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Early Sex and Its Behavioral Consequences in New Zealand

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Abstract

A steady trend towards earlier sexual intercourse is now well documented. However, the relationship of this development to trends in other early sexual formative experiences has not been explored, nor has there been an analysis of the longer-term behavioral consequences. The data examined in this paper were drawn from a two-stage national survey of sexual lifestyles on a sample of 2,361 adult New Zealanders in the age range 18-54. Techniques of survival analysis and multiple logistic regression were used. Over time there was a consistent decline and diminishing gap in age of onset for first experience, first intercourse, and first regular partnership. Multivariate analysis confirms that males, the young, the less educated, ethnic minorities, and respondents professing no religious affiliation were all more likely to report earlier onset of sexual experiences. However, while all three socio-sexual events showed the same trend, pre-intercourse experiences exerted the strongest influence on subsequent sexual practices and outcomes. This has implications for preventive strategies.

Investigation of sexual behavior in the adolescent years has a dual significance. First, adolescence is a period of experimental activity and potentially high-risk behavior in its own right (Gagnon et al., 1989). But second, and more pertinent to this paper, it is also a crucial point of transition to adulthood (Gagnon, 1989) in the sense that adolescence is a time of major physiological, psychological, and social change when many patterns of behavior are established, including future sexual practices and outcomes, and a range of health-related and risk-taking behaviors (Donovan, Jessor, & Costa, 1993). The focus of this paper is on this second dimension, namely adolescence as a time for significant socio-sexual development with important consequences for subsequent sexual lifestyles. This has implications for future risk behavior and related health profiles.

There is a considerable body of research on sexual activity in the teenage years, principally orientated either to studies attuned to particular social problems associated with this age group, such as unintended pregnancy (Jones et al., 1985) and premarital behavior (Reiss, 1967), or to investigations addressing sexual activity in a more generic fashion. This research focuses both on the concurrent behavior of teenagers (Khan, Kalbeck, & Hofferth, 1988) and on the retrospectively recalled activities of representative samples

of adults (Johnson, Wadsworth, Wellings, & Field, 1994; Laumann, Gagnon, Michael, & Michaels, 1994). There have also been a diversity of sampling frames and subpopulations used in past studies in this area, including high school pupils (Klanger, Tyden, & Ruusuvaara, 1993), university students (Bishop & Lipsitz, 1991), clinic populations (Evans, McCormack, Bond, & MacRae, 1991), regional samples (Dickson, Paul, & Herbison, 1993), and nationally representative surveys (Forrest & Singh, 1990).

A number of trends are evident from this literature. First, there is a well-established progression in the sequencing of early sexual and partnering activity among adolescents, starting with incipient relationships and associated kissing, cuddling, and minor petting and moving on to longer-term relationships, heavy petting, and sexual intercourse (Brook, Balka, Abernathy, & Harburg, 1994). Second, there are clear socio-demographic patterns of sexual initiation, with socially disadvantaged groups tending to begin their sexual career earlier (Gagnon, 1989; West, Wight, & Macintyre, 1993). Third, a number of changes in patterns of behavior over time have taken place, with a progressively earlier age at first intercourse and a convergence in these patterns between males and females (Johnson, Wadsworth, Wellings, & Field, 1994). Finally, there is evidence that

early initiation may be a potential marker for later risky sexual behavior (Greenberg, Magder, & Aral, 1992).

The object of the current paper is to advance this literature in two respects. First, while trends in first intercourse have been well documented in most major national surveys, other aspects of early socio-sexual development have not been so firmly established. In this paper trends in pre-intercourse sexual experiences and first long-term sexual partnership will be analysed, and their relationship to first intercourse described. Second, the context and possible consequences of such trends in early socio-sexual development have not been extensively explored.

The focus in this study, therefore, is on trends in the initiation of young people into sexual and partnering activity and on the behavioral consequences of these trends. It relies on the retrospective recall of such events in a national sample of adults. Furthermore, while it does not explicitly adopt a social problem perspective, it does explore the implications of early sexual events for subsequent potential risk behavior and associated health profiles.

Method

Participants

A computer-assisted telephone interview (CATI) survey was carried out in mid-1991 on a representative national sample of 2,361 adult New Zealanders in the age range 18-54. A two-

stage, stratified sampling procedure was used: initial identification of household by random digit dialling (RDD) of all available telephone numbers in the country stratified by dialling zones, followed by selection of one eligible household member for interview. Stratification was achieved by allocating sample quotas in proportion to the 1991 Census population of 18-54 year olds in 14 administrative regions (which coincided with the principal telephone dialling zones). The Sudman (1973) method of cluster sampling was used, which involved the selection of a seed number as the start point for the random generation of two further numbers. The screening completion rate -- that is, the success in making contact and establishing eligibility -- was .69 (2,603/3,792), and the interview completion rate -- that is, the success rate among those identified for interview -- was .91 (2,361/2,603). The final effective response rate was 63% with nonresponse being equally distributed between refusals and failure to establish contact. Item nonresponse was less than one per cent. Further details of sample design, questionnaire, and methodology have been reported elsewhere (Davis, Lay Yee, Chetwynd, & McMillan, 1993).

