

National Survey of Sexual Attitudes and Lifestyles II

Reference tables and summary report

Bob Erens, Sally McManus, Alison Prescott, Julia Field
with

Anne M Johnson, Kaye Wellings, Kevin A Fenton, Catherine
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1 INTRODUCTION

Background to Natsal II

The National Survey of Sexual Attitudes and Lifestyles (Natsal) II is the second major survey of British sexual attitudes and lifestyles. It was carried out by the National Centre for Social Research (NatCen), Royal Free and University College London Medical School (UCL) and the London School of Hygiene and Tropical Medicine (LSHTM), and was supported by a grant from the Medical Research Council (MRC), with funds from the Department of Health, the Scottish Executive and the National Assembly for Wales.

The research team for Natsal II included researchers and statisticians from three organisations:

NatCen: Bob Erens, Sally McManus, Julia Field, Christos Korovessis,
Susan Purdon, Alison Prescott

UCL: Anne Johnson, Kevin Fenton, Catherine Mercer, Andrew Copas

LSHTM: Kaye Wellings, Wendy Macdowall, Kiran Nanchahal

Concern about the rising epidemic of AIDS/HIV provided the original impetus for the first survey, funded by the Wellcome Trust in 1989/90.¹ Nearly 19,000 people aged 16-59 were interviewed in that survey and the data have been widely reported and used extensively by epidemiologists to estimate the prevalence and likely spread of HIV and other sexually transmitted infections in Britain. The need for information in the area of sexual attitudes and lifestyles, however, had long been felt for a range of other policy and service provision purposes including medical, health and sex education, family planning and teenage pregnancy.

Natsal II was carried out in 1999-2001 primarily to update the first survey's data for epidemiological use and to inform sexual health policy. It also provided an opportunity to: cover more recently identified areas of policy concern (such as sexual networks abroad and preferred sources of contraception); improve or add questions in areas previously covered such as sexual partnerships; and incorporate developments in computer assisted survey methodology. The two surveys make it possible to explore how sexual behaviour has changed over the last decade.

The Natsal II samples

Interviews were conducted with men and women aged 16 to 44 living in private households in England, Scotland and Wales. Fieldwork was divided between a general population sample and an ethnic minority boost sample.

¹ Wellings, K *et al.* *Sexual Behaviour in Britain: the National Survey of Sexual Attitudes and Lifestyles.* (1994) Penguin, London.

Johnson, A *et al.* *Sexual Attitudes and Lifestyles.* (1994) Blackwell Scientific, Oxford.

General population

The general population survey achieved 11,161 interviews, and included the collection of urine specimens to test for *Chlamydia trachomatis* (results of this test are reported in one of the three *Lancet* papers – see section below). A stratified sample of addresses was selected from the small user Postcode Address File (PAF), using a multistage probability cluster design with over-sampling in Greater London. At each household, eligible residents were enumerated, and one was randomly selected to take part. Interviews were conducted using CAPI (Computer Assisted Personal Interview) and CASI (Computer Assisted Self Interview) methods. The data were weighted to adjust for the unequal probabilities of selection and non-response.

Ethnic minority boost

The ethnic minority boost was designed to increase the number of informants from four ethnic minority groups: people of Pakistani, Indian, Black Caribbean and Black African origin. A total of 949 interviews was achieved, to add to the 837 informants from these groups interviewed as part of the general population sample. Again, a stratified sample of addresses was selected from PAF, using a multistage probability cluster design taking account of known densities of ethnic minorities. Screening for the eligible groups was either done directly (with an interviewer making contact at each pre-selected address) in high density areas or was carried out using focused enumeration in lower density areas (where the potential eligibility of neighbouring addresses was established by first asking at a 'core' address). The interview was conducted in translation with informants who could speak Urdu or Punjabi, but not English. For these informants, the self-completion section was done in a paper booklet rather than on the laptop. The survey content for the ethnic minority boost was the same as that for the general population survey, except for additional questions on languages spoken and area of birth.

Response

The main survey response rate was 63.1%. Because response rates were lower in London, an adjustment taking account of the over-sampling of London gives a better estimate of a national response rate at 65.4%.² The boost sample response rate was 62.9% of those known or assumed to be eligible.

Full details about the design, content, conduct and outcome of the surveys is contained in the published technical report (Erens *et al.*; 2001).

Natsal II publications

First results from Natsal II were published in *The Lancet* in December 2001 in three separate papers. A detailed methodological report was published by NatCen at the same time, and a paper looking at some of the statistical issues for measuring change over time was published early in 2002. Further papers are being prepared by the research team for publication in 2003. Details of the publications to date are:

² Response rates were calculated excluding those who did not speak English, were sick or away from home, and after estimating the likely proportion who would be outside the eligible age group in households where no information about residents was obtained.

- Johnson A, *et al.* 'Sexual behaviour in Britain: partnerships, practices, and HIV risk behaviours.' *The Lancet*, 2001;358:1835-1842.
- Wellings K, *et al.* 'Sexual behaviour in Britain: early heterosexual experience.' *The Lancet*, 2001;358:1843-1850.
- Fenton K, *et al.* 'Sexual behaviour in Britain: reported sexually transmitted infections and prevalent genital Chlamydia trachomatis infection.' *The Lancet*, 2001;358:1851-1854.
- Erens B, *et al.* *National Survey of Sexual Attitudes and Lifestyles II: Technical Report*. National Centre for Social Research, 2001.
- Copas AJ *et al.* 'The accuracy of reported sensitive sexual behaviour in Britain: exploring the extent of change 1990-2000.' *Journal of Sexually Transmitted Infections*, 2002;78:26-30.

