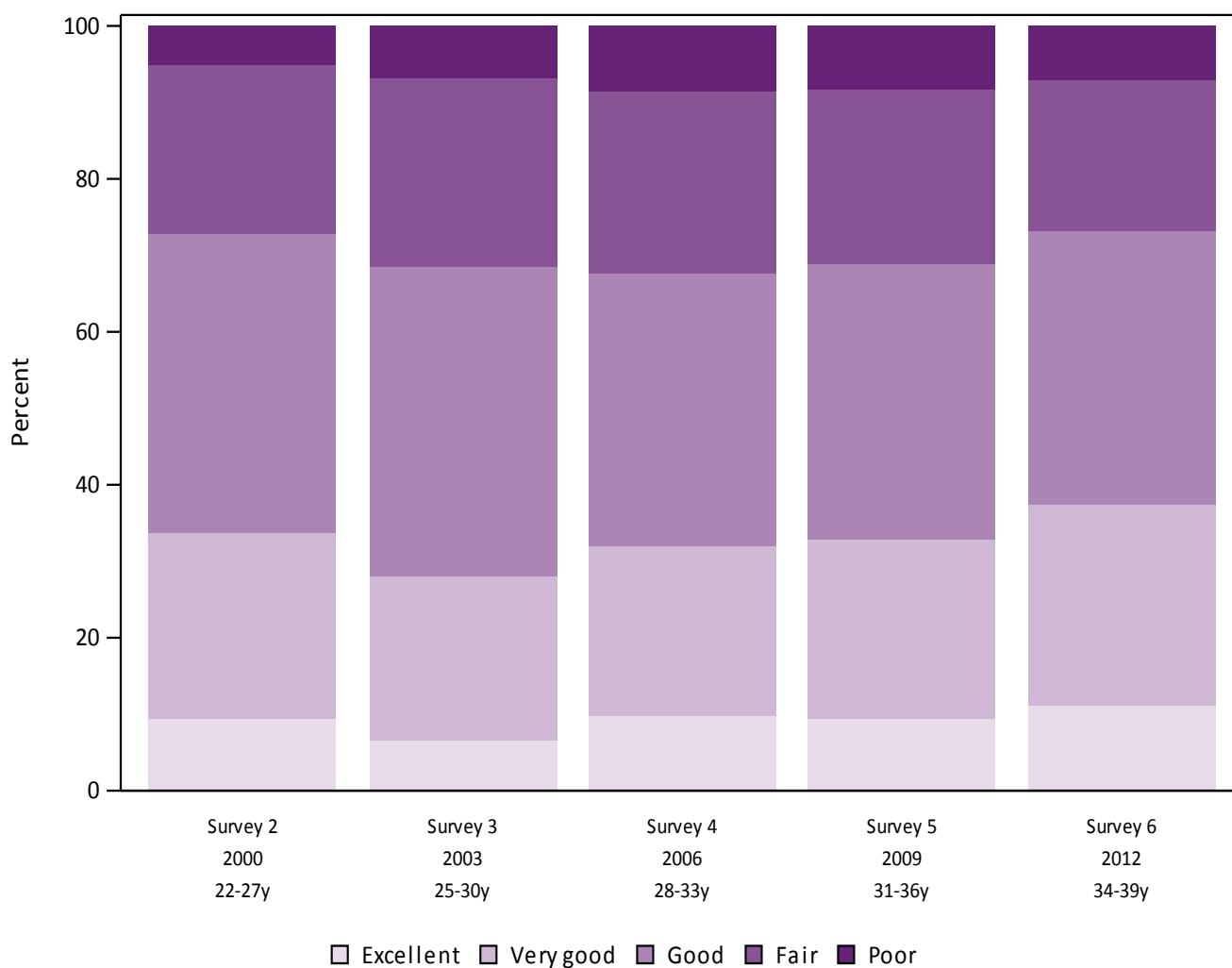
**Figure 2-35 Rating of cost of visit to GP from Survey 2 to Survey 6 (N=4,925).**

*Note:* This question was not asked at Survey 1.

As with the previous figure, ratings of the cost of visiting a GP have improved since Survey 3. The percentage of women who rated the cost of a visit to a GP as good or better than good initially declined from almost 80% of women at Survey 2 to just over 60% at Survey 3. This change was accompanied by a decline in the percentage of women who reported that a visit to a GP was available at no cost to them. By Survey 5 and Survey 6, the percentage of women who rated the cost of a visit to a GP as good or better increased to around 70%.



QUESTION: Thinking about your own health, how would you rate the hours when a GP is available?

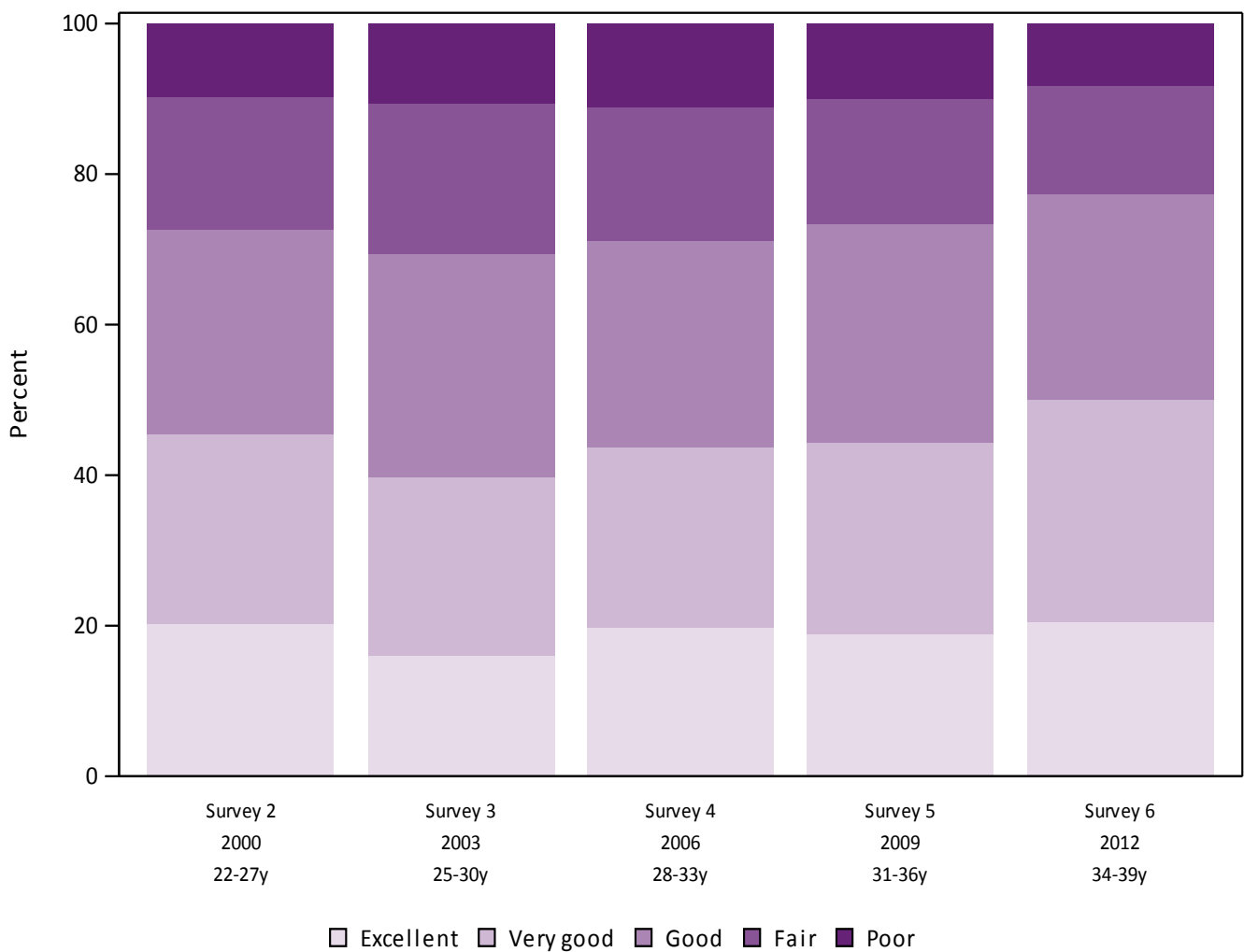


**Figure 2-36 Ratings of hours of availability of GP from Survey 2 to Survey 6 (N=5,065).**

*Note:* This question was not asked at Survey 1.

Ratings of the hours when a GP is available have also seen an initial small decline to Survey 4, when about a third of women rated availability as fair or poor. This has since been followed by a similarly scaled improvement, such that by Survey 6 about 75% of women rated availability as good or better than that (i.e., around 25% rated it as fair or poor).

QUESTION: Thinking about your own health, how would you rate access to a female GP?

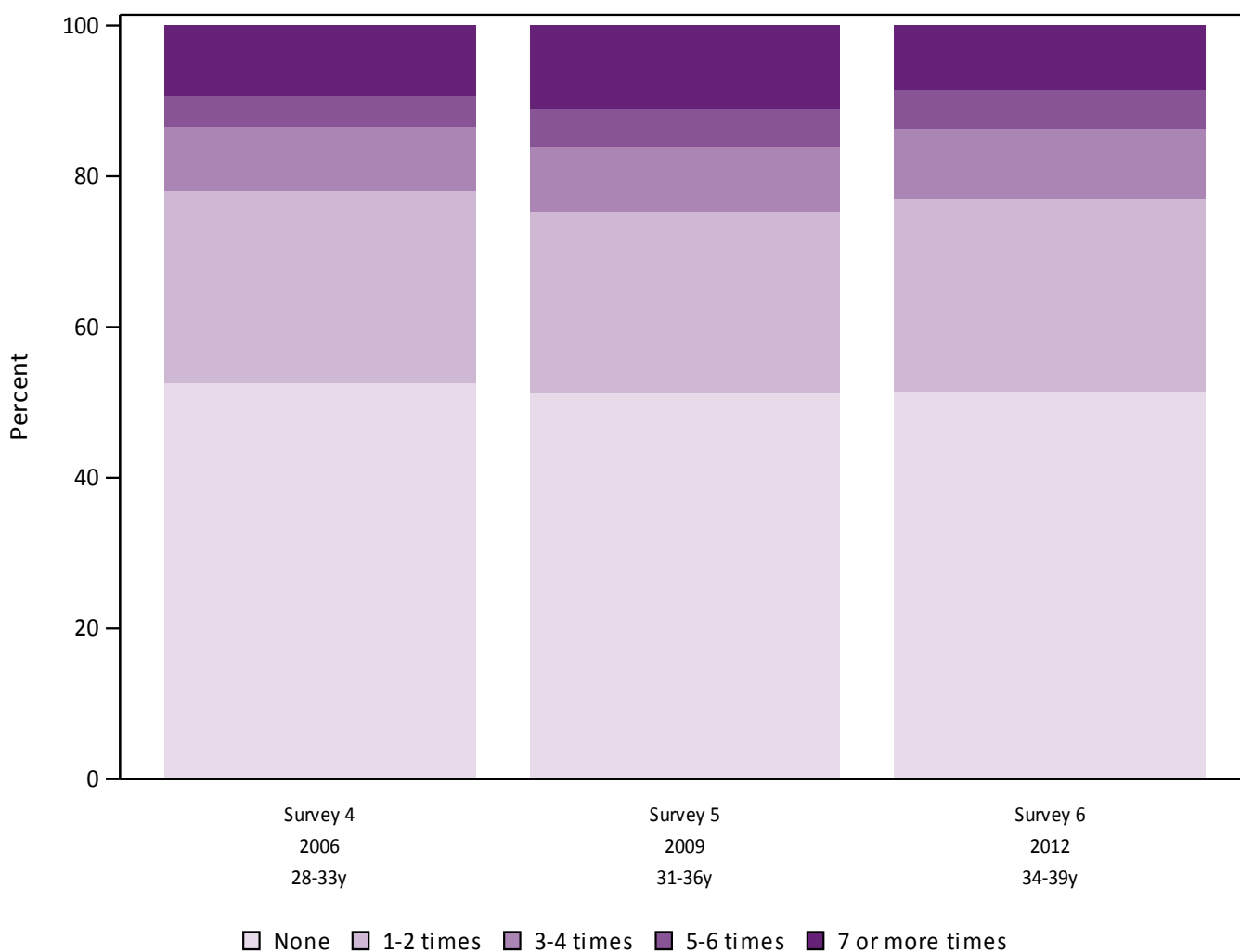


**Figure 2-37 Ratings of access to a female GP from Survey 2 to Survey 6 (N=4,824).**

*Note:* This question was not asked at Survey 1.

In a similar pattern to related figures above, after an initial decline in ratings of access to a female GP from Survey 2 to Survey 3, there has been a progressive improvement over subsequent surveys. By Survey 6, more than three in four women rated access to a female GP as good, very good, or excellent.

QUESTION: How many times have you consulted a *specialist doctor* for your own health in the last 12 months?