The interview took approximately 15 minutes and followed an introduction to the purposes and sponsorship of the study. Participants were anonymous and free to terminate the interview at any stage. Contact records were destroyed on

completion of the field work. The study underwent the standard ethical scrutiny required for research of this kind in New Zealand.

Measures

The interview was based on standardised items adapted from the protocol developed by the World Health Organisation (WHO) Global Programme on AIDS (GPA) (WHO, no date). The schedule included questions in the following areas: background characteristics; partnership; sexual behavior; contraception; sexually transmitted diseases; sexual practices; and knowledge, attitudes, and behavior related to HIV/AIDS. In keeping with the discussion of the previous section, questionnaire items presented in this paper are grouped into three categories: contextual precursors (socio-demographic and cultural background factors), socio-sexual development (measures of early sexual activity and partnership), and behavioral consequences (reported sexual practices and outcomes).

Aside from gender and age, five commonly used socio-demographic variables were deployed: *marital status*, *region*, *ethnic group*, *education*, and *religious affiliation*. Marital status was grouped into three categories: never married, currently married or cohabiting, and other. Region was coded by population size and density: major urban centers, provincial centers, and smaller towns and communities. Ethnic

group was classified into European (Pakeha) and non-European (Maori, Pacific Island and Other). Educational level was grouped according to whether or not the respondent had advanced beyond secondary (high) school. Religious affiliation was classified as follows: major Protestant denominations (Anglican, Presbyterian, Methodist, Baptist); Roman Catholic; other denominations; and no religious affiliation. Four birth cohorts were defined by date of birth of respondent: 1937-1946, 1947-1956, 1957-1966, and 1967-1973.

The three questions relating to early socio-sexual experiences were worded in a common pattern as follows: "How old were you when you first ... had any experience of a sexual kind/had sexual intercourse with someone/had a regular partner?". For each event an explanatory addendum was attached as follows -- (a) sexual experience: "for example, kissing, cuddling, petting - with someone else," (b) sexual intercourse: "I mean vaginal, oral, or anal sex," and (c) regular partner: "I mean a person with whom you have had an intimate relationship for a year or more. They could be someone with whom you have had a relationship for less than a year but with whom you intend to continue this relationship. They may be your spouse; they may be someone you live with; or someone who does not live in the same house but with whom you have an intimate relationship including sex."

Ten sexual practices and outcomes were identified from the adapted version of the Partner Relations questionnaire: frequency of sexual intercourse in the last four weeks; use of a condom for contraception in the last three months; sex with more than one partner in the previous twelve months; number of sexual partners; and any experience or report of anal sex, oral sex, same-gender sex, commercial sex, an STD, or the use of a condom to prevent STDs.

Procedure

For each of the three sexual initiation variables there were significant numbers of respondents who had not as yet experienced the activity at the time of the interview, particularly in the youngest cohort (see Table 1). Such data are known as right-censored. A raw, unadjusted median is likely to underestimate the true figure (see Table 2). It is in circumstances such as these that survival analysis is the correct technique to use since it correctly adjusts for censored data (Kalbfleisch & Prentice, 1980). Survival analysis estimates the distribution of the probability of a particular activity not occurring by a given age (in this instance, not reporting a type of initiation activity). In the case of censored values, individuals not reporting the event in question are included in the denominator of any rate calculated only up to and including the age of the respondent at interview.

In this paper the median -- the value for age at initiation that is achieved by 50% of the sample -- was computed by the life-table method using grouped data, with individual survival times calculated using the Lifetest procedure in SAS (SAS Institute, 1985). Adjusted medians were derived from the life-table method using grouped data to produce non-integer medians, and including censored data. These were compared with raw medians shown in Table 2 which were similarly derived, but excluded censored data. Two linear rank statistics produced by the SAS Lifetest were used in this table to test the equality in distributions between survival curves (age of event) for different strata (gender and cohort): While the Wilcoxon gives more weight to earlier events, the log-rank test gives more weight to later events.

In order to carry out an analysis of the relationship between the full complement of socio-demographic variables and the three socio-sexual events, a multiple logistic regression approach was deployed (see Table 4). Three regression analyses were run, one for each event (outcome variable), with all socio-demographic factors as predictors. The odds ratios were generated using the Logistic procedure in SAS (SAS Institute, 1990) and encapsulate the effect of each predictor, adjusting for the other predictors in the model.