Further information about the Natsal survey, including the full questionnaire, can be found at <http://qb.soc.surrey.ac.uk/surveys/nssal/nssalintro.htm>.

This report

This report provides a set of *reference tables* for some of the key variables included in Natsal II. The variables are tabulated for a standard selection of demographic characteristics. The variables and demographic characteristics were selected to broadly reproduce for Natsal II the tables which were included in Appendix 3 of the Blackwell publication of Natsal I results.³ Although the match with the Natsal I tables is not exact, the set of reference tables included here for Natsal II are somewhat more extensive than those provided in the Natsal I publication. The reference tables are found in Part III. They are preceded by a short commentary of the main results for each of the variables included in these tables (Part II).

Format of the reference tables

Each variable of interest is analysed, separately for men and women, by a more or less standard set of demographic variables, along with informants' smoking and drinking behaviour. Appendix A contains definitions of the main analysis variables used in the tables, and Tables 1.1 – 1.8 show the distribution of the sample for these analysis variables.

The tables only show data for the general population sample, comprising the 11,161 informants interviewed as part of the main stage of Natsal II fieldwork. This sample is weighted to be representative of the population of England, Scotland and Wales aged 16 to 44.

Comparison with Natsal I

For most variables, there is a table (generally the first one) which presents, alongside data analysed by age, the total distribution for that variable for Natsal I as well as for Natsal II. This is only presented when comparable questions were asked on both surveys. The Natsal I frequencies have been re-run on informants aged 16-44, and the

³ Johnson, A *et al.* *Sexual Attitudes and Lifestyles*. (1994) Blackwell Scientific, Oxford; pages 427-494.

data has been weighted so that it is comparable with the profile of the Natsal II sample.

Statistical approach

For these tables, the data have been analysed using SPSS version 10. Given that the analyses presented in these tables are basic cross-tabulations, potential confounding factors (such as age) should be borne in mind. Only differences significant at (at least) the 95% confidence interval are drawn attention to in the text. There may be very slight discrepancies between SPSS generated statistics and those in currently published papers, as the latter used STATA (a different analysis program). In Appendix C, DEFTs and true standard errors are reported for a few key variables (with the calculations done in STATA).

Please refer to the Natsal II Technical Report for full details of the sampling and weighting strategies employed.

Notes to the tables

- 1 The following conventions have been used in the tables:
 - No observations (zero value)
 - 0 Non-zero values of less than 0.05% and thus rounded to zero
 - [] Used to warn of small sample bases, if the unweighted base is less than 50. (If a group's unweighted base is less than 30, data are not shown for that group. Where necessary this is indicated by a letter in the relevant column.)
- 2 Because of rounding, row or column percentages may not add exactly to 100%. However, many tables show only one or two of the response categories relevant to a variable, e.g. presenting 'yes' responses but not 'no' responses.
- 3 A percentage may be quoted in the text for a single category that aggregates two or more of the percentages shown in a table. The percentage for the single category may, because of rounding, differ by one percentage point from the sum of the percentages in the table.
- 4 'Missing values' occur for several reasons, including refusal or inability to answer a particular question, as well as cases where the question is not applicable to the informant. In general, missing values have been omitted from all tables.
- 5 The group to whom each table refers (for example, those who had at least one heterosexual partner in the last year) is stated in the upper left corner of the table.
- 6 The data used in this report have been weighted. The weighting is described in the Natsal II Technical Report. Both weighted and unweighted sample bases are normally shown at the foot of the table. The weighted numbers reflect the relative size of each group in the population, not numbers of interviews made, which are shown by the unweighted bases.

2 AGE AT FIRST HETEROSEXUAL INTERCOURSE (Tables 2.1-2.8)

All survey informants were asked at what age they had first had sexual intercourse with someone of the opposite sex, or whether this had never happened. The question was in the face-to-face section of the interview, with the question on a card (ie, not read out by the interviewer), so that the reply could simply be given as a number. (Age at first intercourse was analysed in STATA using life table analysis.)

The median age for first intercourse was 17 for both men and women (aged 16-44 at time of interview). One in four men (27.4%) and one in five women (20.4%) reported first intercourse before the age of 16. The median ages, for 2000, were similar to those for 1990 (Natsal I: men 17, women 18). However there was a large increase in the proportion of women who reported first intercourse before the age of 16: from 10.3% in 1990 to 20.4% in 2000. There was a smaller increase for men, from 21.7% to 27.4%.

First sex at an early age was much less likely in non-manual social classes, particularly Social Class I, than in manual social classes. The likelihood of early first sex was also inversely related with education, so that those with no qualifications were much more likely to have sex before age 16 (40.3% of men and 26.7% of women).

Religious affiliation was also a factor associated with age at first heterosexual intercourse: nearly one in three men (30.7%) and one in four women (24.8%) professing no religion had had sex under age 16 – the highest proportions. The least likely to have sex before 16 were Muslim and Hindu women (both under 4%) and Hindu men (10%).

3 HETEROSEXUAL PARTNERSHIP (Tables 3.1-3.26)

Definitions

Heterosexual partners are defined as partners of the opposite sex with whom the informant has had vaginal, oral or anal sexual intercourse. Questions relating to numbers of heterosexual partnerships were asked of five time periods: lifetime (ever, so far), 5 years, 1 year, 3 months and 4 weeks. For data on number of partners, the median is usually a better measure of central tendency than the mean, since the mean and variance are strongly influenced by those reporting a very large number of partners and can prove an unstable measure of summary statistics. The tables in this section are based on the total sample, including informants who have never had sex.

