

## Change and stasis in sexual health and relationships: comparisons between the First and Second Australian Studies of Health and Relationships

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Received 14 June 2014, accepted 6 September 2014, published online 7 November 2014

### Introduction

The Second Australian Study of Health and Relationships (ASHR2) was conducted between 2012 and 2013 with two aims: first, to provide accurate population data about current aspects of sexual health and second, to allow analysis of change and stability in beliefs, behaviours and experiences in the 11 years since the First Australian Study of Health and Relationships (ASHR1) was conducted.<sup>1</sup> The articles in this themed issue present data largely directed towards the first aim, with sub-sections focussed on the second aim.<sup>2–11</sup> The purpose of this paper is to provide an integrated summary of ASHR1–ASHR2 analyses and to consider what the observed changes and stasis mean for sexual health policy and service provision.

ASHR has operationalised a broad definition of sexual health that corresponds to the definition supported by the World Health Organization (WHO):

[A] state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For

sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled.<sup>12</sup>

However, around this stable orienting definition, some changes to methods were required between ASHR1 and ASHR2.

### Methodological challenges and changes

The method of data collection (i.e., computer-assisted telephone interviews (CATI)) and the majority of the questionnaire items were identical in ASHR1 and ASHR2. Computer-assisted telephone interviews were completed in 2012–13 by a representative sample of 20 094 Australian men and women aged 16–69 years (participation rate among eligible people = 66.2%) and in 2001–02 by a representative sample of 19 307 men and women aged 16–59 years (participation rate among eligible people = 73.1%). However, there were some important changes, the details of which are reported elsewhere in this issue.<sup>1</sup> For example, some questions were altered due to changes in the use of information and communication technology.

ASHR2 included a broader age range than did ASHR1. This was to acknowledge that sexual health is still an important issue for many people older than the 59-year-old cut-off employed in

ASHR1 and to allow for comparisons of temporal changes to include those people at the upper end of the ASHR1 age range.<sup>1</sup> Similarly, in the British National Survey of Sexual Attitudes and Lifestyles (Natsal-3), the age range was increased from 16–44 years to 16–74 years.<sup>13</sup> Such changes are important to facilitate analysis of whether changes in sexual attitudes and behaviour are a result of age, *per se*, and/or are cohort effects – an issue that is not addressed in this paper, but which will be addressed elsewhere.<sup>13,14</sup>

The major change to the methods used was the need to add sampling of mobile telephone numbers to the ASHR1 strategy of calling only residential phone numbers. This was necessary because of changes in patterns of phone ownership and use, particularly among young people, who also tend to be more likely to engage in behaviours that could affect their sexual health in positive or negative ways in relation to sexually transmissible infections (STIs), fertility and contraception and sexual pleasure and satisfaction.<sup>15</sup> It is interesting to note that Natsal-3 included a sub-study in which a short form of the standard questionnaire was administered as an Internet panel survey.<sup>13</sup> This was done to determine the feasibility of online surveys for national sexual health surveys and because it is possible that the next UK population census will employ online data collection. We await these findings from Natsal-3 with interest, as they may influence the data collection methods chosen for the next ASHR, given that it may be a less costly way to reach the widely dispersed Australian population.<sup>1</sup> Despite the necessary changes to the mode of data collection, it was important to keep as much of the study design of ASHR1 for ASHR2 to better enable comparisons of the two datasets.

### Comparisons of key findings from ASHR1 and ASHR2

Selected comparisons between ASHR1 and ASHR2 are reported in 10 other papers in this themed issue.<sup>2–11</sup> Many of the broad changes (and stability) observed in ASHR1–ASHR2 comparisons were also found in the comparisons between Natsal-2 and Natsal-3 in Britain<sup>16,17</sup> and analyses of repeated surveys in France.<sup>18</sup>

In addition, the patterns of demographic correlates of the various outcomes tended to be similar in ASHR1 and ASHR2. For many measures of sexual ill-health, people of lower socioeconomic status (SES) fared less well—a pattern observed for many other health outcomes.<sup>19</sup> However, for many key outcomes representative of a broader definition of sexual health, there were contrary or variable associations with demographic variables. This lack of simple, consistent correlations between SES and sexual health or ill-health suggests that policymakers and service providers must be aware that different demographic variables may be variously related to different healthy or less healthy behaviours and experiences and that they should not make blanket assumptions about any population subgroup.