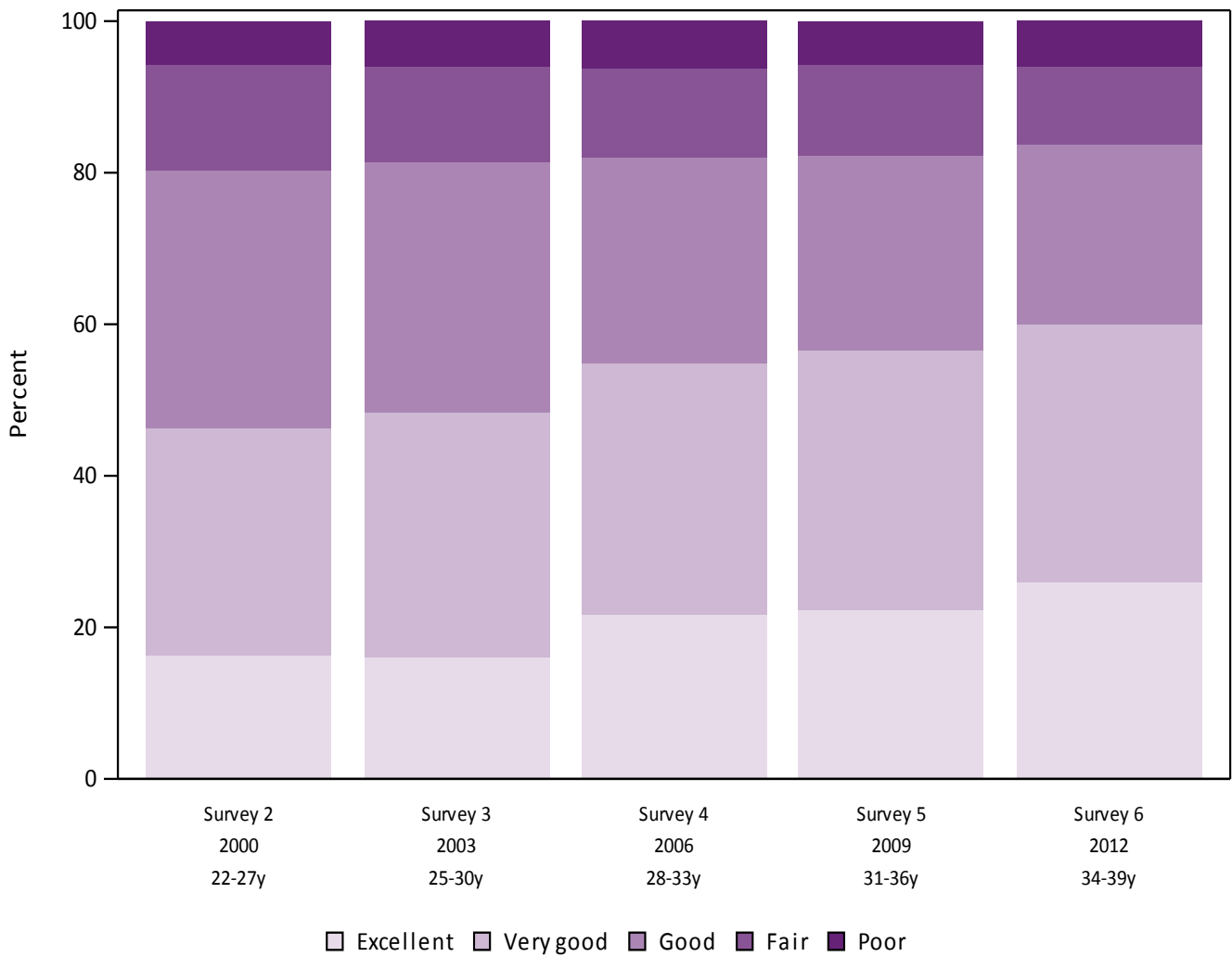


**Figure 2-38 Consultations with a specialist in the previous 12 months from Survey 4 to Survey 6 (N=6,325).**

*Note:* Due to differences in question format, data from Surveys 1- 3 has not been included in this comparison. Data from all surveys are available in the survey databooks, available at: <http://www.alswh.org.au/for-researchers/data/databooks>

The majority of women had not consulted a specialist doctor in the previous 12 months, with a slight increase in those with three or more consultations at Survey 5. Across all three surveys just over 20% of women reported three or more specialist consultations in the previous 12 months.

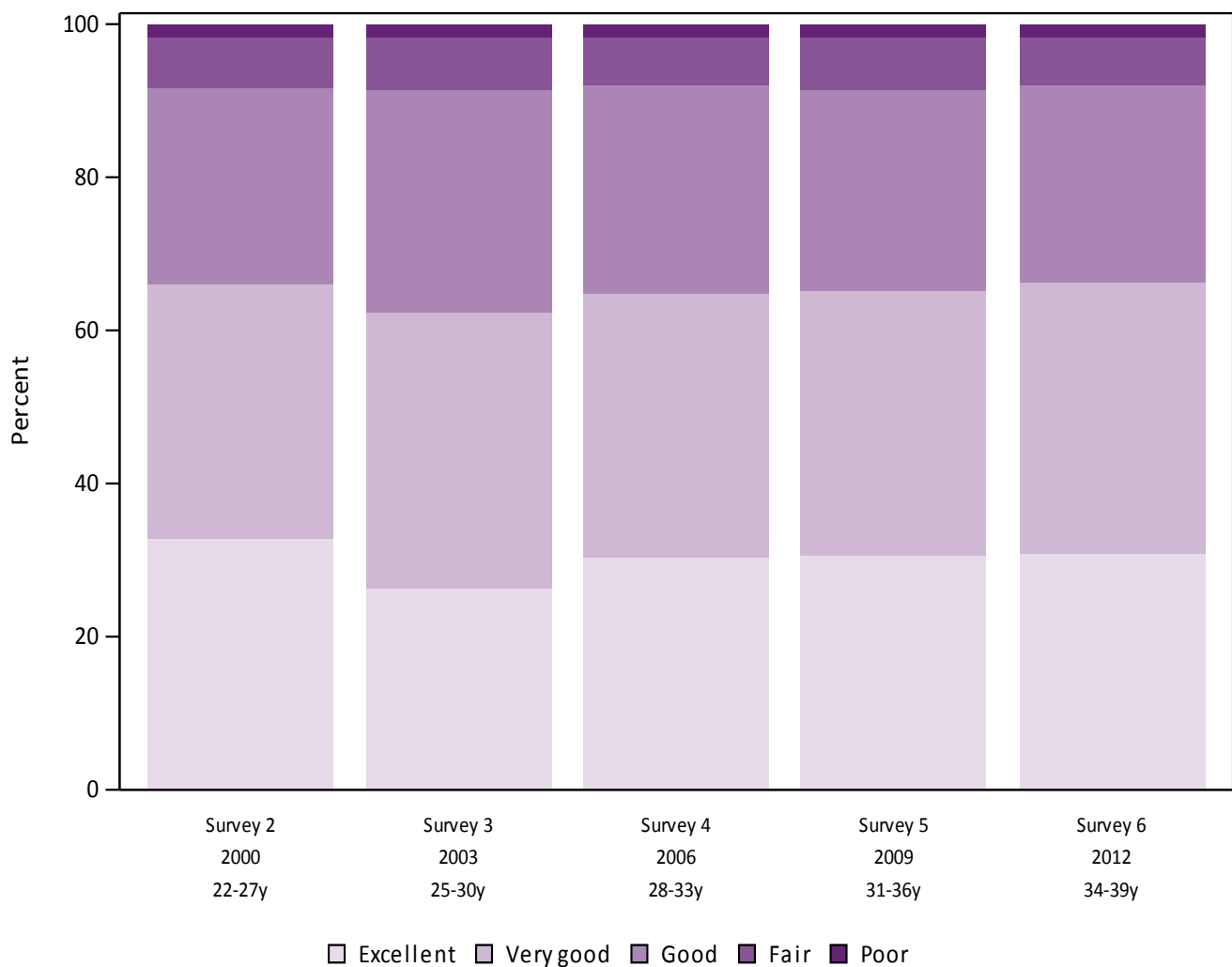
QUESTION: Thinking about your own health care, how would you rate access to medical specialists if you need it?



**Figure 2-39 Access to specialist doctors from Survey 2 to Survey 6 (N=4,836).**

While the percentage of women who rated access to medical specialist as fair or poor has declined from just under 20% at Survey 2, the percentage who rated access as excellent or very good has progressively increased at each survey, from just less than half of the women at Survey 2 to around 60% at Survey 6. Additional details for satisfaction with access to specialist doctors can be found in Table 5-5 in Appendix A.

QUESTION: Thinking about your own health care, how would you rate ease of obtaining a PAP test?



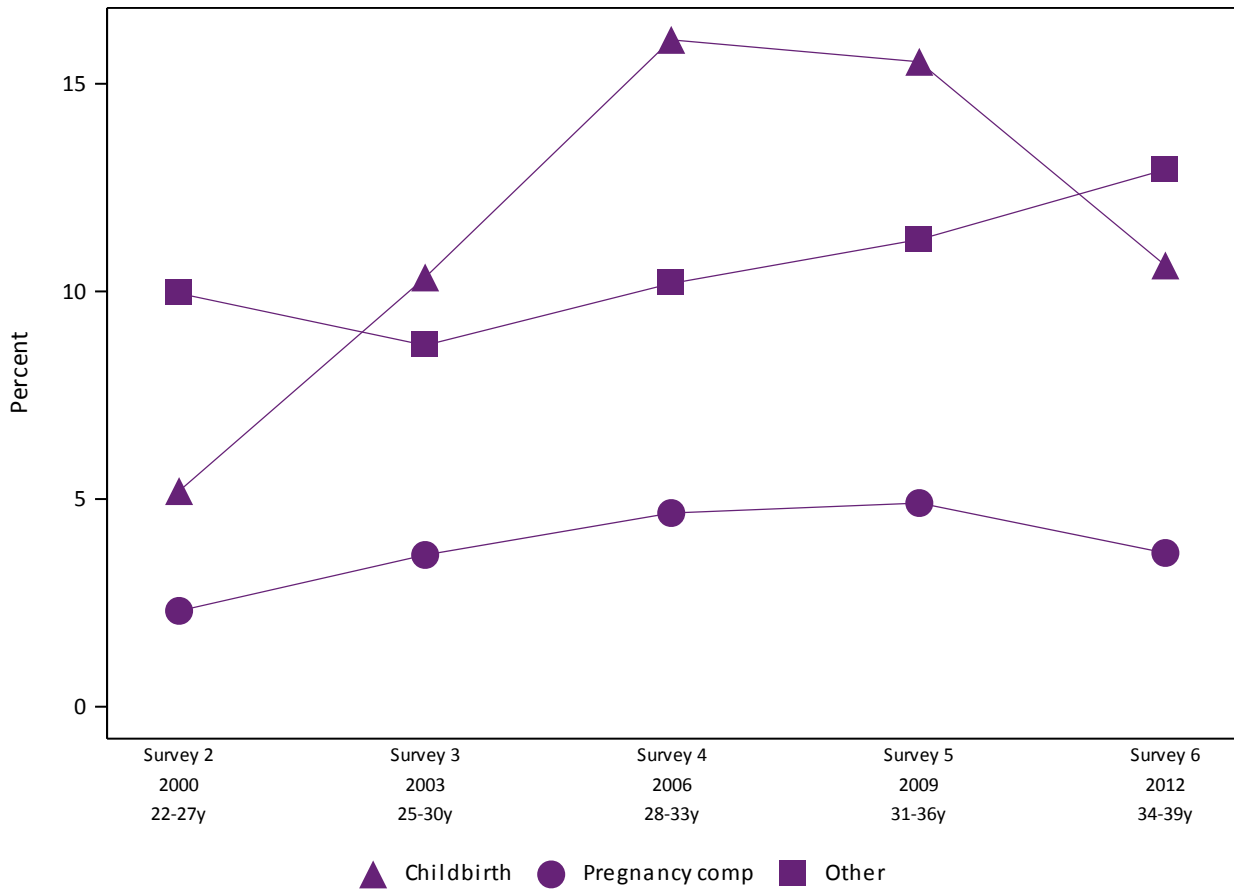
**Figure 2-40 Access to Pap test from Survey 2 to Survey 6 (N=4,860).**

Ratings on the ease of access to obtaining a Pap test have remained largely unchanged from Survey 2 to Survey 6, except for a slight dip at Survey 3. For the other surveys, about two out of three women regard access as either very good or excellent.

## 2.6.2 Hospitals

QUESTION: Have you been admitted to hospital in the last 12 months?

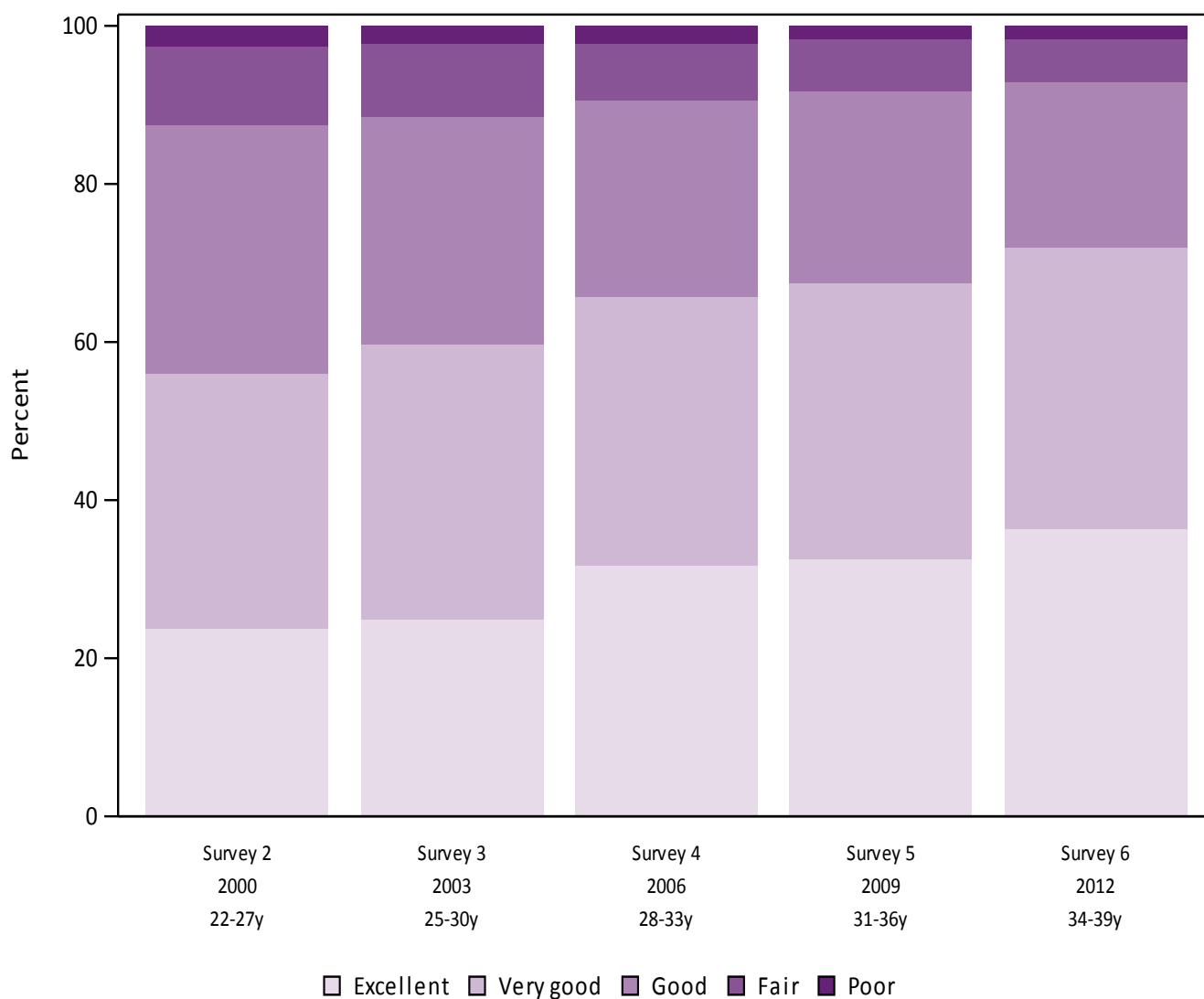
- For normal childbirth
- For problems with childbirth
- All other reasons



**Figure 2-41 Percentage of Hospital admissions in past 12 months from Survey 1 to Survey 6 (N=4,772).**

Reflecting a life stage in which the women are starting their families, hospital admissions started to increase from Survey 2 when women were aged 22-27, and declined at Survey 6, when the women were aged 34-39.