Number of partners

The median number of lifetime heterosexual partners reported was 6 for men and 4 for women (aged 16-44 at time of interview), and a substantially higher proportion of men than women reported lifetime partners of ten or more (34.6% men, 19.3% women). One in a hundred men reported 100 or more partners, while the top one percent of women reported 40 or more. Women were more likely to report fewer partners than men, with 18.2% of men and 23.6% of women reporting none or only one lifetime sexual partner.

For both men and women, the median number of heterosexual partners in the last five years, year and three months was one; about half the sample reported one partner in the last five years (42.4% men, 55.6% women). However, 8.4% of men and 3.6% of women reported ten or more partners in the last five years, and 4.9% of men and 1.9% of women reported five or more partners in the last year. For each diminishing time period the proportion reporting one or no partner increased, with 77.6% of men and 86.7% of women reporting one or no partner in the last year, and over nine in ten men (90.2%) and women (95.0%) reporting one or no partner in the last three months.

Comparison of the two Natsal surveys shows that the proportion of people reporting no, one or two lifetime partners had substantially declined, while the proportion reporting five or more had increased. The change over time was larger for women, for whom the median number of lifetime partners increased from 2 to 4, compared with an increase from 4 to 6 amongst men (full discussion of possible explanations for this change is reported in the first *Lancet* paper and in Copas *et al.*). An increase in the number of reported partners is also evident for the last five years and the last year for both men and women.

Men consistently reported more partnerships than women across all the time periods asked about (although the gap was slightly narrower than it was in Natsal I). This difference was found whether the mean, median or frequency distribution was considered. This apparent discrepancy is partly explained by patterns of age mixing, as men tend to have relationships with younger women, and also by the age profile

of the sample which, because women tend to marry at an earlier age, includes more single men.

There was marked variability by age in the number of sexual partners reported. The youngest informants (aged 16-24) had the lowest median number of lifetime partners (3), in part because they had spent less time sexually active. However, they also reported the highest median number of partners in the last five years (3 for men, 2 for women), despite also having the highest proportion reporting no sexual partner (20.5% men, 18.2% women). While five or more partners in the last five years were reported by 9.1% of men and 2.9% of women aged 35-44, the comparable figures for the 16-24 age group were substantially higher at 33.6% and 25.2% respectively.

The pattern for the number of partners in the last five years by marital status was similar to that found for age. Single informants, like those in the youngest age group, were more likely to have never had sex, while also reporting a significantly higher mean and median number of partners than those who were married. Married and cohabiting informants were substantially more likely to report just one partner in the last year compared with those who were single or divorced/separated/widowed.

There was a clear trend towards those who reported a higher smoking or drinking intake also reporting a higher number of heterosexual partners. Heavier smokers had a median number of lifetime partners two to three times greater than that of those who never smoked; and heavier drinkers had a median three to four times that of non-drinkers.

4 HOMOSEXUAL PARTNERSHIP (Tables 4.1-4.18)

Definitions

Informants were asked questions relating to their sexual experiences with a partner of the same sex in both the face-to-face and self-completion sections of the interview. During the face-to-face component, show cards were used, enabling informants to read questions about sexual attraction and experience themselves, and to respond using only a code letter. These questions asked informants to place themselves on a five point scale ranging from sexual attraction and sexual experience exclusively with people of the opposite sex, through to exclusively with people of the same sex.

Additional questions relating to frequency of same-sex experience, same-sex intercourse, and numbers of same-sex sexual partners were asked in the self-completion section. 'Sexual experience' was defined to include 'kissing or cuddling, not necessarily leading to (*genital area/penis/vagina*) contact or intercourse.' 'Sexual intercourse' with a partner of the same sex was defined to include 'oral (*or anal*) sex or any other contact involving the genital area.'

At a later stage in the self-completion questionnaire, informants also were asked, with respect to ever, the last five years, last year and last three months, 'with how many (*people of the same sex*) have you had sex (that is oral or anal sex and other forms of genital contact)?' This question was asked of all informants answering the questionnaire, and someone who had previously responded that they had never had genital contact with a same-sex partner could still enter a positive value here. The questionnaire was deliberately designed to allow informants both opportunities to report same-sex sexual behaviour: the 'sexual intercourse' variable used here was derived by combining those answering positively at *either* question. Resultant slight inconsistencies (ie, responding positively at one question and negatively at the other) were allowed to remain in the data set, as it is not possible to establish which answer is correct.

Sexual attraction

The great majority of informants stated that they had only ever felt attraction to people of the opposite sex, with men being slightly more likely than women to report this (91.9% men, 88.3% women). Of those who had been attracted to people of the same sex, most stated that they were attracted 'more often to the opposite sex, but at least once to the same sex' (5.3% men, 9.7% women). Only 0.9% of men and 0.2% of women reported having only ever been attracted to people of the same sex.

Comparison with data from Natsal I shows that reporting of at least some same-sex sexual attraction has increased significantly amongst women.

Homosexual experience and partners

Overall, 8.4% of men and 9.7% of women reported *ever* having had sexual experience - not necessarily including genital contact - with a partner of the same sex. This represents a significant increase on Natsal I, especially for women, when the comparable figures were 5.3% of men and 2.8% of women.

Ever having sex with a same-sex partner, including genital contact, was reported by 6.3% of men and 5.7% of women. This is also a significant increase on the 3.7% of men and 1.9% of women reporting this in Natsal I.