Rather than repeating all of the ASHR1–ASHR2 comparisons here,<sup>2–11</sup> broad patterns of change/stasis are summarised below. It should be noted that the large sample size means that some differences that are statistically significant may appear small in absolute terms.

### *Are Australians now more permissive or liberal?*

There was evidence from responses to the attitude items that Australians have become more permissive or liberal about sexual behaviour and that there were some corresponding changes in behaviour. These changes in attitudes and behaviour may reflect a shift away from a model of sexuality in which women's sexual behaviour is shaped by men's needs towards a feminist model of female sexuality in which women have the right to refuse or initiate sex and a right to sexual pleasure within the kinds of relationships that are desirable to them.

Women in ASHR2 were significantly more likely than women in ASHR1 to believe that sex before marriage was acceptable, but the magnitude of this change was not great (86% compared with 84%).<sup>2</sup> This attitude change was reflected in a significant increase from 13% to 16% in the proportion of women who had vaginal intercourse before age 16 years among those who had had sex and a narrowing of the sex differences in timing of first sexual experiences; the median age at first vaginal intercourse was 17.9 years among men and 18.0 years among women.<sup>4</sup> There was also a significant increase between ASHR1 and ASHR2 in women's mean number of sexual partners over their lifetime (from 6.9 to 8.9).<sup>5</sup> In contrast, the timing of men's first sexual experiences appears to have stabilised. Indeed, the proportion of men reporting first vaginal intercourse before age 16 years fell from 22% to 19%,<sup>4</sup> and the median age at first vaginal intercourse among men rose from 17.6 years to 17.9 years.<sup>5</sup> These data correspond to findings in other countries<sup>16,18</sup> and suggest that sexual double standards around the timing of early sexual experiences may be weakening.<sup>20</sup>

There were significant reductions between ASHR1 and ASHR2 in the proportions of respondents who believed that oral sex counted as 'having sex' from 72% to 66% among men and women.<sup>2</sup> These attitudinal changes were matched by large significant increases in the proportions of respondents reporting experience of oral sex: from 79% to 88% among men and from 67% to 86% among women.<sup>5</sup>

In addition, there were significant reductions in the proportions of respondents who believed that homosexual activity among adult men was always wrong (from 37% to 25% among men and from 27% to 13% among women) or that homosexual activity among adult women was wrong (from 21% to 16% among men and from 25% to 12% among women).<sup>2</sup> This was reflected in a significant increase in the proportion of men reporting exclusively same-sex experience (from 0.6% to 1.0%), a significant increase in the proportion of women reporting any same-sex experience (from 8.5% to 14.7%) and a significant increase in the proportion of women reporting a bisexual or lesbian identity (from 2.2% to 3.8%).<sup>7</sup> Similar changes in attitudes and behaviours have been found in Natsal.<sup>16</sup>

### *Are Australians having sex less often, but with greater variety?*

In contrast to this greater permissiveness, respondents in ASHR2 were significantly more likely than those in ASHR1 to believe that it was always wrong to have an affair when in a committed relationship (85% in ASHR2 compared with 78% in ASHR1).

among men, 82% in ASHR2 compared with 78% in ASHR1 among women).<sup>2</sup> Similar changes in attitudes have been observed in Natsal.<sup>16</sup> Although the change in attitudes between ASHR1 and ASHR2 was significant, it is important to note that there was no significant change in the corresponding behaviour between the two periods of data collection; similar small proportions of people in a heterosexual relationship reported having sex with a person other than their regular partner in the past year (4.9% in ASHR2 compared with 4.6% in ASHR1 among men, 2.9% in ASHR2 compared with 2.3% in ASHR1 among women).<sup>3</sup>

Men reporting homosexual experience in the past year were significantly less likely to report engaging in insertive anal intercourse (down from 38% in ASHR1 to 22% in ASHR2), engaging in receptive anal intercourse (down from 30% to 17%) or having experienced an orgasm during their most recent same-sex encounter (down from 89% to 76%).<sup>6</sup> The observed differences between ASHR1 and ASHR2 may be due to differences in what participants defined as a sexual encounter, but the data do not permit examination of this possibility.