QUESTION: Thinking about your own health care, how would you rate access to a hospital if you need it?



**Figure 2-42 Rating of access to a hospital if needed from Survey 2 to Survey 6 (N=5,005).**

*Note:* This question was not asked at Survey 1.

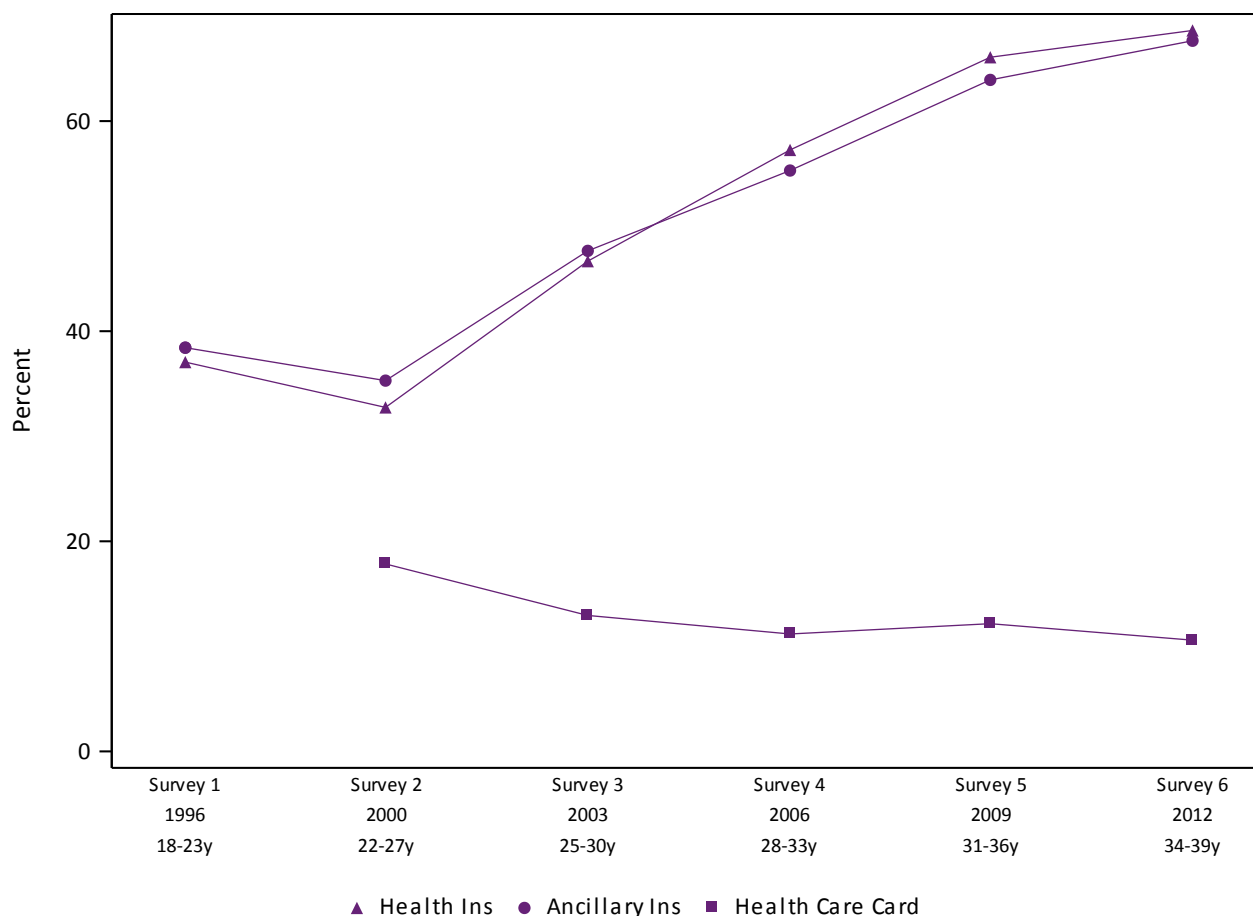
Between Survey 2 and Survey 6, the women’s assessment of access to a hospital improved, so that by Survey 6 about 70% of the women rated access as good, very good, or excellent. Additional details for ratings of access to a hospital can be found in Table 5-6 in Appendix A.

### 2.6.3 Health insurance

QUESTION: Do you have private hospital insurance?

QUESTION: Do you have private insurance for ancillary services?

QUESTION: Do you have a Health Care Card?



**Figure 2-43 Uptake of private hospital insurance, private ancillary insurance and possession of Health Care Card from Survey 1 to Survey 6 (N for private hospital insurance = 5,039, N for private ancillary insurance = 5,015, and N for health care card = 4,965).**

Uptake of private insurance for hospital and ancillary services began to increase in 2000, reflecting both changes to government policy whereby individuals without private health insurance would have higher premiums if they choose to take out private health insurance after the age of 30, and a higher likelihood of hospital use due to pregnancy and childbirth. The percentage of women who had a Health Care Card declined by about a third from 18% at Survey 2 to 11% at Survey 4, and remained at around 11 -12% of women for the remaining surveys.

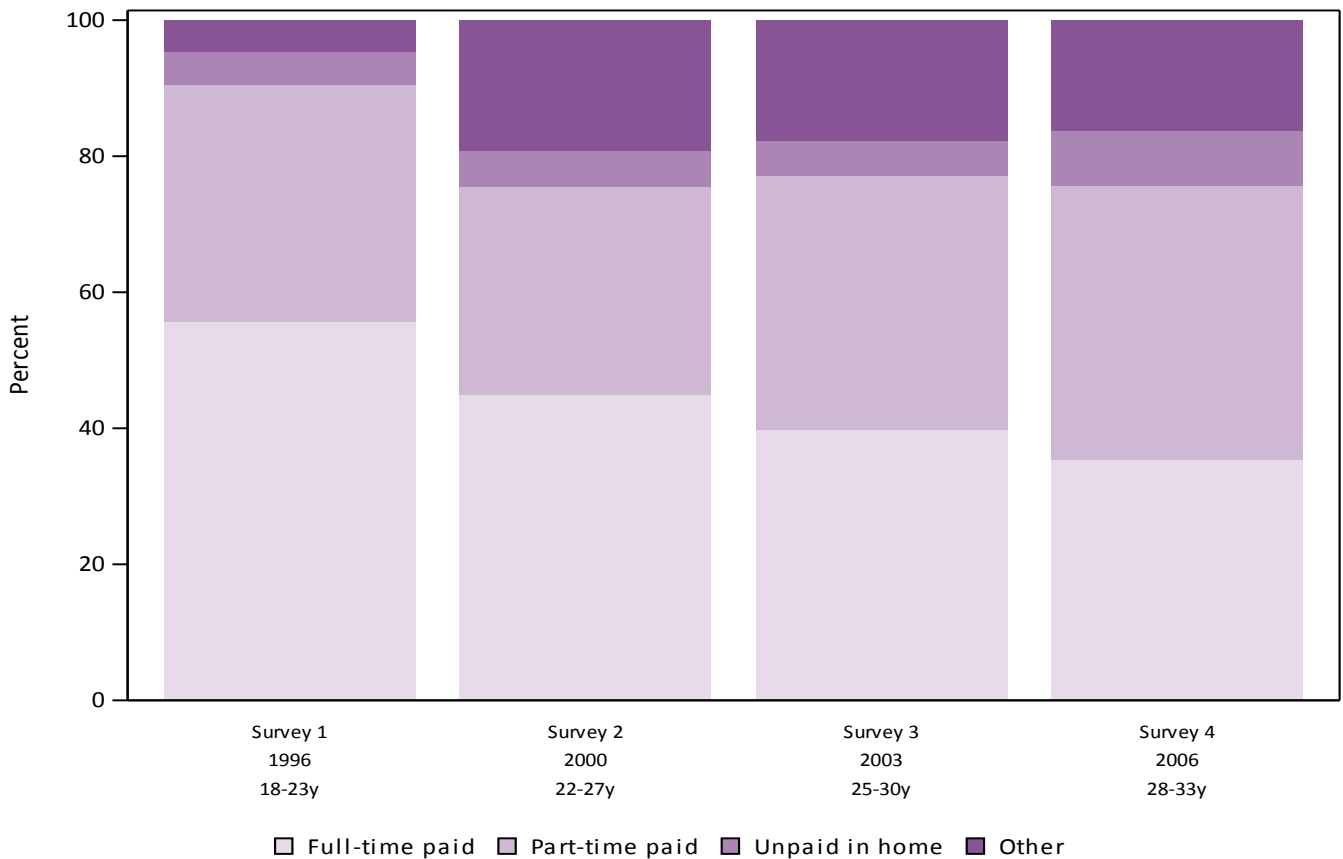


## 2.7 Cohort specific issues

### 2.7.1 Aspirations

QUESTION: When you are 35, would you like to be:

- In full-time paid employment
- In part-time paid employment
- In full-time unpaid work in the home
- Other (included as an option at Survey 1 only)
- Self-employed/own business (included at Survey 2, 3 and 4 only)

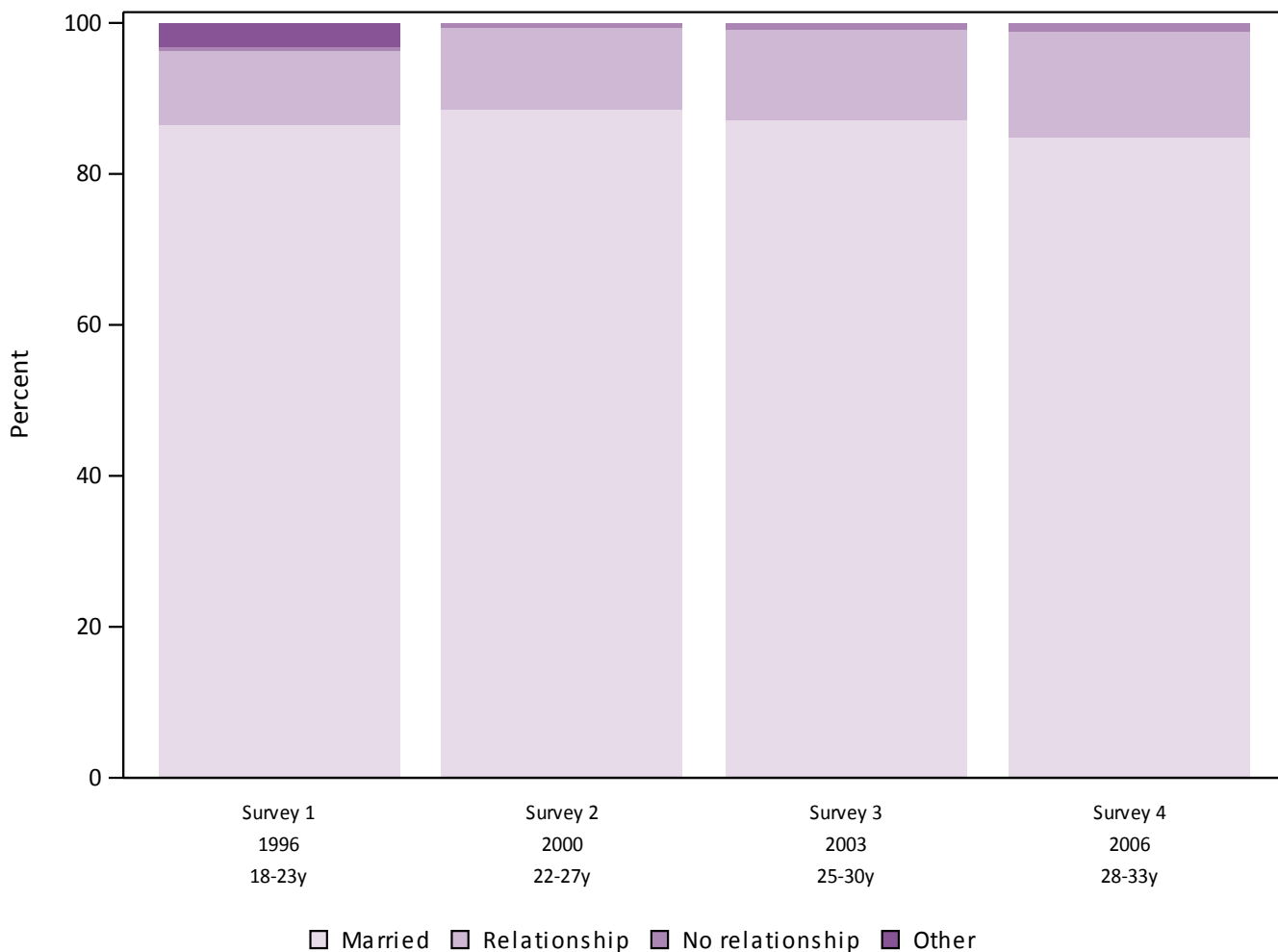


**Figure 2-44 Aspirations for employment at age 35, from Survey 1 to Survey 4 (N=6,439).**

Across all the surveys, most of the women aspired to be employed either full-time or part-time when they were 35, however the percentage who aspired to be employed full-time declined to 40% by Survey 4, with a corresponding increase for part-time employment.

QUESTION: When you are 35, would you like to be:

- Married
- In a stable relationship but not married
- Single (not in a stable relationship)
- Other (included as an option at Survey 1 only)



**Figure 2-45 Aspirations for relationship at age 35 from Survey 1 to Survey 4 (N=6,444).**

Across Surveys 1 to Survey 4, more than 80% of the women aspired to be married by the time they were aged 35.