Very few informants under age 18 reported ever having a same-sex sexual partner. Among those aged 16-17, the proportion reporting sex with someone of the same sex was 1.2% for men and 2.5% for women. The proportion of men reporting sex with a same-sex partner increased with age, to 8.1% of 35-44 year olds. Among women, however, the proportion reporting same-sex partners was similar across the age groups (20-24, 25-34, 35-44).

Men in manual social classes were less likely than those in the non-manual group to report having had sexual intercourse with other men. Informants with lower levels of education were less likely to report same-sex partners. A higher proportion of men and women living in London reported having had a same-sex partner than did those living elsewhere in Britain.

Men reported more same-sex partners than women, with 2.2% of men and 0.8% of women reporting three or more lifetime same-sex partners. Men were also more likely than women to report having had a same-sex partner in the last year and in the last three months.

5 SEX IN THE LAST FOUR WEEKS (Tables 5.1-5.7)

Frequency of sexual intercourse is variable and may be influenced by a range of factors, such as the number of recent sex partners and the length and stability of a relationship. Reported frequency of heterosexual sex in the past four weeks is shown in Table 5.1, based on all respondents. 'Sex' is defined as vaginal intercourse, oral sex or anal sex.

The median number of occasions of sex in the last four weeks was 3 for men and 4 for women. The distribution is very skewed, indicating that there is variability in the frequency of reported occasions. The 25th centile for both men and women is 1 occasion in the last four weeks, while the 99th centile is 30 for men and 28 for women. A small number of informants had very high frequencies, with a maximum of 150 occasions for men and 120 for women. The distribution of frequencies reported is very similar to that for Natsal I.

There is little variation in the frequency of sex by age, with a median of 4 for men and women of all ages, except for men aged 16-24 (median of 1) and women aged 16-17 (median 0). However, there is significant variation by marital status. Given that being married or cohabiting usually indicates the availability of a regular sexual partner, marital status would be expected to exert considerable influence on reported rates of frequency of sex. Indeed, both cohabiting and married informants reported substantially higher frequencies than those who were divorced/separated/widowed or single. Cohabiting informants also reported a significantly higher frequency than did married men and women.

6 SEXUAL PRACTICES (Tables 6.1-6.9)

Sexual practices with an opposite sex partner

In the self-completion section, informants were asked how long ago their most recent occasion of vaginal sexual intercourse, oral sex 'from a partner to you', oral sex 'from you to a partner' and anal sex occurred. Informants were also asked when they last had genital contact with someone of the opposite sex *not* leading to intercourse, but which was intended to achieve orgasm (for example, stimulating by hand).⁴

Very similar proportions of men and women reported each of the different sexual practices, with nine in ten having ever experienced vaginal intercourse (92.1% men, 93.9% women) and genital contact (88.3% men, 87.8% women), over eight in ten experiencing oral sex (cunnilingus and/or fellatio; 86.7% men, 86.8% women), and one quarter reported experiencing anal sex (26.2% men, 24.1% women). Compared with Natsal I, the greatest increase was in the reporting of anal sex (14.4% men, 13.4% women in Natsal I). Proportions reporting oral sex and genital contact also increased between the two surveys, while the already near universal proportion reporting vaginal intercourse remained the same.

Vaginal intercourse was reported by half of those aged 16-17 (49.5% men, 51.0% women). By the age of 20, eight in ten men and women had experience of vaginal intercourse, and there was little variation in reporting lifetime experience of any practices after this age.

Looking at experience in the last year, the proportion of men reporting anal sex was highest amongst those aged 20-24 (16.0% of men aged 20-24 compared with 12.3% of all men). This was also true of women (14.8% of women aged 20-24 compared with 11.3% of all women), though the difference between those in the 20-24 and 25-34 age groups was not statistically significant.

Sexual practices with a same sex partner

A number of homosexual practices were asked about in the self-completion section. Informants were asked how long ago was their most recent occasion (with a same sex partner) of oral sex 'from a partner to you', oral sex 'from you to a partner,' 'any other form of sex that involved genital contact' and, if the informant was male, anal sex. The data presented in the table are for reported practices in the last five years.

Oral sex with a partner of the same sex in the last five years was reported by 2.4% of men and 2.0% of women; genital contact by 2.2% of both men and women; and anal sex in the last 5 years was reported by 1.8% of men.

⁴ In calculating prevalence estimates for sexual behaviours, a number of assumptions were made about the experience of informants who did not answer the self-completion section. Those who had reported in the face-to-face interview that they had never had heterosexual intercourse were counted as never having had vaginal, oral or anal sex. The assumption that the informant had no experience of genital contact which had not led to intercourse could only be made for informants who had reported that they had had no heterosexual experience at all; therefore, the base for this analysis is somewhat smaller.

7 ATTITUDES TO DIFFERENT TYPES OF RELATIONSHIP (Tables 7.1-7.8)

Informants were asked for their views about different types of sexual behaviours and relationships: sex before marriage (pre-marital sex); sex outside marriage (extra-marital sex); sex outside a cohabiting relationship; sex outside a non-cohabiting regular relationship; and 'one night stands' (casual sex). These attitudinal questions were asked in the face-to-face section of the interview (after the self-completion module) and show cards with code letters were used to allow respondents to provide answers without having to verbalise them.⁵ Response options were provided on a five-point scale for each statement – 'always wrong', 'mostly wrong', 'sometimes wrong', 'rarely wrong', and 'not wrong at all'. The tables show the combined proportion of informants who regarded certain attitudes as 'always wrong' or 'mostly wrong', collectively referred to in the text here as 'wrong'.