A further contrast to the greater sexual permissiveness noted above was the finding that men were significantly less likely to believe that an active sex life was important for wellbeing (down slightly from 88% in ASHR1 to 86% in ASHR2), with a non-significant reduction among women (from 80% to 78%).<sup>2</sup> This attitudinal change was matched by small but significant declines in the average weekly frequency of sex among people in heterosexual regular relationships from 1.9 to 1.5 times per week among men and from 1.8 to 1.5 times per week among women.<sup>3</sup> These decreases correspond to changes observed among men and women in Natsal between 2001 and 2011, but stand in contrast to stability in frequency of vaginal intercourse in France between 1992 and 2006.<sup>16,18</sup> Having noted that, there was no significant change in the degree of correspondence between desired and actual frequency of sex; the proportion of respondents who reported concordance between their actual and desired frequency of sex fell from 15% to 14% among men and from 27% to 25% among women. The majority of men (85%) and women (69%) wanted to have sex more often than they actually did.<sup>3</sup> There may be several reasons for the observed mismatch between desired and actual changes, including various changes to leisure activities such as spending more time using interactive technology and social media and mismatches between sexual partners in terms of desired frequency of sex. These explanations may also help to explain similar changes observed in Natsal.<sup>16</sup> Further research would be needed to identify the underlying causes and their relative importance.

Comparisons between ASHR1 and ASHR2 also revealed significant increases in the proportions of respondents who had masturbated in the last year (from 65% to 77% among men, and from 35% to 45% among women) and a small but significant increase in the frequency of masturbation in the last 4 weeks (from 2.9 to 3.8 times among men and from 0.7 to 0.8 among women).<sup>8</sup> Increases in the prevalence of masturbation have also been found in France.<sup>18</sup> Furthermore, the data revealed significant increases in the use of sex toys (up from 12% in ASHR1 to 16% in ASHR2 among men, and from 14% to 24% among women) and engagement in role play or dressing-up (up from 4% to 8% among men and from 4% to 9% among

women).<sup>8</sup> There were also significant increases in the proportion of men reporting digital–anal stimulation (from 17% in ASHR1 to 22% in ASHR2) and rimming (from 5% in ASHR1 to 8% in ASHR2), with non-significant increases among women.<sup>8</sup> These changes may be linked to more heterosexual anal intercourse as part of a broadening of sexual repertoires; the proportion of respondents who had ever engaged in heterosexual anal intercourse increased from 21% in ASHR1 to 26% in ASHR2 among men, and from 15% to 20% among women,<sup>5</sup> a similar pattern to that found in France.<sup>18</sup> However, an interesting contrast to this rise in the prevalence of heterosexual anal intercourse was noted earlier: homosexually active men were significantly less likely to report insertive or receptive anal intercourse in their most recent same-sex encounters.<sup>6</sup>

Only broad patterns have been mentioned here; it is possible that changes (and stasis) have not been uniformly distributed. This may help to explain some of the apparent contradictions in the data. There may be bimodal (or multimodal) patterns that include some people who appear to have disengaged from sexual activity and other people who are having sex more frequently and doing so with more variety. Similar bimodal patterns appear to be emerging in relation to alcohol use among young people; UK data suggest that at the same time that heavy episodic ‘binge’ drinking is increasing among young people who drink, there is a growing proportion of young people who do not drink at all or do so rarely and moderately.<sup>21</sup>

It appears that more people are meeting sexual partners via information and computer technology, although direct comparisons between ASHR1 and ASHR2 are not possible due to changes in wording in the CATI enforced by technological changes (i.e. from ‘met new partner via Internet chat room’ to ‘used an Internet site or a smart-phone application to look for potential partners’). In ASHR2, 3% of men and 2% of women reported having had sex in the last year with a person they first met on an Internet site or via a smartphone application.<sup>8</sup>

#### *Are sexually active Australians better protected?*

Several variables indicated that use of effective contraception and/or STI prophylaxis increased between ASHR1 and ASHR2. There were significant declines in the proportion of respondents reporting not using condoms or other contraception at first vaginal intercourse (down from 38% in ASHR1 to 29% in ASHR2 among men, and from 27% to 21% among women).<sup>4</sup> These changes correspond to changes found in Britain and France.<sup>16,18</sup> There were also significant increases from ASHR1 to ASHR2 in the proportion of men and women using condoms during their most recent heterosexual experience (up from 25% to 29% among men, and from 18% to 23% among women).<sup>13</sup> There were significant increases in knowledge about STIs and blood-borne viruses among men and women from ASHR1 to ASHR2; mean scores on an eight-item scale increased from 4.3 to 5.5 among men and from 4.8 to 5.7 among women.<sup>10</sup> There was a significant reduction in the proportion of men who had ever been diagnosed with an STI (down from 19% in ASHR1 to 15% in ASHR2), but a significant increase in the proportion of women who had ever been diagnosed with an STI (up from 17% to 20%).<sup>10</sup>