QUESTION: When you are 35, would you like to have:

- No children
- 1 child (asked at Survey 2, 3 and 4)
- 1 or 2 children (asked at Survey 1 only)
- 2 children (asked at Survey 2, 3 and 4)
- More than 2 children (asked at Survey 1 only)
- 3 or more children (asked at Survey 2, 3 and 4)

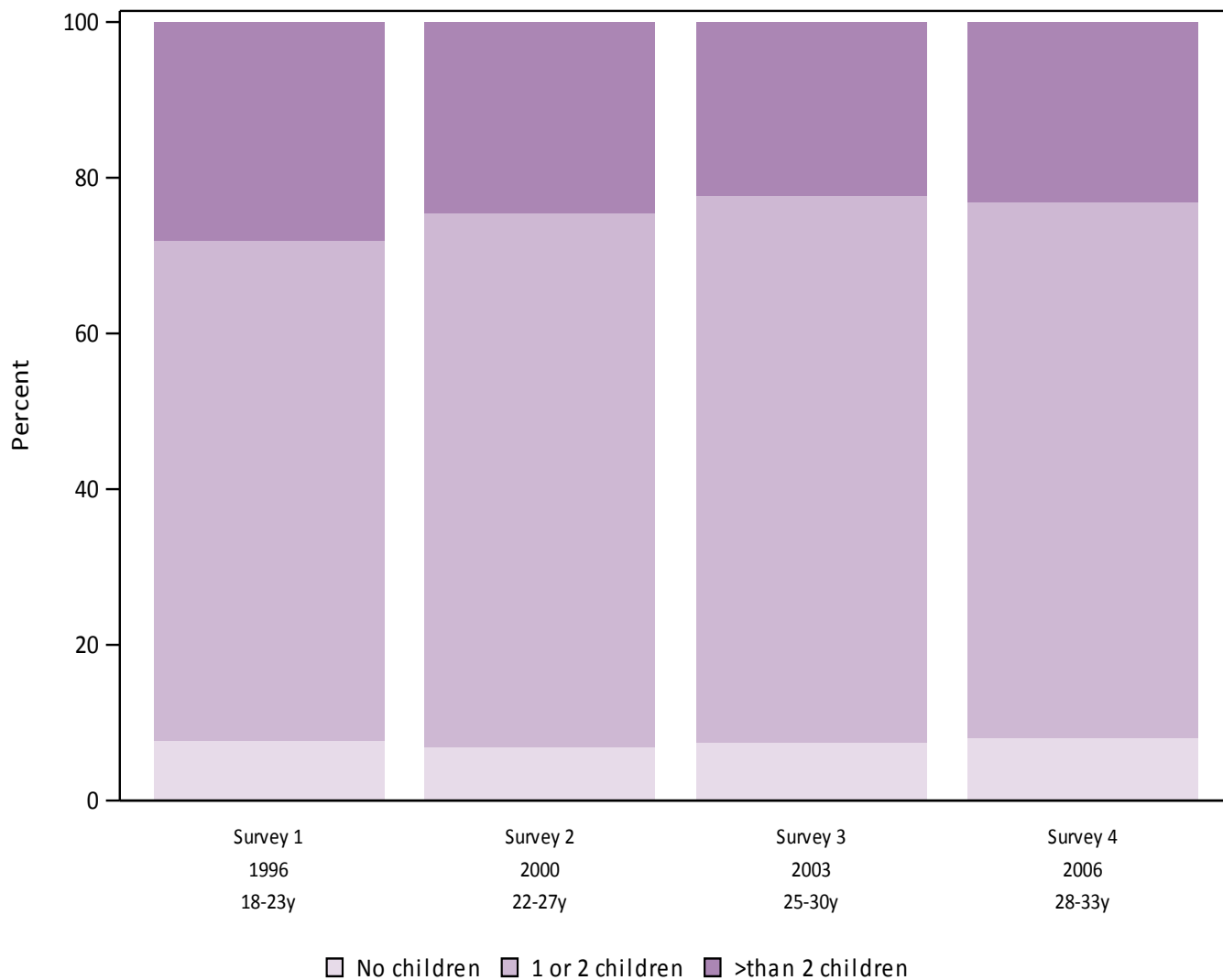
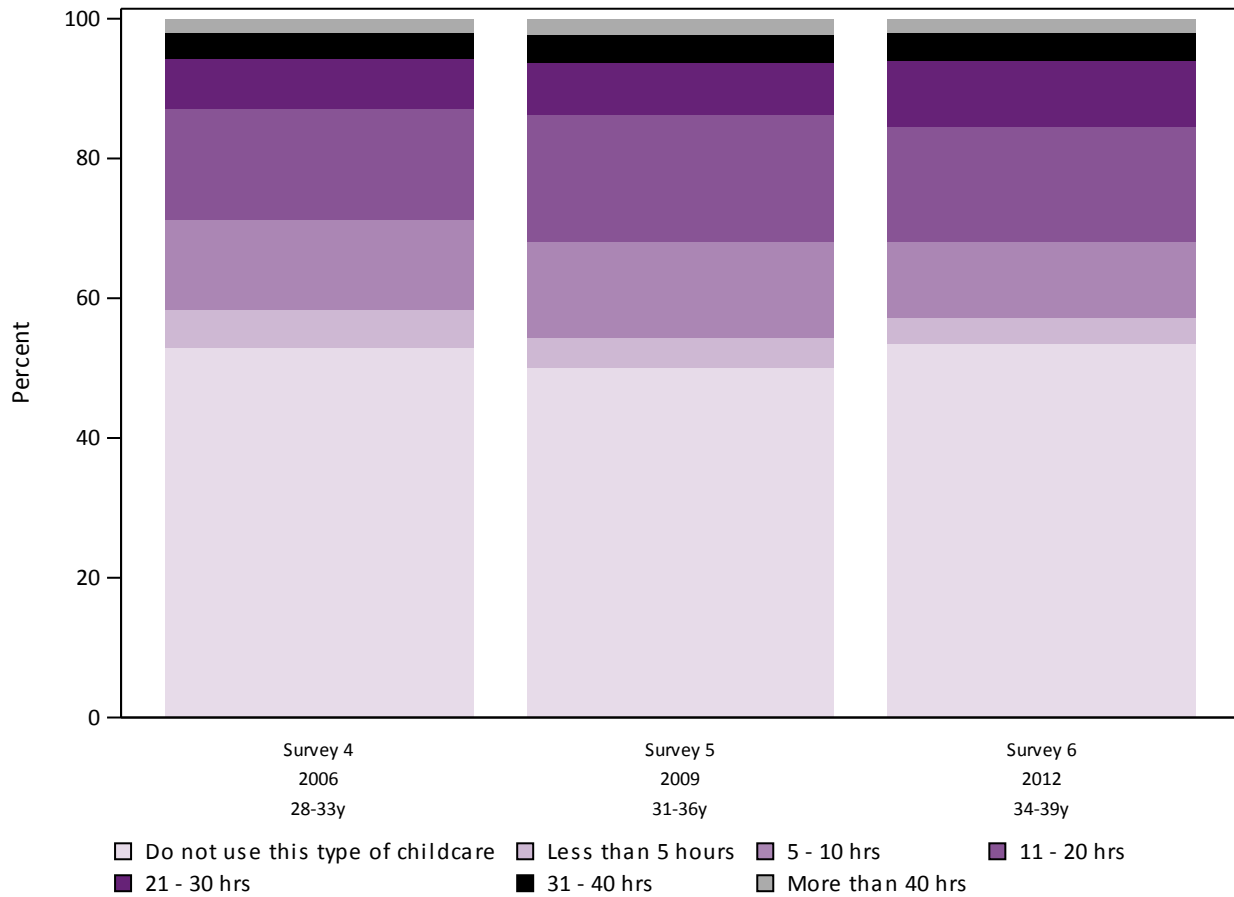


Figure 2-46 Aspirations for children at age 35 from Survey 1 to Survey 4 (N=5,712).

Consistent with the large majority of women who aspired to be married by the time they were 35, more than 70% also desired a traditional family of 1 or 2 children.

## 2.7.2 Childcare

QUESTION In a normal week, how often do you usually use formal childcare?

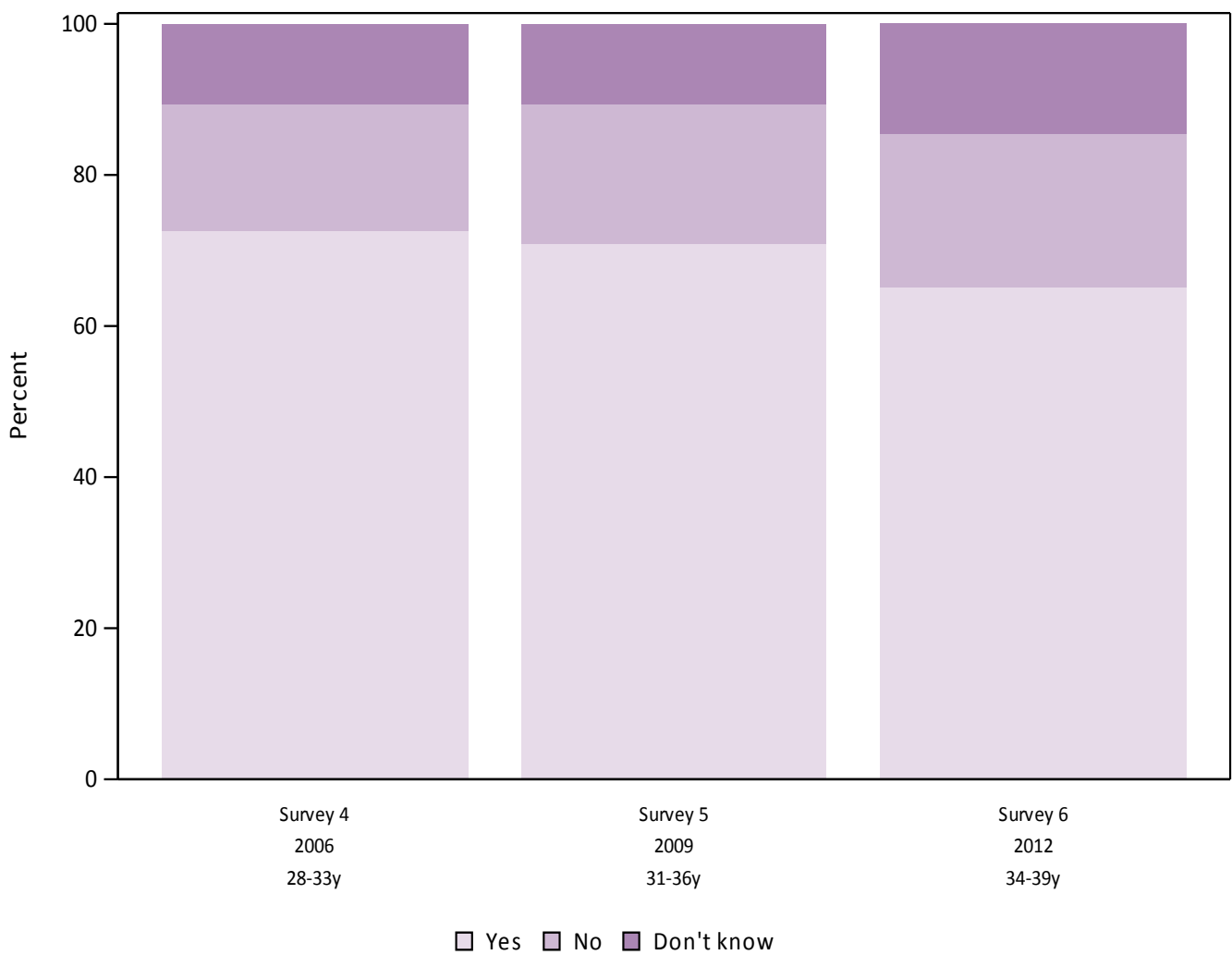


**Figure 2-47 Use of formal childcare services from Survey 4 to Survey 6 (N=4,618\*).**

\* Includes only women who have children living with them, and who have answered this question at every survey.

Across Surveys 4 to 6, the majority of mothers in the cohort either did not use formal childcare or used it for less than 5 hours a week.

QUESTION: Is informal child care available to you?

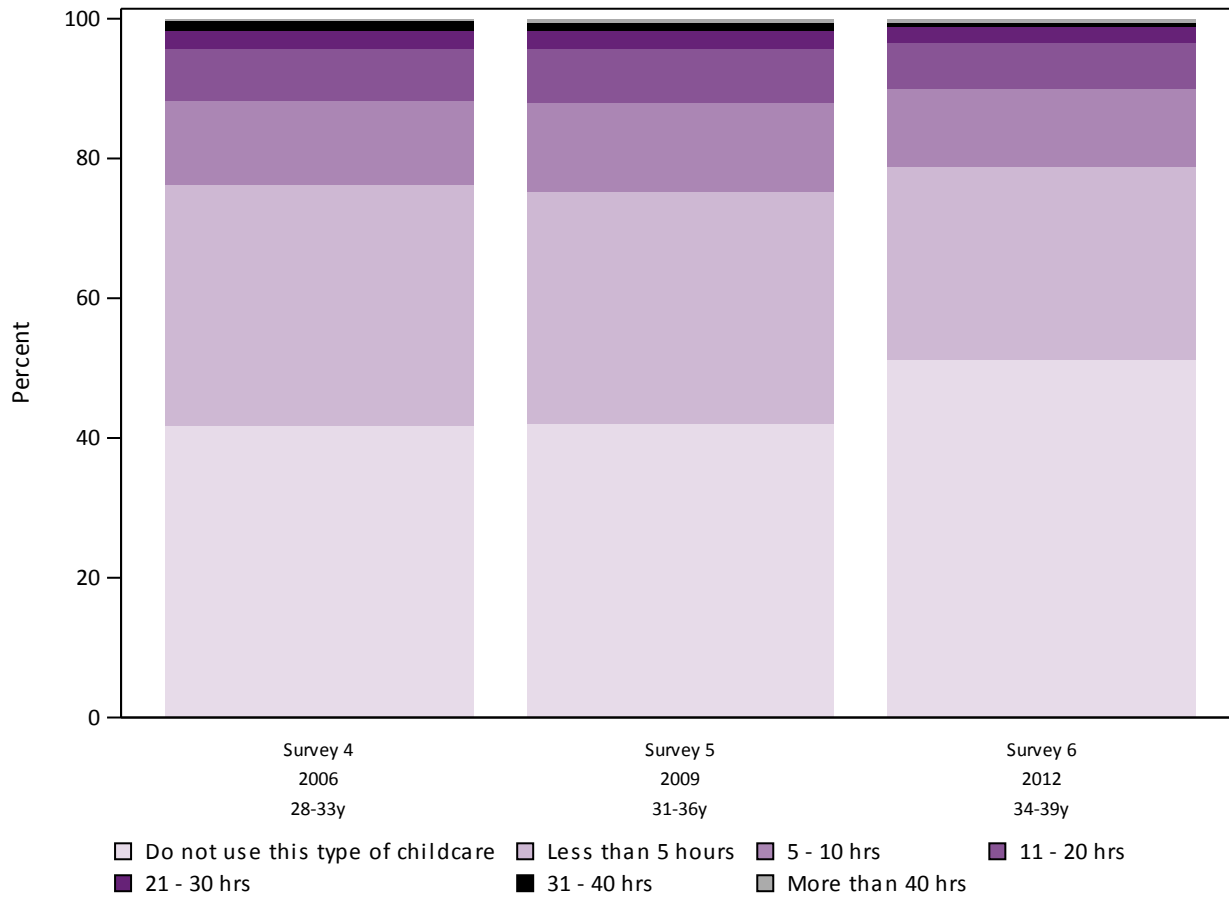


**Figure 2-48 Availability of informal childcare from Survey 4 to Survey 6 (N=4,668\*).**

\* Includes only women who have children living with them, and who have answered this question at every survey.

Most women (60 to 70%) reported that informal childcare was available to them, although the percentage reporting this availability declined to the lower end of this range by Survey 6.

QUESTION: In a normal week, how often do you usually use informal child care?