Most tolerance was shown to pre-marital sex. Only one person in twenty in the general population considered sex before marriage to be mostly or always wrong, and there was little variation in this proportion by age or sex (5.1% men, 5.3% women). However, religious beliefs appeared to influence attitudes towards pre-marital sex. Those in the general population with no religious affiliation were the least likely to disapprove of pre-marital sex (1.7% men, 1.8% women), while Muslim respondents were the most likely to (53.0% men, 54.0% women).

In contrast, the least tolerance was shown towards extra-marital sex. A substantial majority of respondents (84.4% men, 88.7% women) described a married person having sex with a partner other than their spouse as wrong. There is evidence of a change in attitudes over time, as the proportion describing sex outside of marriage as wrong in 1990 was somewhat lower (77.6% men, 83.2% women). Although younger respondents were more likely than older ones to be critical of extra-marital sex, there was little variation by the other demographic variables examined.

Generally, the morality of monogamy accorded to a cohabiting couple was similar to that for a married couple, with the proportion considering sex outside of a cohabiting relationship to be wrong (77.1% men, 85.7% women) being only slightly lower than that considering sex outside marriage to be wrong. Similarly, the population has become less tolerant of this behaviour over the past decade, with a lower proportion describing it as wrong in Natsal I (67.2% men, 78.5% women).

Having sex with someone while going out with someone else, even where the couple does not live together, was considered wrong by seven in ten men and eight in ten women (70.3% men, 81.1% women). Again, this represented an increase on the proportion reporting it as wrong in 1990 (59.2% men, 70.0% women).

Attitudes towards casual sex were measured using responses to a statement about 'having one night stands'. Overall, men were more tolerant of casual sex than women, with a third of men and half of women saying that one night stands were

⁵ It was not specified as to whether respondents answered the attitudinal questions in relation to themselves or as a general opinion of the issue.

wrong (35.0% men, 53.6% women). In contrast to the decline in tolerance of sex outside of an existing relationship, people were considerably more likely in Natsal I to have described one night stands as wrong (53.0% men, 78.8% women).

8 IDEAL RELATIONSHIP (Tables 8.1-8.12)

Informants were asked to identify which of seven different types of relationship described on a show card would be their ideal now. Overall, about half of women (48.5%) and two-fifths of men (40.9%) selected 'married, with no other sex partners' as their current ideal relationship. This was followed by 'one regular partner but not living together' (21.1% men, 21.7% women) and 'not married, but living with a partner and no other sex partners' (17.6% men, 19.0% women). Non-monogamous relationships (with two or more concurrent partners) were cited as ideal by one in eight men (12.3%) and one in twenty women (4.6%).

Comparison of Natsal I and II reveals that while the overall proportion wanting to live monogamously with one partner had not significantly changed, both men and women were less likely in Natsal II to want to be married, and more likely to want to cohabit, than was the case in 1990. The proportion preferring to have no sexual activity declined between the two surveys for both men and women.

Current ideal relationships varied greatly with age. Older informants were more likely than younger ones to select a type of relationship that involved living together and that involved just one, regular partner.

The majority of respondents who were married described 'married with no other sex partners' as their ideal (87.4% men, 93.0% women). Married men were three times as likely as married women to say their ideal is being 'married with other sex partners' (9.3% men, 2.9% women). While most cohabiting informants cited monogamous cohabitation as their ideal, about one in six indicated they would have preferred marriage without other sex partners (16.2% men, 18.8% women). Single informants were most likely to want a non-cohabiting partner.

There were also differences by social class, with men in Social Classes I/II much more likely than men in Social Classes IV/V to say they would like to be married; the latter were more likely to choose as their ideal a relationship which did not involve marriage or cohabitation. The pattern was similar for women but less pronounced.

Informants were asked to select, from the same list of relationship types, what their ideal relationship would be in five years time. Two-thirds chose 'married with no other partners' (62.5% men, 69.3% women), and a further fifth preferred 'cohabiting with no other partners' (20.4% men, 18.0% women). The proportions citing no sexual activity, only casual partners, and non-monogamous regular relationships as their future ideal were lower than the proportion choosing these as their current ideal. As would be expected, the greatest difference between current and future ideal was reported by informants in the 16-24 age group.

Comparison with Natsal I shows a decline in the proportion describing their future ideal as 'married with no other sex partners', and a comparable increase in the proportion citing 'cohabitation with no other sex partners' as their preferred ideal in five years time.

9 ATTITUDES TO HOMOSEXUALITY (Tables 9.1-9.6)

Separate questions were asked about attitudes towards sex between two adult men and sex between two adult women. Respondents were shown a scale on a show card, with response categories for 'always wrong', 'mostly wrong', 'sometimes wrong', 'rarely wrong' and 'not wrong at all.' The figures in the text and tables group the proportions stating a practice as 'always wrong' or as 'mostly wrong' together, and are described in the text as 'wrong'.

Women tend to be more accepting than men of same sex relationships. One half of men (48.5%) and one quarter of women (27.6%) considered sex between two adult men to be wrong. While the proportion of women describing female homosexuality as wrong remained the same as for male homosexuality, the proportion of men disapproving fell to two-fifths (38.0%). Comparison of Natsal I and Natsal II reveals a significant increase in tolerance in attitudes towards homosexuality over the last decade.

Younger informants (except for men aged 16-19) were more tolerant of same sex relationships than were older informants.

Informants with higher educational qualifications and those in a non-manual social class were much less likely to consider homosexuality to be wrong. And religion also seemed to influence attitudes: informants who were Muslim, Hindu or other Christian were much less tolerant of homosexuality than people who said they were Church of England, Roman Catholic, of other non-Christian faiths, or who did not identify with any religion.