Although the observed changes are generally encouraging and suggest that sexual encounters are now more likely to be protected, many people still do not use effective contraception and/or STI prophylaxis and many people use methods inconsistently or incorrectly.<sup>11</sup> Detailed data from ASHR2 relating to reproductive histories and current contraceptive practises will be published in future research papers.

#### *Areas for improvement*

For some aspects of health and relationships covered by ASHR, there was no change between ASHR1 and ASHR2 when change would have been desirable. For example, there were no significant changes in the proportion of people who had experienced sexual coercion ever (men: 5% in ASHR1, 4% in ASHR2; women: 21% in ASHR1, 22% in ASHR2) or during childhood (men: 3% in ASHR1, 2% in ASHR2; women: 10% in ASHR1, 12% in ASHR2).<sup>9</sup> Nor were there significant changes in whether people who had been coerced had talked to anyone about this experience (men: 32% in ASHR1, 27% in ASHR2; women: 38% in ASHR1, 43% in ASHR2) or talked to a qualified professional (men: 18% in ASHR1, 11% in ASHR2; women: 26% in ASHR1, 22% in ASHR2).<sup>9</sup> This suggests that there is a need to implement strategies that not only aim to prevent sexual coercion happening, but also provide accessible services and support for men and women who experience coercion.

#### **Towards a national sexual health strategy**

Much has been written about the need for broad national strategies to promote sexual health. This reflects an observation that many relevant strategies are often narrowly focussed on one aspect or a few aspects of sexual health<sup>22,23</sup> and that some strategies labelled as 'sexual health' strategies still tend to focus narrowly on HIV and other STIs, but not other aspects of sexual health.<sup>24</sup> A recent study of Australian sexual health professionals highlighted their belief that there is a need for a unified national sexual health strategy, but also identified several perceived barriers to sexual health promotion.<sup>25</sup> Some have sought to expand the focus of current strategies from HIV/AIDS to all STIs,<sup>23</sup> whereas others have argued for the development of a strategy that properly reflects the broad definition of sexual health supported by the WHO cited earlier.<sup>12,26,27</sup>

The articles in this special issue show that both ASHR1 and ASHR2 were designed to reflect this broad definition of sexual health and this distinguishes ASHR from many other nationally representative surveys of sexual health. The data are thus important sources of information that could inform the development of a national sexual health strategy. However, we acknowledge that other studies may be needed to provide more detailed information about specific sexual-health-related issues and/or groups within the population. Given the important changes (and lack of change) since 2002 in the many areas of sexual health reported in this special issue, there is a need to ensure that a third ASHR will be conducted in 2021 and that funding will be available to support more focussed studies of specific issues and/or population sub-groups. Such research should be a key element of any sexual health strategy;<sup>28</sup> sexual health strategies should be developed and sustained

for the long term, should involve the input of various stakeholders, including health professionals and should incorporate practical approaches for protecting and enhancing sexual wellbeing.<sup>25,28</sup>

A paper prepared by three national bodies concerned with sexual health made a compelling case and helpful recommendations, for the development of a national sexual health strategy.<sup>26</sup> It noted that Australia is a signatory to international treaties that protect sexual rights and sexual health and that many countries have national strategies that could be used as models for a national sexual health strategy. Others have noted how the principles underlying the successful national HIV/AIDS strategies, including unconditional bipartisan funding, could be adapted in the broader field of sexual health.<sup>22</sup> Any such national strategy should reflect an understanding that sexuality and sexual health are influenced by complex interactions among biological, psychological and social factors.<sup>12,26</sup>