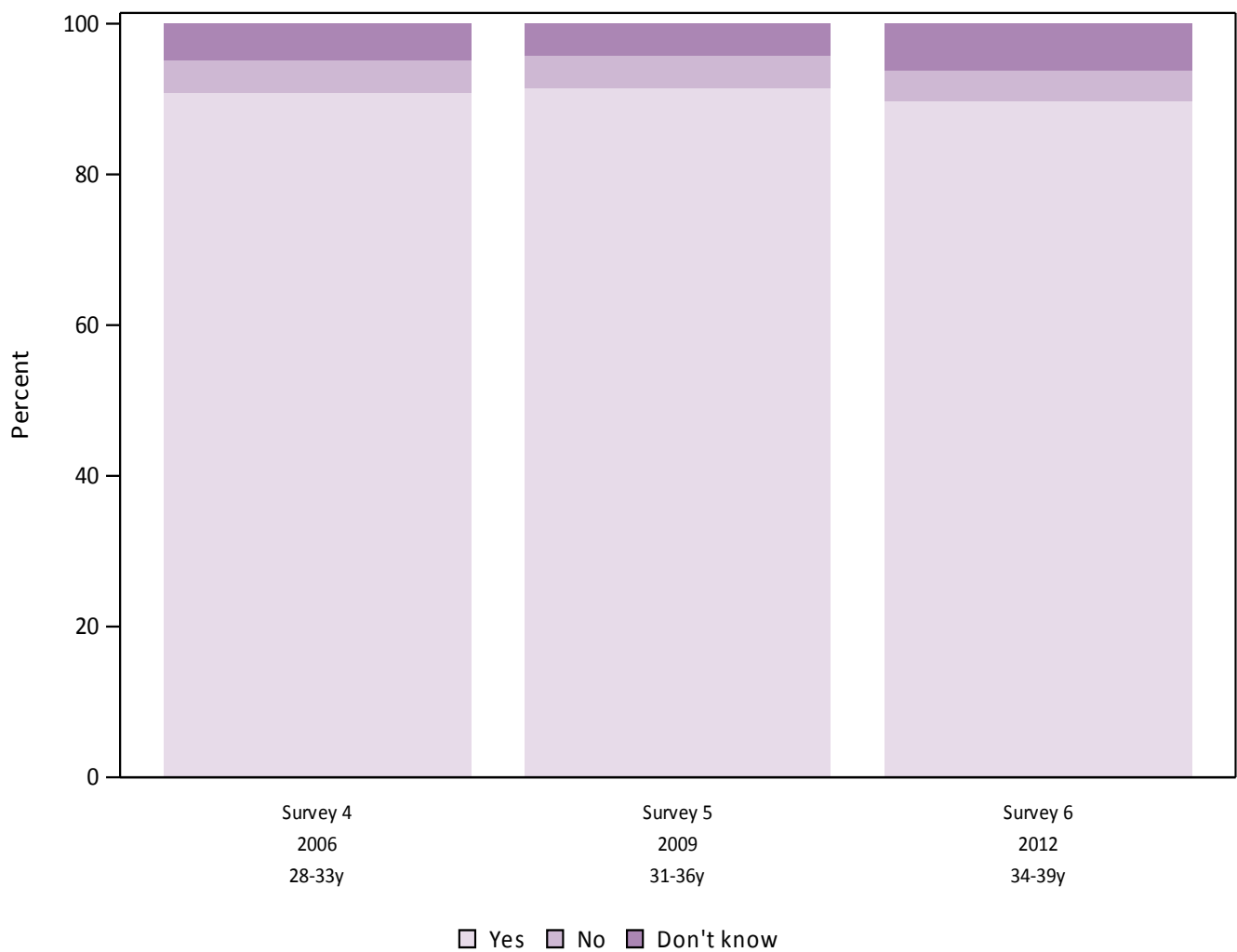


**Figure 2-49 : Use of informal childcare from Survey 4 to Survey 6 (N=4,514\*).**

\* Includes only women who have children living with them, and who have answered this question at every survey.

More than 20% of the women reported that they usually used informal childcare for more than 5 hours per week. However by Survey 6 this figure had declined slightly, with almost 80% of women reporting using this type of care for less than 5 hours per week.

QUESTION: Is formal child care located in an area convenient to you

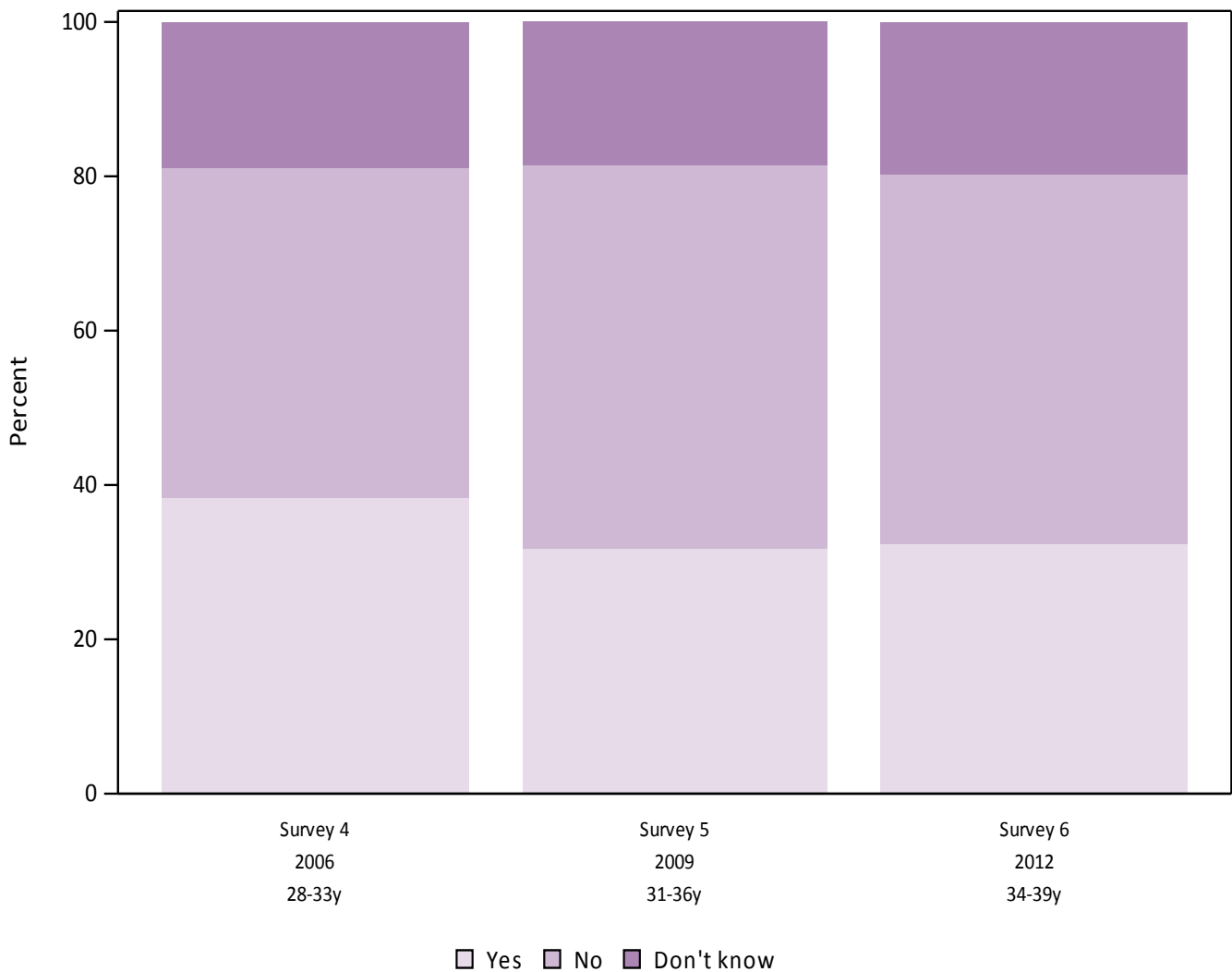


**Figure 2-50 Convenience of the location of formal childcare from Survey 4 to Survey 6 (N=4,683\*).**

\* Includes only women who have children living with them, and who have answered this question at every survey.

Although the majority of the women did not use formal childcare or used it for less than 5 hours per week, this low uptake was not dictated by location, as the vast majority of women reported that a formal childcare facility was conveniently located to them.

QUESTION: Is the cost of formal child care a problem for you?



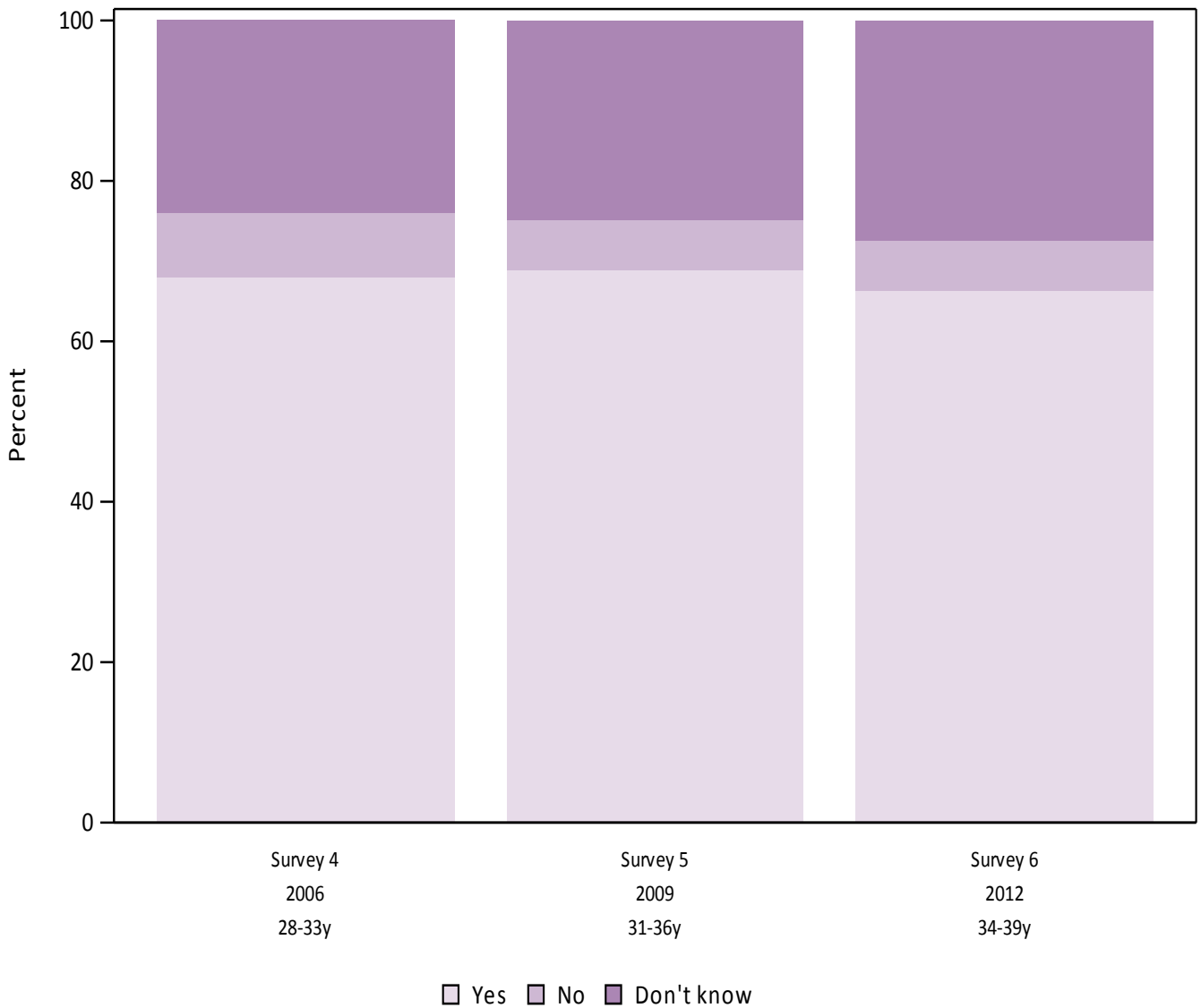
**Figure 2-51 Problem with the cost of formal childcare from Survey 4 to Survey 6 (N=4,679\*).**

\* Includes only women who have children living with them, and who have answered this question at every survey.

At Survey 4, almost 40% of women reported that the cost of formal childcare was a problem for them, with this figure declining to around 30% at Survey 5 and 6. Further information about women's responses to this question (Is the cost of formal childcare a problem for you?) can be found in Table 5-7 and Table 5-8 in Appendix A.



QUESTION: Are formal child care places available to you?

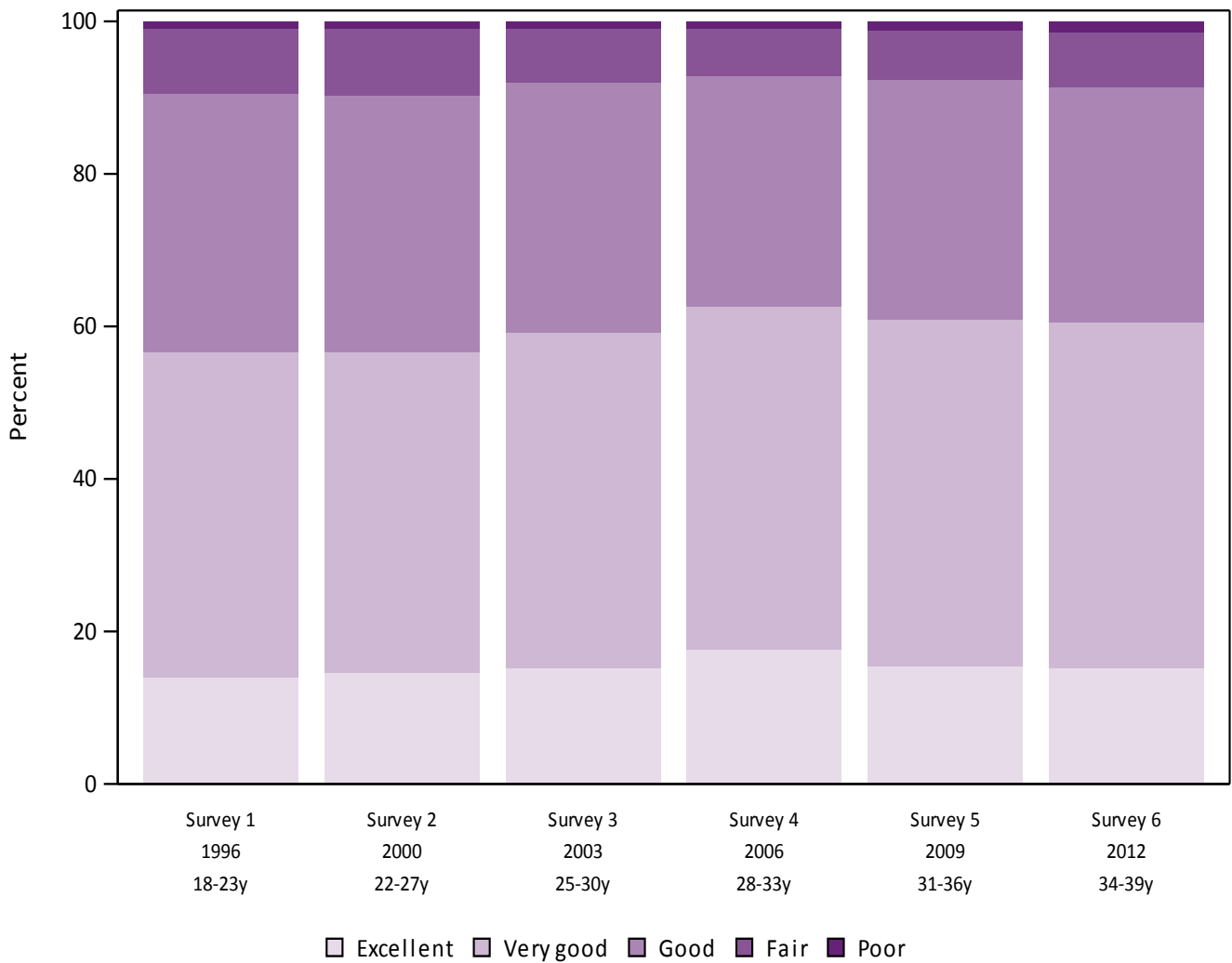


**Figure 2-52 Availability of places for formal childcare from Survey 4 to Survey 6 (N=4,683\*).**

\* Includes only women who have children living with them, and who have answered this question at every survey.