The outcome variables considered in this analysis were the three measures of socio-sexual development; that is, age

at first experience, age at first intercourse, and age at regular partnership. These variables were rendered in binary form with cut-points chosen to represent early and late starters at each stage. These were selected for the three measures at ages 15, 16, and 18 respectively. A cut-off at age 15 for first experience was selected because it was the approximate median for this variable and thus close to the most efficient split; 16 was selected for first intercourse because it provided comparability with a benchmark British study (Johnson et al., 1994); and in the case of first regular partnership, a cut-off of 18 was chosen because this represented the age of the youngest respondents (thus reducing problems of censored data).

The predictor variables were also represented in binary form. In the case of each socio-demographic variable the reference (or omitted) category was selected on a priori basis as the one most likely to be associated with a delay in age of initiation. The predictions implicit in this selection of reference categories were largely borne out by the results.

Cox regression was not used because the assumption of proportional hazards -- that hazards do not change over time -- did not hold for this data set and, in any case, much the same results were achieved using logistic regression with censored values as missing data. The effect of different

observation times for participants was addressed by including cohort membership as an explicit variable in the model.

Multiple logistic regression was again used in the analysis of the impact of socio-demographic background and socio-sexual development on subsequent patterns of sexual practice and outcomes (reported separately for males and females; see Tables 5 and 6 respectively). For each stage of socio-sexual development a separate logistic regression was run on a model containing all socio-demographic factors and precursor events for each of ten practice and outcome items (only nine for females, with the omission of commercial sex). Odds ratios, adjusted for all other variables in the model, are reported for the relationship between each item and each socio-sexual event. The results of 30 multiple logistic regressions are therefore reported, with significance levels set at the .05 level.

Results

A survival analysis of data for each of the socio-sexual events is presented in Table 1. The survival function is represented by those individuals yet to experience the activity (Kalbfleisch & Prentice, 1980). While practically every member of the sample reported having had an early sexual experience of some kind, significant minorities had yet to have sexual intercourse (3.1%) or a regular partner (4.2%) at survey date. In the youngest cohort, aged 18-24, the

proportion yet to experience sexual intercourse and those yet to enter a longer term relationship were much higher (12% and 15.8% respectively).

TABLE 1 ABOUT HERE

Two sets of estimates of the median age of early socio-sexual development are shown in Table 2: The raw estimates were calculated after excluding those members of the sample who had not reported the activity by interview date. The adjusted estimates were derived without exclusions, except for missing data, using the life-table method of calculation (the so-called median residual lifetime: see Cutler & Ederer, 1958). In both cases age was treated as a grouped, or divisible variable, rather than an integer variable. As can be seen, adjusting for censored data did little to change median values. Where discrepancies did occur, they were identified -- as predicted from the pattern of censored data in Table 1 -- among younger cohorts for age at first sexual partnership of a year or more and, to a lesser extent, for age at first sexual intercourse.

TABLE 2 ABOUT HERE

Overall, the median ages for the three socio-sexual events, adjusted for censored values, were slightly under 16 years in the case of first sexual experience, slightly over 18 for coitus, and exactly 20 for sexual partnership. Gender differences were statistically significant at the .001 level

for both log-rank and Wilcoxon tests of equality between males and females for first sexual experience, but for only one or the other of these two tests for the other events. There was evidence of a consistent decline in age of early sexual activity and partnership by birth cohort of approximately two years, three years, and four years over the 35 years spanned by the survey for first sexual experience, first intercourse, and first partnership respectively. Log-rank and Wilcoxon tests of equality of age at initiation over the four age groups were all significant at the .001 level for both males and females.

Table 3 presents a more detailed analysis of variations in the age of early socio-sexual development by gender and cohort. Only adjusted median values were used, where current age is allocated for censored cases. The first two columns present data separately for males and females on sexual experience and intercourse, with the third column documenting the time lag between median ages for these two activities. This sequence is repeated for first regular partnership in the remaining two columns, with the time lag estimated from median age of first intercourse. The difference between males and females in the median age of onset for each activity is outlined in the third panel of the table.

As already indicated there was a consistent decline in age of onset over time for all three events, and for both

males and females. In the case of first sexual experience, this decline was a matter of only a year or two over the 35-year period, but for first coitus and first partnership the difference in age of onset amounted to at least three years. This differential rate of decline was reflected in a diminishing time lag between the various stages of socio-sexual development: a narrowing of the gap for both males and females from about four years to under three years in the progression from first experience to first coitus, and a "catch-up" for males only of two years in closing the gap between first intercourse and partnership.