#### **Conclusion**

The data discussed in this article, and in other empirical articles in this issue, highlight some important changes in the 11 years between ASHR1 and ASHR2 and stasis in other key domains.<sup>2-11</sup> The observed changes tended to correspond to changes found in similar repeated surveys of population-representative samples in Britain and France.<sup>16,18</sup> Many of the changes were in directions that would suggest that the sexual health of the Australian population has improved, but this was not true for all changes. For some important behaviours and sexual health outcomes, there was no change. Three questions were posed in the section 'Comparisons of key findings from ASHR1 and ASHR2' above, brief answers to which are provided here. First, Australians appear to have more permissive attitudes towards homosexuality, but have stronger expectations for sexual exclusivity in relationships. Second, Australians appear to be having sex less frequently, but they have broader repertoires of sexual behaviour. Furthermore, Australians appear to be having sex in ways that may provide better protection against STIs and unintended pregnancy. Despite these promising changes, there is room for improvement. A coordinated national sexual health strategy (incorporating ongoing, systematic, large-scale data collection) should be an important part of efforts to continue to improve the sexual health of Australians.

#### **Conflicts of interest**

None declared.

#### **Acknowledgements**

This study was funded by the National Health and Medical Research Council (grant no. 1002174). We are indebted to David Shellard and the staff of the Hunter Valley Research Foundation for managing data collection and undertaking the interviews for this study; and to the Social Research Centre for producing weights for the data. We also thank the 21 139 Australians who took part in the two phases of the project and so freely shared the sometimes intimate aspects of their lives. Professor Anthony Smith died during the course of this project and we intend this work to be a tribute to, and further example of, the extraordinary contribution his work has made to the sexual health and wellbeing of Australians.