Over the three surveys, around 65 to 70% of the women who had children living with them indicated that formal childcare places were available for them, with this figure at the lower end of the range by Survey 6.

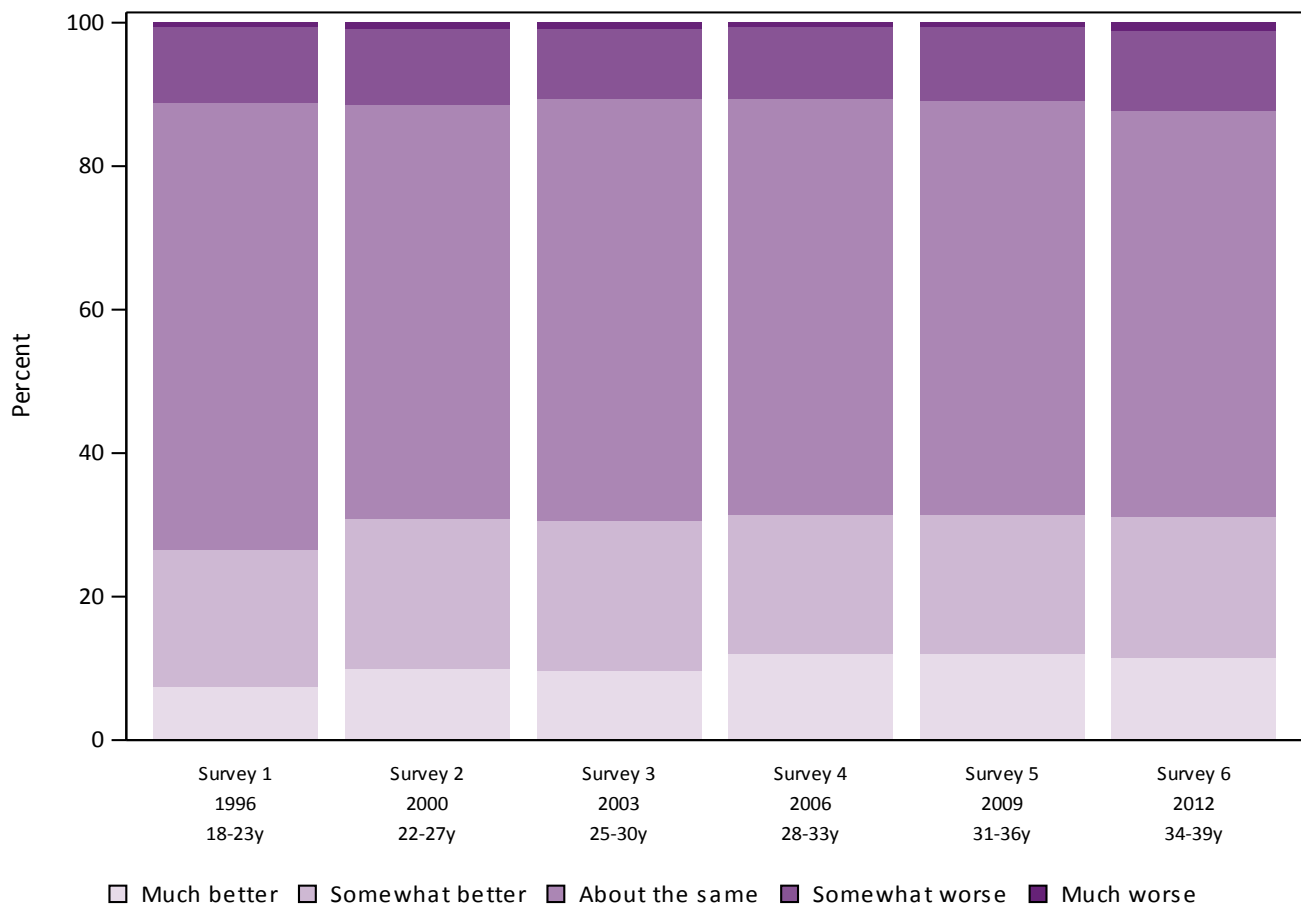
QUESTION: In general, would you say your health is excellent, very good, good, fair, poor?



**Figure 2-53 : Self-rated health from Survey 1 to Survey 6 (N=5,164).**

Across all six surveys, more than 90% of women rated their health as good, very good, or excellent.

QUESTION: Compared to one year ago, how would you rate your health in general now?



**Figure 2-54 Self-rated health compared to one year ago, from Survey 1 to Survey 6 (N=5,168).**

Compared to one year ago, the majority of the women felt that their health was much better, somewhat better, or about the same. About 10% of the women felt their health was somewhat worse than the previous year and this percentage remained fairly stable over the sixteen years between Survey 1 and Survey 6.

### 3 KEY RESEARCH ACHIEVEMENTS SINCE 1996

In this section the key research achievements which have contributed to the health of young Australian women are described by:

- Publications and reports using data from the 1973-78 ALSWH cohort
- Contributions to Government Policy
- Capacity building activities in women's health research
- The identification of future gaps and priorities for research on the health of young Australian women

#### 3.1 Publications and reports using data from the 1973-78 ALSWH cohort

##### 3.1.1 Publications

Between 1996 and March 2014, ALSWH published 126 papers that used data from the 1973-78 cohort. These publications are listed in Appendix B. The major themes in these publications are:

- Mental health (31 papers)
- Reproductive health (30 papers)
- Weight, nutrition and physical activity (23 papers)
- Health service use and systems (16 papers)
- Chronic conditions (16 papers)
- Work patterns and work family balance (13 papers)
- Tobacco, alcohol and other drugs (13 papers)
- Social factors in health and well-being (11 papers)
- Roles and relationships (10 papers)
- Methodology (8 papers)
- Abuse (7 papers)
- Data linkage (4 papers)
- Health in rural and remote areas (4 papers)

(Note: A publication may reflect more than one major theme).

The themes with four or more papers cited 20 times or more in the international peer reviewed literature were chronic conditions, mental health, reproductive health and weight, nutrition, and physical activity. Particularly highly cited papers included:

- Chiarelli P, Brown WJ & McElduff P. Leaking urine: Prevalence and associated factors in Australian women. 1999, *Neurology and Urodynamics*, 18(6); 567-577. Citations = 103. In this paper the authors commented that the prevalence of leaking urine in the younger cohort was surprisingly high (13%), and that the association between parity and leaking urine was strongest in the young women, thus lending support to the notion that leaking urine is not necessarily a condition of old age. They also found poorer quality of life in younger women who reported leaking urine.
- Adams J, Sibbritt D, Easthope G & Young A. The profile of women who consult alternative health practitioners in Australia. 2003, *Medical Journal of Australia*, 1779(6); 297-300. Citations = 81. This paper showed that 19% of young women had consulted a complementary or alternative medicine (CAM) practitioner in the previous 12 months and that CAM users were more likely than non-users to reside in non-urban areas, to report poorer health, have more symptoms and illness, and be higher users of conventional health services.

- Young AF, Powers JR & Bell SL. Attrition in longitudinal studies: Who do you lose? 2006, *Australian and New Zealand Journal of Public Health*, 30(4); 353-361. Citations = 59. This paper described the risk factors for various types of attrition in the 1973-78 cohort, as well as the older ALSWH cohorts. The 1973-78 cohort had the highest attrition between surveys 1 and 2 at 32%. Attrition at survey 2 was highest among younger women (32%), mainly because of participants not being contactable (21%), and lower among the older (16%) and mid-age women (10%). At survey 1, the survey 2 non-respondents in the younger cohort were more likely to report having less education, being born in a non-English speaking country and being a current smoker.
- Smith MD, Russell A & Hodges PW. Disorders of breathing and continence have a stronger association with back pain than obesity and physical activity. 2006, *Australian Journal of Physiotherapy*, 52(1); 11-16. Citations = 51. This paper identified that disorders of continence and respiration were strongly related to frequent back pain, unlike obesity and physical activity. The authors suggested that this relationship may be explained by physiological limitations of co-ordination of postural, respiratory and continence functions of trunk muscles.

### 3.1.2 Reports to the Department of Health

Since 2001, ALSWH has published 27 reports for the Department of Health that have used data from the 1973-78 cohort. These reports, listed in full in Appendix C, have included the following research areas:

- **Weight and Physical Activity:** Physical activity and the maintenance of health/body weight have significant effects on the prevention and management of chronic disease. ALSWH is well positioned to explore this relationship over time, and four major reports (in 2003, 2004, 2007 and 2012) have examined these issues for the 1973-78 cohort. The main findings of the reports were that women in this cohort have been gaining weight rapidly (an average increase of around 9 kilograms since 1996), show poor levels of adherence to nutritional guidelines, and have declining levels of physical activity. They also showed obese women and less physically active women made more use of health care services than other women.
- **Reproductive Health:** A major report in 2009 covered contraception use, fertility and infertility, and prenatal and maternal health behaviours - such as diet and physical activity, smoking and alcohol consumption, and prescription medication usage, as well aspirations for children, and motherhood and paid work.
- **Alcohol and smoking:** Five reports in 2001, 2002 and 2004, including ones prepared for the National Tobacco Strategy and National Alcohol Strategy.
- **Violence:** Three reports in 2003, 2004 and 2005, including two prepared for the Office of the Status of Women, Department of Prime Minister and Cabinet.
- **Alcohol and smoking:** Four reports in 2001, 2002 and 2004, including one prepared for the National Tobacco Strategy.
- **Mental Health:** Four reports including one major report in 2013, and others in 2003, 2007 and 2011 reflect the high prevalence (13-18%) of diagnosed or treated depression within this cohort. The 2013 report (Mental Health: Findings from the Australian Longitudinal Study on Women's Health) showed that an increase in detection and management of mental health disorders has occurred. In particular, there has been a steady increase in the use of *Better Access Scheme* (BAS) Medicare items since their introduction in 2006, with data suggesting a substantial decrease in poor mental health for younger women.
- **Health Service Use:** Five reports, including one major report in 2011 which described health service use by geographical location, and others in 2001, 2003 and 2008. Some highlights of this research were that young

women were more likely to have a Pap screening test if they were married, more highly educated, working full-time, had private health insurance and had up to 3 children. Regarding geographical location, obtaining access to a Pap test was easiest for young women living in major cities and poorest for those living in rural/remote areas. Despite access to a Pap test being slightly harder for women living in regional areas compared to major cities, these women were 10% more likely to have had a Pap test within the past 2 to 5 years, compared to women in major cities.

- **Transitions and trends:** Three reports in 2004, 2005 and 2006 have described changes in prevalence of health behaviours, risk factors and health conditions in young women over time, and methodological techniques for analysing change data.
- **Paid Work, Time use and Aspirations:** A report in 2004 highlighted how young women juggle their time by analysing the mix between paid work and other activities. It also presented data on the aspirations of young women (“when I am 35 I would like to...” ) with regards to relationship status, motherhood and educational achievement.

In 2008, ALSWH produced a calendar that featured a particular women’s health theme each month. Of these, five featured data from the 1973-78 cohort: these were reproductive health, physical activity, violence, transitions in relationships and employment, and chronic disease.

ALSWH also produced reports between 1996 and 2001 but these primarily concerned cross-sectional analyses of baseline data from the earliest ALSWH surveys.

### **Other reports**

ALSWH data have also been used by researchers to produce reports for other agencies. Two examples are the 2005 Social Policy Research Centre Discussion Paper “Impact of young motherhood on education, employment and marriage” (Bradbury, 2005), and the 2005 report by Access Economics “The cost of domestic violence to the economy, Part 1” (Access Economics, 2005).

## **3.2 Contributions to Government Policy**

Findings from the 1973-78 ALSWH cohort have directly influenced Federal and State Government Policy in several areas. We briefly feature three recent notable contributions:

- 2010 Australian Government's National Women's Health Policy (Australian Government Department of Health and Ageing, 2010)
- 2014 Australian Government's Physical Activity Guidelines (Australian Government Department of Health, 2014)
- 2013 New South Wales Government's Health Framework for Women's Health (NSW Ministry of Health, 2013)

### **3.2.1 The 2010 Australian Government's National Women's Health Policy (Australian Government Department of Health, 2010).**

Published research from the ALSWH 1973-78 cohort was cited 34 times in the policy. Evidence from the ALSWH contributed to recommendations concerning reproductive health (outcomes and risks); health behaviours (diet, smoking, alcohol consumption, physical activity) and pregnancy; weight gain after pregnancy; sexual identity and health outcomes; chronic conditions (such as asthma) in young women; risk factors for depression and anxiety; health outcomes associated with depression and anxiety; adherence to healthy behaviour guidelines; mental health and employment, education and occupational outcomes; the impact of interpersonal violence and abuse on young women's reproductive health, reproductive outcomes and mental and physical health; young women's aspirations; transitional moments in young women's lives when health promotion can be targeted; and the impact of social pressure on health issues such as body weight, self-image and risk taking behaviours.