10 PERCEPTIONS OF HIV RISK (Tables 10.1-10.8)

Informants were asked how much at risk they perceived themselves to be of becoming infected with HIV, given their current sexual lifestyle. The response options were 'greatly at risk,' 'quite a lot,' 'not very much,' and 'not at all at risk.' (Those who said 'don't know' or 'it depends' are excluded from the tables.)

Overall, about a third of the sample saw their current sexual lifestyle as presenting at least some risk. Men were more likely than women to consider themselves to be at some risk (37.6% men, 29.2% women). The proportion perceiving themselves to be at risk had increased slightly since Natsal I, when 31.2% of men and 24.4% of women felt they were at no risk of HIV.

The proportion perceiving themselves to be at risk varied by age. More than half of men aged 16-24 (54.3%) described themselves as at some HIV risk, compared with a quarter in the 35-44 age group (25.5%). Married informants reported less self-perceived risk (19.3% men, 15.2% women) than did single informants (57.2% men, 46.2% women). Men and women living in London were the most likely to say they were at risk (43.4% men, 33.6% women).

11 CONTRACEPTIVE USE (Tables 11.1-11.15)

All informants who had heterosexual experience were asked a series of questions about their use of contraceptives. They were shown a card listing a range of contraceptive methods, including options for 'other' and 'no method', and asked: which (if any) they or a partner had *ever* used; which they had used in the *last year*; and, if more than one method was used in the last year, which was their *usual* method these days. The types of contraceptives used were grouped into the eight categories (along with 'none' and 'abstinence') which are shown in the tables (except for Table 11.1 which includes the full list of methods).

Contraception ever used

Only one in a hundred sexually experienced men (1.3%) and women (1.0%) said that they had *never* used any form of contraception. The most popular types of contraception were the pill and condoms, with over eight in ten men and women reporting their use. Over one-third of informants reported use of 'natural' methods of contraception, including withdrawal (32.7% men, 25.2% women), rhythm method (12.0% men, 10.3% women) and Persona (1.3% men, 1.4% women). Among women, 15.4% reported using an intrauterine device, 15.2% used emergency contraception, 9.4% had contraceptive injections and 7.4% used a diaphragm. Just under one in ten women (8.3%) and men (8.7%) had undergone surgical sterilisation.

Recent use of contraception

For looking at recent use of contraception - that is, at methods used in the *year before the interview* - the tables are based on 'sexually active' informants, defined as those who had at least one heterosexual partner in this period. Just over one in ten sexually active men and women (11.0% and 12.1% respectively) said they used *no* method of contraception at all in the past 12 months. This is virtually the same as the figures from Natsal I for this age group (11.2% and 12.7% respectively). It should be noted that its not possible to distinguish within this group of non-users between those who were at risk of an unplanned pregnancy and those who were not at risk because they were pregnant, seeking pregnancy or sterile for non-contraceptive reasons. However, given the age range of the Natsal II sample, it seems reasonable to suppose that the proportion of the sample who were sexually active and at risk of an *unplanned* pregnancy must be well below 10%.

Contraceptive use decreases with age: among ages 16-24 only 3.9% of men and 6.2% of women reported using no contraception in the last year, while among ages 35-44, the figures were 16.0% and 16.8% respectively.

Contraceptive use was related to informants' marital status in ways that would be expected given the level of sexual activity and need for protection against pregnancy. Only about one in twenty sexually active informants who were single used no contraception in the last year (6.2% men, 5.4% women). Non-users accounted for about one in ten informants in cohabiting relationships (8.4% men, 10.7% women), and one in seven (15.3% men and women) of those who were married.

Sexually active men and women in manual social classes were a bit more likely than those in non-manual social classes to report no contraceptive use in the last year. Similarly, informants with the lowest educational qualifications were about twice as likely as average to not use any contraception: 19.8% of men and 21.1% of women without any qualifications used no contraceptives in the last year.

More than one method of contraception in the last year could have been reported by informants, as they were asked to list *all* methods used by themselves or a sexual partner (although it should be borne in mind that respondents may not always be aware of methods being used by a sexual partner). The two types of contraception which were by far the most commonly used in the last year are the pill (reported by 38.2% of men and women) and condoms (reported by 51.3% of men and 39.2% of women). Among men, the next most common methods reported were natural methods (10.9%) and vasectomy (8.7%); no other methods were mentioned by more than 5% of men. Among women, 9.5% said their male partners had a vasectomy, 8.5% reported using natural methods, 7.4% said they had undergone sterilisation, and 6.1% used an IUD.

The popularity of particular types of contraception varied significantly by age. Thus, nearly two in three (62.6%) women aged 16-24 used oral contraception, but this declined to only 16.8% of women aged 35-44. Condom use showed a similar decline, from 63.3% in women aged 16-24 to 26.3% at ages 35-44; there was a similar decline among men, from 82.6% to 32.0% in the same age categories. Two methods showed an increase with age. Use of an IUD increased from 1.7% among the youngest age group of women (16-24) to 7.9% amongst the oldest (35-44). Among both sexes, there was also a much larger increase in sterilisation with age: only 0.1% of men aged 16-24 had a vasectomy compared with 19.7% of men aged 35-44; similarly, the proportion of women who said they had undergone sterilisation showed a similar increase, from no (sampled) women at all in the youngest age group (16-24) to 14.9% in the oldest (35-44).