## References

- 1 Richters J, Badcock PB, Simpson JM, Shellard D, Rissel C, de Visser RO, *et al.* Design and methods of the Second Australian Study of Health and Relationships. *Sex Health* 2014; 11: 383–96. doi:10.1071/SH14115
- 2 de Visser RO, Badcock PB, Simpson JM, Grulich AE, Smith AMA, Richters J, *et al.* Attitudes toward sex and relationships: the Second Australian Study of Health and Relationships. *Sex Health* 2014; 11: 397–405. doi:10.1071/SH14099
- 3 Badcock PB, Smith AMA, Richters J, Rissel C, de Visser RO, Simpson JM, *et al.* Characteristics of heterosexual regular relationships among a representative sample of adults: the Second Australian Study of Health and Relationships. *Sex Health* 2014; 11: 427–38. doi:10.1071/SH14114
- 4 Rissel C, Heywood W, de Visser RO, Simpson JM, Grulich AE, Badcock PB, *et al.* First vaginal intercourse and oral sex among a representative sample of Australian adults: the Second Australian Study of Health and Relationships. *Sex Health* 2014; 11: 406–15. doi:10.1071/SH14113
- 5 Rissel C, Badcock PB, Smith AMA, Richters J, de Visser RO, Grulich AE, *et al.* Heterosexual experience and recent heterosexual encounters among Australian adults: the Second Australian Study of Health and Relationships. *Sex Health* 2014; 11: 416–26. doi:10.1071/SH14105
- 6 Grulich AE, de Visser RO, Badcock PB, Smith AMA, Heywood W, Richters J, Rissel C, *et al.* Homosexual experience and recent homosexual encounters: the Second Australian Study of Health and Relationships. *Sex Health* 2014; 11: 439–50. doi:10.1071/SH14122
- 7 Richters J, Altman D, Badcock PB, Smith AMA, de Visser RO, Grulich AE, *et al.* Sexual identity, sexual attraction and sexual experience: the Second Australian Study of Health and Relationships. *Sex Health* 2014; 11: 451–60. doi:10.1071/SH14117
- 8 Richters J, de Visser RO, Badcock PB, Smith AMA, Rissel C, Simpson JM, *et al.* Masturbation, paying for sex, and other sexual activities: the Second Australian Study of Health and Relationships. *Sex Health* 2014; 11: 461–71. doi:10.1071/SH14116
- 9 de Visser RO, Badcock PB, Rissel C, Richters J, Smith AMA, Grulich AE, *et al.* Experiences of sexual coercion in a representative sample of adults: the Second Australian Study of Health and Relationships. *Sex Health* 2014; 11: 472–80. doi:10.1071/SH14103
- 10 Grulich AE, de Visser RO, Badcock PB, Smith AMA, Richters J, Rissel C, *et al.* Knowledge about and experience of sexually transmissible infections in a representative sample of adults: the Second Australian Study of Health and Relationships. *Sex Health* 2014; 11: 481–94. doi:10.1071/SH14121
- 11 de Visser RO, Badcock PB, Rissel C, Richters J, Smith AMA, Grulich AE, *et al.* Safer sex and condom use: findings from the Second Australian Study of Health and Relationships. *Sex Health* 2014; 11: 495–504. doi:10.1071/SH14102
- 12 World Health Organization. Sexual health. Available online at: [http://www.who.int/reproductivehealth/topics/sexual\\_health/sh\\_definitions/en/](http://www.who.int/reproductivehealth/topics/sexual_health/sh_definitions/en/) [verified 12 May 2014].
- 13 Mercer CH, Wellings K, Johnson AM. What's new about Natsal-3? *Sex Transm Infect* 2014; 90: 80–1. doi:10.1136/sextrans-2013-051292
- 14 Haavio-Mannila E, Kontula O. Correlates of increased sexual satisfaction. *Arch Sex Behav* 1997; 26: 399–419. doi:10.1023/A:1024591318836
- 15 Jackson AC, Pennay D, Dowling NA, Coles-Janess B, Christensen DR. Improving gambling survey research using dual-frame sampling of landline and mobile phone numbers. *J Gambling Stud* 2014; 30: 291–307. doi:10.1007/s10899-012-9353-6
- 16 Mercer CH, Taunton C, Prah P, Erens B, Sonnenberg P, Clifton S, *et al.* Changes in sexual attitudes and lifestyles in Britain through the life course and over time: findings from the National Survey of Sexual Attitudes and Lifestyles (Natsal). *Lancet* 2013; 382: 1781–94. doi:10.1016/S0140-6736(13)62035-8
- 17 Prah P, Copas AJ, Mercer CH, Clifton S, Erens B, Phelps A, *et al.* Consistency in reporting sensitive sexual behaviours in Britain: change in reporting bias in the second and third National Surveys of Sexual Attitudes and Lifestyles (Natsal-2 and Natsal-3). *Sex Transm Infect* 2014; 90: 90–3. doi:10.1136/sextrans-2013-051360
- 18 Bajos N, Bozon M, Beltzer N, Laborde C, Andro A, Ferrand M, *et al.* Changes in sexual behaviours: from secular trends to public health policies. *AIDS* 2010; 24: 1185–91. doi:10.1097/QAD.0b013e328336ad52
- 19 Wilkinson RG. Unhealthy societies: the afflictions of inequality. London: Routledge; 1996.
- 20 Holland J, Ramazanoglu C, Sharpe S, Thomson R. The male in the head: young people, heterosexuality and power. London: The Tufnell Press; 1998.
- 21 Office for National Statistics. General lifestyle survey, 2011. Newport: Office for National Statistics; 2012.
- 22 Chan DJ, Bradford DL. A sexual health strategy for Australia: time for action. *Sex Health* 2004; 1: 197–9. doi:10.1071/SH04008
- 23 Department of Health. National strategies for blood borne viruses and sexually transmissible infections. Available online at: [www.health.gov.au/internet/main/publishing.nsf/Content/ohp-national-strategies-2010](http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-national-strategies-2010) [verified 10 May 2014].
- 24 Sydney LHD. Sexual Health Strategy 2013–2018. Available online at: <http://www.slhd.nsw.gov.au/pdfs/sexualhealthstrategy.pdf> [verified 7 May 2014].
- 25 Newton D, Keogh L, Temple-Smith M, Fairley CK, Chen M, Bayly C, *et al.* Key informant perceptions of youth-focused sexual health promotion program in Australia. *Sex Health* 2013; 10: 47–56.
- 26 O'Rourke K. Time for a national sexual and reproductive health strategy for Australia—Background Paper. Canberra: Public Health Association of Australia, Sexual Health & Family Planning Australia, Australian Reproductive Health Alliance; 2008. p 34. Available online at: [www.phaa.net.au/documens/SRH\\_background\\_paper.pdf](http://www.phaa.net.au/documens/SRH_background_paper.pdf) [verified 7 May 2014].
- 27 Lucke JC, Watson M, Herbert D. Changing patterns of contraceptive use in Australian women. *Contraception* 2009; 80: 533–9. doi:10.1016/j.contraception.2009.05.122
- 28 Moodie R. Sexual health for all: strategies for action in the 21st century. In Temple-Smith M, Gifford S, editors. Sexual health: an Australian perspective. Melbourne: IP Communications; 2005. pp. 317–24.