### **3.2.2 The 2014 Australian Government's Physical Activity Guidelines (Australian Government Department of Health, 2014).**

Published research from the ALSWH 1973-78 cohort was cited 7 times in the systematic review of evidence supporting these guidelines (Brown et al., 2012). Evidence from the ALSWH contributed to recommendations concerning prevalence and predictors of weight gain, sedentary behaviours and health, and new domains of physical activity that need to be considered in activity guidelines.

### **3.2.3 The 2013 New South Wales Government's Health Framework for Women's Health (NSW Ministry of Health, 2013).**

Published research from the ALSWH 1973-78 cohort contributed to recommendations concerning how socioeconomic inequalities are associated with health conditions and health behaviours in young women which can subsequently affect their risk of developing further health conditions.

### 3.3 Capacity building activities in women's health research

Between 1996 and 2014, 21 researchers who based their research on the ALSWH 1973-78 cohort have graduated with a masters or PhD degree. The table below outlines these research topics, and highlights a few of the researchers.

#### ALSWH RESEARCH HIGHER DEGREE (PHD OR MASTERS) STUDENTS COMPLETED USING 1973-78 COHORT DATA

Student	Topic	Institution	Degree	Completion date
Anne Young	General Practitioner utilisation among women in Australia.	The University of Newcastle	PhD	1999
Associate Professor Anne Young is now Director of the Strategy, Planning and Performance Unit, University of Newcastle.				
Amanda Patterson	Iron deficiency in women of child bearing age	The University of Newcastle	PhD	1999
Kylie Ball	Disordered eating, psychological distress and coping in young women.	The University of Newcastle	PhD	1999
Professor Kylie Ball is now a Principal Research Fellow in the Centre for Physical Activity and Nutrition Research, Deakin University.				
Pauline Chiarelli	Female urinary incontinence in Australia: Prevalence and prevention in post-partum women	The University of Newcastle	PhD	2001
Samantha Hollingworth	The contraceptive behaviour of young women in Australia	The University of Queensland	Masters of Public Health	2002
Dr Samantha Hollingworth is now a Senior Lecturer in the School of Pharmacy, The University of Queensland.				
Sandra Bell	Stress, health behaviours and the transitions to adulthood among young women	The University of Newcastle	PhD	2003
Lauren Miller-Lewis	Psychosocial risk factors for pregnancy and pregnancy risk-taking in late adolescent females: A WHA longitudinal inquiry	Flinders University	PhD	2004
Dr Lauren Miller-Lewis is now an NHMRC Public Health (Australia) Postdoctoral Research Training Fellow at the Research and Evaluation Unit within the Discipline of Paediatrics in the School of Paediatrics and Reproductive Health at the University of Adelaide, and the Women's and Children's Hospital, Women's and Children's Health Network.				
Angie Wood	A longitudinal analysis of Oral Contraceptive Pill (OCP) use	Macquarie University	Masters of Applied Statistics	2006
Liane McDermott	Cigarette smoking among young women	The University of Queensland	PhD	2007
Nadine Smith	Biopsychosocial correlates of women's mental health: A longitudinal analysis of self-reported mental health across three generations of Australian women.	The University of Queensland	PhD	2008
Dr Nadine Smith is now a senior researcher with the NSW Bureau of Crime Statistics and Research.				



Student	Topic	Institution	Degree	Completion date
Catherine France	Battling the Black Dog: An exploration of the strategies used by young Australian women coping with depressive symptoms.	The University of Newcastle	PhD	2008
Ingrid Rowlands	Coping with miscarriage: Australian women's experiences.	The University of Queensland	PhD	2009
Dr Ingrid Rowlands is now a researcher with the Gynecological Cancers Group, Queensland Institute of Medical Research.				
Alexis Hure	Nutritional influences in pregnancy and postpartum for women and their children.	The University of Newcastle	PhD	2009
Toni Lindsay	Changes in young women's health behaviours in response to traumatic events.	The University of Newcastle	Masters of Health Psychology	2009
Dr Toni Lindsay is now a practising clinical psychologist in Sydney, working with children, adolescents and adults living with chronic health conditions such as cancer, diabetes, cystic fibrosis and gastrointestinal conditions. Dr Lindsay is on several professional advisory committees for young people living with cancer, and regularly blogs about issues related to cancer issues.				
Beverley Lloyd	Mothers, work and mental health: Epidemiological and women's perspectives.	The University of Sydney	PhD	2010
Heather McKay	Childlessness in Australian women: By choice?	The University of Melbourne	PhD	2010
Rosie Mooney	Negotiating the reproduction imperative in late modernity: How do young women make decisions about if and when to have children?	The University of Newcastle	PhD	2011
Melissa Johnstone	Careers or babies: What young Australian women want.	The University of Queensland	PhD	2011
Danielle Herbert	Fertility and infertility: Studies in reproductive epidemiology in Australia.	The University of Queensland	PhD	2011
Dr Danielle Herbert is now a Postdoctoral Research Fellow at the Queensland University of Technology and Project Manager of an NHMRC project, 'Building an evidence base for funding evidence-based medicine'.				
Kees van Gool	The impact of out-of-pocket costs on the use and distribution of cervical screening services.	University Technology Sydney	PhD	2011
Nicole Au	Obesity in Australian: An economic perspective.	Monash University	PhD	2012
Catherine Chojenta	Prevalence, antecedents and perceptions of efficacy of treatments of postnatal depression in Australia.	The University of Newcastle	PhD	2013

There are 15 students currently enrolled in Masters or PhD research which is based on data from the ALSWH 1973-78 cohort.

Findings from the 1973-78 cohort have been presented at a number of symposia as part of both international and specialist conferences.

- *Symposium: Qualitative findings from the Australian Longitudinal Study on Women's Health.* Loxton D (presenter and chair). Qualitative Health Research: The 15<sup>th</sup> International Interdisciplinary Conference, Vancouver, 4-6 October, 2009.
- *Symposium: Women's experiences of abuse: Findings from the ALSWH.* Loxton D (presenter and chair). The New National Agenda: The 6<sup>th</sup> Australian Women's Health Conference, Hobart, 18-21 May, 2010.
- *Motherhood, drought and elder abuse: Stories from three generations of women who participate in the Australian Longitudinal Study on Women's Health.* Loxton D (presenter and chair). Challenging the Boundaries: The 16th Qualitative Health Research Conference, Coast Plaza Hotel and Suites, Vancouver, British Columbia, October 3-5, 2010.
- *Findings from the ALSWH.* 3rd International Congress on Women's Mental Health, Melbourne, Victoria, 17-20 March, 2008.
- *Methods on analysing longitudinal life course data.* Mishra G (presenter and chair). The Australasian Epidemiological Association Annual Scientific Meeting 2013, Brisbane, 20-22 October, 2013

### **3.4 The identification of gaps and priorities for research on the health of young Australian women**

ALSWH findings on the 1973-78 cohort have contributed to identifying national priorities for research on the health of young women, including:

- How to increase participation by young women in healthy lifestyle behaviour (reduced sitting time, increased physical activity, less caloric consumption, maintenance of healthy body weight, and reduced smoking and risk taking behaviour concerning drugs and alcohol).
- How to optimally utilise the internet, in particular social media, to increase young women's awareness of health issues and healthy behaviour practices.
- Identifying domestic violence and abuse before it becomes detrimental to young women's health.
- Identification of factors to increase labour force participation.
- Identification of ways to reduce young women's risk of sexually transmitted infections and risky health behaviours which, if not identified and treated early enough, can impact on future fertility.
- Early identification of mental health issues and ways to promote early treatment.
- How to assist young women manage and balance work and family commitments so as to minimise negative impacts on mental and physical health.

Future ALSWH data collection from both the 1973-78 cohort and from the newest cohort of young women who were born 1989-95 will continue to enable the study to provide unparalleled data on the early predictors of many health outcomes. ALSWH is ideally placed to address and inform health policy and priorities and this is principally due to:

- The longitudinal design of the ALSWH.
- Large number of participants in the ALSWH cohorts from across Australia, including rural and remote areas.
- Comprehensive assessment of socio-demographic, health, social, lifestyle and health service use factors.
- Linkage to administrative health and health service use records.

In summary, as data collection and analysis continues, ALSWH findings from the 1973-78 and other cohorts will increasingly contribute detailed evidence to support the development of health policy and inform the type, timing, and targeting of preventive health initiatives and health services.

## 4 REFERENCES

Access Economics. The cost of domestic violence to the economy, Part 1. A report prepared for the Australian Government's Office of the Status of Women. Access Economics; Canberra, Australia, 2005). [http://www.dss.gov.au/sites/default/files/documents/05\\_2012/cost\\_of\\_dv\\_to\\_australian\\_economy\\_i\\_1.pdf](http://www.dss.gov.au/sites/default/files/documents/05_2012/cost_of_dv_to_australian_economy_i_1.pdf)

Australian Government Department of Health and Ageing. National Women's Health Policy 2010. Australian Government; Canberra, Australia, 2010. Available: <http://www.health.gov.au/womenshealthpolicy>

NSW Ministry of Health. NSW Health Framework for Women's Health 2013. Integrated Care Branch: Sydney, 2013. Available: <http://www.health.gov.au/internet/main/publishing.nsf/Content/health-publth-strateg-phys-act-guidelines#apaadult>

Brown WJ, Bauman AE, Bull FC, Burton NW. Development of Evidence-based Physical Activity Recommendations for Adults (18-64 years). Report prepared for the Australian Government Department of Health and Ageing, August 2012. Available: <http://www.health.gov.au/internet/main/publishing.nsf/Content/health-publth-strateg-phys-act-guidelines>

Bradbury B. Impact of young motherhood on education, employment and marriage. Social Policy Research Centre Discussion Paper no. 148: University of New South Wales, Australia; 2006.

## 5 APPENDIX A – ADDITIONAL DETAIL FOR SELECTED TRAJECTORIES

Table 5-1 Dissatisfaction with weight, ALSWH 1973-78 cohort from Survey 2 to Survey 6, by BMI category.

BMI Category	Dissatisfaction with weight in last month?	Survey 1		Survey 2		Survey 3		Survey 4		Survey 5		Survey 6	
		N	%	N	%	N	%	N	%	N	%	N	%
Underweight	0 (Not at all)	151	35.0	144	46.8	79	39.9	84	50.0	72	51.4	66	55.5
	1	69	16.0	45	14.6	32	16.2	25	14.9	19	13.6	3	2.5
	2 (Slightly)	85	19.7	74	24.0	50	25.3	34	20.2	30	21.4	31	26.1
	3	31	7.2	6	1.9	5	2.5	4	2.4	4	2.9	5	4.2
	4 (Moderately)	40	9.3	19	6.2	19	9.6	12	7.1	6	4.3	8	6.7
	5	27	6.3	6	1.9	4	2.0	3	1.8	2	1.4	2	1.7
	6 (Markedly)	28	6.5	14	4.5	9	4.5	6	3.6	7	5.0	4	3.4
Healthy weight	0 (Not at all)	514	15.9	626	20.4	572	20.5	709	25.5	677	25.8	725	29.9
	1	391	12.1	425	13.9	431	15.5	449	16.1	427	16.2	279	11.5
	2 (Slightly)	679	21.0	853	27.9	812	29.1	775	27.9	751	28.6	782	32.2
	3	368	11.4	194	6.3	168	6.0	181	6.5	148	5.6	100	4.1
	4 (Moderately)	579	17.9	500	16.3	445	16.0	418	15.0	368	14.0	351	14.5
	5	359	11.1	176	5.7	139	5.0	83	3.0	101	3.8	60	2.5
	6 (Markedly)	343	10.6	288	9.4	222	8.0	167	6.0	156	5.9	131	5.4

		Survey 1		Survey 2		Survey 3		Survey 4		Survey 5		Survey 6	
		N	%	N	%	N	%	N	%	N	%	N	%
Overweight	0 (Not at all)	20	2.9	29	3.2	29	3.0	72	6.0	63	5.2	80	6.1
	1	18	2.6	33	3.6	65	6.7	72	6.0	64	5.2	55	4.2
	2 (Slightly)	76	10.9	165	18.1	215	22.1	282	23.7	269	22.0	358	27.5
	3	78	11.2	65	7.1	70	7.2	92	7.7	120	9.8	64	4.9
	4 (Moderately)	158	22.6	246	27.0	225	23.1	295	24.7	286	23.4	370	28.4
	5	156	22.3	98	10.8	112	11.5	124	10.4	139	11.4	79	6.1
	6 (Markedly)	192	27.5	274	30.1	259	26.6	255	21.4	281	23.0	295	22.7
Obese	0 (Not at all)	1	0.4	7	1.6	14	2.3	23	2.9	22	2.3	43	3.9
	1	6	2.3	8	1.8	14	2.3	32	4.0	21	2.2	19	1.7
	2 (Slightly)	17	6.5	49	10.9	88	14.4	127	16.0	114	11.8	153	13.9
	3	19	7.3	21	4.7	34	5.6	42	5.3	48	5.0	36	3.3
	4 (Moderately)	41	15.7	86	19.2	123	20.2	168	21.2	194	20.1	221	20.1
	5	60	23.0	58	12.9	73	12.0	90	11.3	127	13.2	84	7.6
	6 (Markedly)	117	44.8	220	49.0	263	43.2	312	39.3	439	45.5	543	49.4

**Table 5-2 Levels of Physical Activity in the ALSWH 1973-78 cohort from Survey 2 to Survey 6, by BMI category.**

		Survey 2		Survey 3		Survey 4		Survey 5		Survey 6	
		N	%	N	%	N	%	N	%	N	%
<b>BMI Category</b>	<b>Level of Physical Activity</b>										
Underweight	Inactive	24	8.8	10	5.6	16	10.4	16	12.5	17	16.0
	Low	94	34.4	60	33.7	57	37.0	53	41.4	40	37.7
	Moderate	74	27.1	41	23.0	36	23.4	23	18.0	26	24.5
	High	81	29.7	67	37.6	45	29.2	36	28.1	23	21.7
Healthy weight	Inactive	207	7.3	172	6.7	225	8.7	273	11.2	257	11.4
	Low	935	33.0	841	32.7	959	37.2	935	38.5	855	37.8
	Moderate	719	25.4	622	24.2	620	24.0	549	22.6	488	21.6
	High	973	34.3	939	36.5	775	30.1	674	27.7	663	29.3
Overweight	Inactive	57	6.8	69	7.7	109	9.8	158	13.9	157	13.0
	Low	285	34.2	332	36.8	447	40.1	445	39.1	486	40.4
	Moderate	212	25.4	216	24.0	282	25.3	273	24.0	286	23.8
	High	280	33.6	284	31.5	277	24.8	261	23.0	275	22.8
Obese	Inactive	48	11.4	61	10.9	97	13.5	142	16.0	220	21.8
	Low	172	41.0	222	39.6	317	44.0	405	45.7	418	41.5
	Moderate	92	21.9	131	23.4	152	21.1	172	19.4	193	19.1
	High	108	25.7	147	26.2	154	21.4	168	18.9	177	17.6

Measurement of physical activity is based on generic Metabolic Equivalent (MET) values of 3.33 for walking and moderate activity, and 6.66 for vigorous activity, and a cut point of 500 MET.mins/week (150 minutes x 3.33 METs, or 75 minutes x 6.66 METs or a combination of moderate and vigorous activities). Level of activity is calculated from responses to both questions and is categorised as inactive (<33.3 MET.mins/week); low (33.3 - <500 MET.mins/week), moderate (500 - <1000 MET.mins/week) or high (≥1000 MET.mins/week). This physical activity measure has been shown to have acceptable reliability and validity<sup>1</sup>.