Among sexually active single men and women, condoms were the most commonly used type of contraception in the last year (reported by 78.0% of men and 63.6% of women). This was followed by the pill (reported by 45.5% of men and 57.0% of women). Aside from 12.5% of single men who reported using natural methods, no other contraceptive method was reported by more than 10% of single men or women.

Although at a much lower level, condoms and the pill were also the most commonly reported methods used by married men (35.2% and 28.1% respectively) and women (28.9% and 25.6% respectively). Vasectomy and female sterilisation were also more common among married informants, with 16.0% of married men and 10.5% of married women saying they had undergone sterilisation. Nine percent of married informants also reported using natural family planning methods (8.8% men, 9.0% women). Cohabiting informants fell in-between those who were married and those who were single, but on the whole were more similar to the latter group.

Recent condom use

The self-completion questionnaire also contained a number of questions on condom use. The reference tables focus on responses to the questions on condom use for heterosexual intercourse in the last four weeks. Three in four of the Natsal II sample reported at least one occasion of vaginal or anal intercourse in the four weeks before the interview. Two in three men (65.6%) and three in four women (73.6%) among this group did *not use* a condom at all in this four week period. Only one in four men (24.0%) and one in five women (18.0%) used a condom on *every* occasion in this period, with the rest using condoms on *some* occasions (10.3% men, 8.4% women). Using a condom on *every* occasion has increased since Natsal I by about a third for men (from 18.2% to 24.0%) and a fifth for women (from 14.9% to 18.0%).

Condom use is particularly important from a safe sex perspective for people who have new or overlapping partnerships. Informants who had a new heterosexual relationship in the last four weeks were over twice as likely as those who did, not to use condoms on some or all occasions. Thus, 45.9% of men and 36.7% of women who had a new sexual relationship in the last four weeks used a condom on every occasion, compared with only 20.4% of men and 16.5% of women who had no new sexual partner(s) during this period. However, even among those who had new sexual partnerships in the last four weeks, over a third of men (37.6%) and nearly half of women (47.7%) did not use a condom at all, and one in six men and women used a condom on some occasions only (16.5% men, 15.6% women).

12 ABORTION, MISCARRIAGE AND STILLBIRTH (Tables 12.1-12.8)

Experience of therapeutic abortion

Women respondents were asked in the self-completion module whether they had ever terminated a pregnancy. Asking women whether they had ever terminated a pregnancy is a sensitive question, and previous research has suggested that surveys are likely to under-estimate abortion rates.⁶ That abortion was still a controversial issue at the time of Natsal II is clearly demonstrated by the 30.5% of women who responded that abortion is always or mostly wrong to the attitude question included on this subject (Table 9.1). This compares with the 37.4% of women in Natsal I who said that abortion was wrong, showing some movement towards more tolerant views of abortion over the past decade. However, the relatively high proportion of intolerance still shown towards abortion prevails among an age cohort of women for whom abortion has always been legally available by the time their own sexual activity would have begun (abortion was legalised in Britain in 1967).

After asking women whether they ever had an abortion, the follow-up questions for those who said they had differed in Natsal II from those asked in Natsal I. In the 1990 survey, women were asked if they had an abortion in two time periods: the last 12 months, and the last 5 years. In the 2000 survey, the follow-up questions asked women the age they had their first and last abortion(s). For this reason, comparisons between the two surveys are not exact.⁷

Looking at all women in Natsal II aged 16-44 (including those who have not yet had intercourse), overall, 17.0% reported having terminated a pregnancy, which is a significant increase from the 13.5% abortion rate in Natsal I. Among this age group of women, lifetime experience of abortion doubled from 9.5% among 16-24 year olds to 19.8% among 35-44 year olds.

The abortion rate in more recent periods, however, was highest amongst the youngest age category of 16-24 year olds: 7.6% in the last 5 years and 2.4% in the last year. This clearly reflects a higher rate of unwanted pregnancy in this age group potentially for several reasons (eg, not being in a committed relationship, no or inappropriate use of contraception).

⁶ Johnson A, *et al.* *Sexual attitudes and lifestyles*. Oxford: Blackwell Scientific Publications, 1994 (page 62).

⁷ In Natsal II, abortion rates in the last five years and last 12 months have been calculated as follows: age at (last) abortion was converted to months and six months were added to this, so that it was assumed that all abortions were halfway through the year; this was then deducted from the woman's current age (also converted to months); if the resulting number was less than 60, it was assumed the woman had her abortion in the last five years; if it was less than 12, it was assumed the abortion was in the last year. For example, a woman aged 21 years and 3 months at the time of interview who reported having an abortion at age 20 would be counted as having an abortion in the last year, whereas a woman aged 21 years and 9 months would not (as the calculation would give results of 9 months and 15 months respectively).

The table below compares age-specific abortion rates from the survey with official statistics for the year 2000 (for England and Wales only).⁸ As was found in Natsal I, reported abortions in Natsal II again under-estimate rates of abortion compared with government statistics, but the extent of the under-estimate is small.