1. Brown WJ, Burton NW, Marshall AL, Miller YD. Reliability and validity of a modified self administered version of the Active Australia physical activity survey in a sample of mid-age women. *Australian and New Zealand Journal of Public Health* 2008; 32(6): 535-541.

**Table 5-3 Diagnosis or treatment for diabetes, ALSWH 1973-78 cohort from Survey 1 to Survey 6, by BMI category.**

		Survey 1		Survey 2		Survey 3		Survey 4		Survey 5		Survey 6	
		N	%	N	%	N	%	N	%	N	%	N	%
<b>BMI Category</b>	<b>Diabetes (Type 2) diagnosis or treatment in the last 3 years</b>												
Underweight	No diabetes	656	99.2	396	98.5	254	96.9	222	96.9	179	96.8	178	96.2
	Yes, diabetes	5	0.8	6	1.5	8	3.1	7	3.1	6	3.2	7	3.8
Healthy weight	No diabetes	4880	99.3	3853	98.7	3553	98.7	3752	98.4	3476	98.1	3600	97.5
	Yes, diabetes	32	0.7	51	1.3	48	1.3	60	1.6	67	1.9	92	2.5
Overweight	No diabetes	1056	99.3	1170	99.0	1236	98.7	1566	98.2	1636	98.0	1888	97.4
	Yes, diabetes	7	0.7	12	1.0	16	1.3	29	1.8	34	2.0	50	2.6
Obese	No diabetes	398	98.5	578	97.1	782	96.3	1049	96.6	1198	95.7	1632	94.9
	Yes, diabetes	6	1.5	17	2.9	30	3.7	37	3.4	54	4.3	87	5.1

**Table 5-4 Ratings of access to a GP who bulk bills, ALSWH 1973-78 cohort from Survey 2 to Survey 6, by area of residence (ARIA+).**

		Survey 2		Survey 3		Survey 4		Survey 5		Survey 6	
		N	%	N	%	N	%	N	%	N	%
<b>ARIA+ Group</b>	<b>Rating of access to GP who bulk bills</b>										
Major Cities	Excellent	793	32.0	376	14.3	465	17.7	490	19.1	521	21.0
	Very good	644	26.0	392	14.9	390	14.8	410	16.0	441	17.8
	Good	533	21.5	485	18.4	455	17.3	463	18.0	452	18.2
	Fair	303	12.2	483	18.3	501	19.0	480	18.7	405	16.3
	Poor	208	8.4	901	34.2	823	31.2	725	28.2	663	26.7
Inner Regional	Excellent	301	21.9	93	7.9	160	14.0	194	16.3	188	15.0
	Very good	249	18.1	131	11.1	130	11.4	149	12.5	200	16.0
	Good	267	19.5	188	15.9	183	16.0	196	16.5	240	19.2
	Fair	201	14.7	196	16.6	188	16.4	220	18.5	208	16.6
	Poor	354	25.8	572	48.5	483	42.2	429	36.1	414	33.1
Outer Regional	Excellent	108	16.0	56	9.0	67	10.9	84	13.8	102	16.8
	Very good	103	15.2	62	9.9	69	11.2	83	13.6	88	14.5
	Good	147	21.7	96	15.4	95	15.4	103	16.9	113	18.6
	Fair	113	16.7	104	16.6	104	16.9	118	19.4	96	15.8
	Poor	206	30.4	307	49.1	282	45.7	221	36.3	208	34.3
Remote/Very Remote	Excellent	20	15.3	20	14.3	33	21.4	25	18.1	21	17.8
	Very good	20	15.3	13	9.3	17	11.0	19	13.8	14	11.9
	Good	20	15.3	22	15.7	17	11.0	25	18.1	15	12.7
	Fair	12	9.2	11	7.9	17	11.0	18	13.0	13	11.0
	Poor	59	45.0	74	52.9	70	45.5	51	37.0	55	46.6



**Table 5-5 Ratings of access to a specialist if needed, ALSWH 1973-78 cohort from Survey 2 to Survey 6, by area of residence (ARIA +).**

		Survey 2		Survey 3		Survey 4		Survey 5		Survey 6	
		N	%	N	%	N	%	N	%	N	%
<b>ARIA+ Group</b>	<b>Access to specialist</b>										
Major Cities	Excellent	458	19.5	544	20.9	770	29.0	807	30.8	935	36.2
	Very good	795	33.9	953	36.6	956	36.0	1035	39.5	989	38.2
	Good	784	33.5	823	31.6	674	25.4	567	21.6	491	19.0
	Fair	243	10.4	211	8.1	203	7.6	164	6.3	125	4.8
	Poor	63	2.7	76	2.9	52	2.0	46	1.8	46	1.8
Inner Regional	Excellent	209	15.0	138	11.1	188	15.7	172	13.9	231	17.8
	Very good	408	29.2	376	30.3	405	33.8	406	32.7	425	32.7
	Good	464	33.3	445	35.9	355	29.7	394	31.8	376	28.9
	Fair	226	16.2	209	16.8	159	13.3	184	14.8	176	13.5
	Poor	88	6.3	73	5.9	90	7.5	84	6.8	93	7.1
Outer Regional	Excellent	70	10.0	63	9.5	56	8.8	47	7.7	43	6.9
	Very good	151	21.6	151	22.8	152	23.9	123	20.1	140	22.6
	Good	269	38.5	236	35.7	198	31.2	190	31.0	198	32.0
	Fair	130	18.6	132	20.0	144	22.7	163	26.6	145	23.4
	Poor	78	11.2	79	12.0	85	13.4	89	14.5	93	15.0
Remote/Very Remote	Excellent	9	6.4	5	3.2	5	3.1	5	3.5	5	4.0
	Very good	17	12.1	16	10.4	18	11.3	17	11.9	10	8.1
	Good	39	27.9	41	26.6	36	22.6	31	21.7	26	21.0
	Fair	35	25.0	43	27.9	42	26.4	38	26.6	40	32.3
	Poor	40	28.6	49	31.8	58	36.5	52	36.4	43	34.7

**Table 5-6 Ratings of access to a hospital if needed, ALSWH 1973-78 cohort from Survey 2 to Survey 6, by area of residence (ARIA +).**

		Survey 2		Survey 3		Survey 4		Survey 5		Survey 6	
		N	%	N	%	N	%	N	%	N	%
<b>ARIA+ Group</b>	<b>Rating of access to a hospital if needed</b>										
Major Cities	Excellent	561	23.3	681	25.6	935	34.6	995	36.8	1125	42.4
	Very good	827	34.4	958	36.0	923	34.1	985	36.4	990	37.3
	Good	739	30.7	744	27.9	647	23.9	581	21.5	426	16.0
	Fair	220	9.2	230	8.6	156	5.8	125	4.6	86	3.2
	Poor	57	2.4	49	1.8	44	1.6	18	0.7	29	1.1
Inner Regional	Excellent	354	24.3	326	24.9	382	30.0	388	29.8	427	31.3
	Very good	472	32.4	454	34.7	453	35.6	455	34.9	482	35.3
	Good	451	31.0	386	29.5	314	24.7	335	25.7	349	25.6
	Fair	147	10.1	114	8.7	98	7.7	98	7.5	79	5.8
	Poor	32	2.2	29	2.2	26	2.0	28	2.1	28	2.1
Outer Regional	Excellent	183	24.9	160	23.1	181	26.5	168	25.4	166	25.5
	Very good	189	25.7	230	33.2	214	31.3	199	30.1	203	31.1
	Good	264	36.0	220	31.7	199	29.1	200	30.2	197	30.2
	Fair	72	9.8	70	10.1	67	9.8	74	11.2	71	10.9
	Poor	26	3.5	13	1.9	23	3.4	21	3.2	15	2.3
Remote/Very Remote	Excellent	29	20.4	26	16.9	33	20.2	29	20.3	26	20.5
	Very good	36	25.4	40	26.0	50	30.7	42	29.4	37	29.1
	Good	40	28.2	48	31.2	48	29.4	36	25.2	36	28.3
	Fair	26	18.3	26	16.9	20	12.3	23	16.1	22	17.3
	Poor	11	7.7	14	9.1	12	7.4	13	9.1	6	4.7

**Table 5-7 Assessment of childcare costs, ALSWH 1973-78 cohort from Survey 4 to Survey 6, by ability to manage on income.**

		Survey 4		Survey 5		Survey 6	
		N	%	N	%	N	%
<b>Ability to manage on income</b>	<b>Is cost of childcare a problem?</b>						
It is impossible	Yes	25	62.5	23	54.8	40	61.5
	No	12	30.0	11	26.2	11	16.9
	Don't know	3	7.5	8	19.0	14	21.5
It is difficult always	Yes	237	64.6	241	55.7	333	60.9
	No	89	24.3	115	26.6	117	21.4
	Don't know	41	11.2	77	17.8	97	17.7
It is difficult sometimes	Yes	434	44.5	528	42.3	678	42.7
	No	349	35.8	484	38.8	579	36.5
	Don't know	192	19.7	235	18.8	330	20.8
It is not too bad	Yes	298	29.0	377	23.8	375	21.3
	No	506	49.2	882	55.8	1033	58.6
	Don't know	225	21.9	323	20.4	356	20.2
It is easy	Yes	72	18.9	80	12.6	77	11.0
	No	241	63.3	465	73.2	498	71.3
	Don't know	68	17.8	90	14.2	123	17.6

**Table 5-8 Assessment of childcare costs, ALSWH 1973-78 cohort from Survey 4 to Survey 6, by area of residence (ARIA+).**

		Survey 4		Survey 5		Survey 6	
		N	%	N	%	N	%
<b>ARIA+ Group</b>	<b>Is cost of child care a problem?</b>						
Major Cities	Yes	533	40.4	633	31.4	755	31.3
	No	543	41.2	1030	51.1	1238	51.3
	Don't know	243	18.4	352	17.5	421	17.4
Inner Regional	Yes	354	39.7	388	33.7	455	34.6
	No	382	42.8	543	47.1	564	42.9
	Don't know	156	17.5	222	19.3	297	22.6
Outer Regional	Yes	145	31.9	173	30.2	206	32.0
	No	206	45.4	278	48.5	283	44.0
	Don't know	103	22.7	122	21.3	154	24.0
Remote/Very Remote	Yes	31	27.4	43	32.1	40	29.9
	No	56	49.6	66	49.3	69	51.5
	Don't know	26	23.0	25	18.7	25	18.7

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## 7 APPENDIX C – REPORTS PREPARED USING 1973-78 COHORT DATA

### 7.1 Major Reports (2006 – 2013)

- **Mental Health: Findings from the Australian Longitudinal Study on Women’s Health.** (2013). Holden L, Dobson A, Byles J, Loxton D, Dolja-Gore X, Hockey R, Lee C, Chojenta C, Reilly N, Mishra G, McLaughlin D, Pachana N, Tooth L & Harris M. Major report prepared for the Australian Government Department of Health and Ageing. [http://www.alsw.org.au/images/content/pdf/major\\_reports/2013\\_major%20report%20H.pdf](http://www.alsw.org.au/images/content/pdf/major_reports/2013_major%20report%20H.pdf)
- **Adherence to health guidelines: Findings from the Australian Longitudinal Study on Women’s Health.** (2012). Dobson A, Byles J, Brown W, Mishra G, Loxton D, Hockey R, Powers J, C Chojenta, Hure A, Leigh L, Anderson A. [http://www.alsw.org.au/images/content/pdf/major\\_reports/2012ALSWHMajorReportG.pdf](http://www.alsw.org.au/images/content/pdf/major_reports/2012ALSWHMajorReportG.pdf)
- **Rural, remote and regional differences in women’s health: Findings from the Australian Longitudinal Study on Women’s Health.** (2011). Dobson A, Byles J, Dolja-Gore X, Fitzgerald D, Hockey R, Loxton D, McLaughlin D, Pachana N, Powers J, Rich J, Sibbritt D and Leigh Tooth. Major report prepared for the Australian Government Department of Health and Ageing. [http://www.alsw.org.au/images/content/pdf/major\\_reports/2011\\_rural\\_remote\\_and\\_regional\\_differences\\_r163.pdf](http://www.alsw.org.au/images/content/pdf/major_reports/2011_rural_remote_and_regional_differences_r163.pdf)
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- **Trends in Women’s Health: Results from the ALSWH – Priority conditions, risk factors and health behaviours.** (2006). Brown W, Byles J, Carrigan G, Dobson A, Dolja-Gore X, Gibson R, Hockey R, Powers J, Russell A, Spallek M & Young A. Major report prepared for the Australian Government Department of Health and Ageing. [http://www.alsw.org.au/images/content/pdf/major\\_reports/2006\\_major\\_report\\_a.pdf](http://www.alsw.org.au/images/content/pdf/major_reports/2006_major_report_a.pdf)

## 7.2 Other reports

### 7.2.1 Weight and Physical Activity

- Physical activity: Body mass index and health in Australian women: Selected findings of the Australian Longitudinal Study on Women's Health. (2003). Brown W, Ball K, Trost S & Dobson A. Synthesis Technical Report prepared for the Australian Government Department of Health and Ageing.

### 7.2.2 Alcohol and smoking

- **Australian women and alcohol consumption 1996-2003.** (2004). Young A & Powers J. Report prepared for Australian Government Department of Health & Ageing.
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### 7.2.3 Violence

- **Violence against young Australian women and reproductive health: Cross sectional and transitional analyses of surveys 1 & 2, younger cohort, ALSWH.** (2003). Taft A, Watson L & Lee C. Report prepared for Office of the Status of Women.

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### 7.2.5 Health Service Use

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- **Chronic disease and health services in Australia.** (2003). Dobson A and the ALSWH research team. Synthesis Technical Report prepared for the Australian Government Department of Health and Ageing.
- **Screening participant rates on non-English speaking backgrounds: Results from the Australian Longitudinal Study on Women's Health.** (2001). ALSWH. Report prepared for BreastScreen Queensland and Queensland Health. (Data for responses to questions concerning cancer screening behaviour from Survey 2 of the 1973-78 cohort (in 2000 when the cohort were aged 22-27 years) is presented in this report.)

### 7.2.6 Other

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