Abortions in the last year
Rates per 1000 women aged 16-44

<i>Age group</i>	<i>England & Wales*</i>	<i>Natsal II</i>	<i>95% confidence interval</i>	<i>Bases**</i>
16-19	26.7	27.8	15.2 – 50.2	555
20-24	30.9	21.9	13.5 – 35.3	749
25-29	21.2	17.3	10.7 – 27.8	1062
30-34	14.0	12.3	7.6 – 19.8	1251
35-39	8.9	6.9	3.2 – 14.8	1179
40-44	3.2	5.8	2.4 – 14.3	1037
Total	16.3	14.3	11.3 – 18.2	5833

*Office of National Statistics (2001) *Abortion Statistics*. The Stationery Office, London

** All women respondents aged 16-44 in England and Wales (unweighted)

Experience of miscarriage or stillbirth

Lifetime experience of miscarriage or stillbirth is quite common, reported by one in five (20.9%) of all 16-44 year old women. As would be expected, lifetime experience increases with age (as experience of pregnancy increases), so that 29.2% of women aged 35-44 reported having a miscarriage. More recent experience of miscarriage or stillbirth in the last five years is most common among women in the 25-34 age group (12.6%), which are the most active reproductive years. However, this differs from the pattern found for abortion, where it was 16-24 year olds who had the highest rates in the last five years. In the last year, 2.0% of women reported miscarriage or stillbirth.

Consistent with age and expected pregnancy patterns, lifetime reports for miscarriage and stillbirth are much higher for women who are married or divorced (28.7% and 29.9%) than those who are single (7.0%); at 21.2%, the rate for women who are cohabiting is more similar to married than to single women.

Lifetime reports of miscarriage were inversely correlated with educational attainment, increasing from 16.9% for those with the highest qualifications to 31.4% for women with no qualifications. Lifetime reports of miscarriage also showed a clear relationship with social class, with women from manual social classes reporting higher rates than women from non-manual social classes. This difference was not found for more recent time periods, however.

⁸ For Britain as a whole, the rate per 1000 in Natsal II was 13.9 compared with official statistics of 15.8.

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APPENDIX A DEFINITION OF ANALYSIS VARIABLES

Age: Informants were asked for their month and year of birth, from which age at last birthday was derived for analysis.

Social class: The social classes of both the informant and, where applicable, his/her partner, were established, based on their current or last occupations. For analysis in this report, informant's own social class is used. Those who had never had a job of more than 10 hours per week or who had not worked for 10 years were not classified. Analysis is shown for the standard six categories using the Registrar General's Standard Occupation Classification: professional occupations (I), managerial and technical occupations (II), skilled non-manual occupations (IIINM), skilled manual occupations (IIIM), partly skilled occupations (IV), and unskilled occupations (V).

Marital status: Marital status is based on a question which asks whether or not informants were currently married or cohabiting and whether they had ever been married. The variable used for analysis describes their situation at the time of interview and prioritises married/cohabiting over widowed/divorced/separated. It includes seven categories: married, cohabiting with an opposite sex partner, cohabiting with a same sex partner, separated, divorced, widowed, and single. For analysis purposes, widowed/separated/ divorced form a single category, and the small number of same sex cohabiting informants have been excluded.

Region: All informants have been classified into one of the nine Government Office Regions in England, or to Wales or Scotland based on their postal address at the time the sample was selected (1999).

Education level: Informants were asked for their highest educational or vocational qualifications. Responses to these questions were combined into a single variable with three categories: 'A level and above,' 'GCSE/O Level/ CSE' and 'Other/none'. 'Other' includes all foreign qualifications. Informants aged 16 and 17 have been excluded from this analysis.

Religion: Informants were asked whether they considered themselves to belong to any particular religious group; those who did were shown a card with a list to choose from, or to specify another option not listed. The categories used for analysis are None, Church of England, Roman Catholic, Other Christian, Muslim, Hindu and Other non-Christian.

Smoking status: In order to allow assessment of whether different risk behaviours are correlated questions about health behaviours were included. Informants were asked whether they had ever regularly smoked, and if they currently did, how many cigarettes they smoke on average per day. The smoking status variable includes 4 categories: never smoked, ex-smoker, smokes less than 15 per day, and smokes 15 or more per day.

Usual alcohol consumption: Using a show card with illustrations that showed what constitutes a single unit of alcohol, informants were asked about their current usual

alcohol consumption per week. From the units reported, they were classified as: none/never drinks alcohol, 20 (men)/15 (women) or less units, 21 to 49 (men)/16 to 34 (women) units, and 50+ (men)/35+ (women) units.

APPENDIX B DEFTS AND STANDARD ERRORS

The Natsal II survey used a clustered, stratified multi-stage sample design. One of the effects of using this complex design is that standard errors for survey estimates are generally higher than the standard errors that would be derived from a simple random sample of the same size. However, a clustered design enables a lower cost per interview which permits a larger sample for the same financial outlay, and thus is usually more cost-effective.

The ratio of the standard error of the complex sample to that of a simple random sample of the same size is known as the design factor. As such, the design factor (or 'deft') is the factor by which the standard error of an estimate from a simple random sample has to be multiplied to give the true standard error of the complex design.

Defts vary from one estimate to another within the same survey. They are affected by the average number of interviews per sampling point within the sub-group being analysed. A smaller number will yield a lower deft provided the interviews are evenly spread out. But an uneven spread of interviews between sampling points will tend to increase defts. The deft values and true standard errors (which are themselves estimates subject to random sampling error) for selected survey estimates in this report are calculated in the package STATA 7.0 and are presented below.

The defts are presented separately for men and women. For each, the first column shows the proportion (or mean) as estimated by the sample.⁹ The second column shows the size of the sample (or sub-sample) on which it is based. The third column shows the weighted sample size. The fourth column shows its estimated true standard error. The fifth and sixth columns show the lower and upper 95% confidence intervals. The final column shows the estimated deft.

⁹ In a few cases, the proportion or mean may differ slightly from the one shown in the reference table. This occurs because the analysis program used for producing the reference tables (SPSS) differed from the one used for calculating the defts (STATA).