TABLE 3 ABOUT HERE

The differences between males and females in trends for age of reported occurrence are summarised in the third panel of Table 3. In essence, the tendency for males to report an earlier age for key events of socio-sexual development remained constant among cohorts at six months to a year earlier for first experience and generally less than six months at first intercourse. For first partnership, however, the situation was different: Females reported earlier entry into a long-term sexual relationship, a position that was reversed among the younger cohorts, however. These contrasting patterns were reflected in the gender gap for the timing of the transition from one activity to the next. For first experience and first intercourse the gender gap remained

constant over time, while for first long-term sexual partnership it narrowed to vanishing point.

The relationship of socio-demographic factors with the three socio-sexual development variables are considered in Table 4 using multiple logistic regression analysis. A separate logistic regression is run for each set of key events. The results are presented as odds ratios adjusted for all socio-demographic factors in the model. Separate analyses were run for males and females. Although minor variations in the pattern of odds ratios were evident, no systematic gender interactions were detected and, therefore, these results are not reported here.

TABLE 4 ABOUT HERE

The strongest and most consistent relationship with age of reported events of early socio-sexual development was birth cohort. This effect was seen across all three variables, and strengthened over time (a trend that was particularly marked for partnership). While earlier onset was between two and three times more likely among members of the second oldest birth cohort compared to those in the reference age group, odds ratios varied between 4 and 17 for those in the youngest birth cohort. Gender, education, and religion were other factors showing a reasonably consistent relationship; males, the less educated, and those claiming no religious affiliation were generally about twice as likely to report events at an

earlier age than their respective reference groups (females, those with post-secondary education, and those affiliated with religious faiths other than the major Protestant and Catholic denominations). Individual significant results, such as indicating a trend towards earlier onset, were demonstrated for ethnic group, for Protestant affiliation, and for the marital category of other.

Tables 5 and 6 take the analysis one step further to consider the impact of socio-sexual development on subsequent sexual practices and outcomes. The odds ratios in each table cell reflect the strength of the relationship between the age at which a particular event of early socio-sexual development took place and a given sexual practice or outcome, controlling for other predictor variables. In order to test for a possible gender interaction, results are presented separately for males and females.

For both males and females early sexual experience can be seen to have a strong and systematic effect on the great majority of sexual practices and outcomes. Those respondents having their first sexual experience before the age of 15 were much more likely to report a greater number of partners, anal and oral sex, and homosexual activity, and were more likely to have experienced an STD. Other results from this set of analyses (but not reported separately here) show that they were also more likely to have progressed at an earlier age to

coitus and subsequently to a regular sexual partnership. The influence on subsequent outcomes and practices of early sexual intercourse and early sexual partnership were less marked and less consistent.

TABLES 5 AND 6 ABOUT HERE

For both males and females the pattern of odds ratios for sexual practices and outcomes, only number of partners, and, to a lesser extent, experiencing an STD, showed consistent independent effects from early socio-sexual development at more than one stage. Frequency of sex for males, and same-gender sex for females were also affected at more than one stage. By contrast, the experience of commercial sex and failure to use a condom to prevent STDs were the only items showing no association with age of initiation at any stage (again for both males and females). Individual sexual practices -- frequency of sexual activity, use of a condom for contraceptive purposes, and anal and oral sex -- were items whose occurrence was influenced more or less exclusively by one or other of the initiation measures.

Discussion

The object of the current study was to describe the sequence of initiation into early sexual activity and partnering, and to analyse the behavioral consequences of this process.

A particularly novel feature of this study is the more extensive range of measures available on early socio-sexual

development: Data on three activities are used where previous research has often relied only on respondent reports of first intercourse. Although some of these studies have detected a halting of this trend and even a reversal towards a greater sexual conservatism -- in attitudes (Roche & Ramsbey, 1993) if not also in behavior (Cooksey, Rindfuss, & Guilkey, 1996; Simkins, 1994) -- the findings of the current investigation are generally consistent with those of previous research showing a trend for age at first intercourse to decline (Johnson et al., 1994), most markedly for those born in the decade beginning in the mid-1940s (Turner, Danelia, & Rogers, 1995).

However, with data on three measures of early socio-sexual development this study provides information on a broader front than hitherto has been available. While the study confirms a trend towards earlier sexual experience, the results also demonstrate a more rapid transition to partnership over time, suggesting that a liberalisation in the early expression of sexuality, involving its progressive decoupling from the institution of marriage (Turner et al., 1995), does not necessarily carry with it a weakening of the commitment to a long-term personal relationship. Indeed, the evidence seems to be that young people (especially young women) regard sex as a mechanism for establishing an intimate relationship (Stanton, Black, Kaljee, & Ricardo, 1993) and

that those embarking on early courtship go on to develop steady relationships at an earlier age (Thornton, 1990).

The trends identified in this study can be embedded within a broader analytical framework linked to precursors, such as socio-demographic factors, and to subsequent sexual practices and outcomes. Taking the relationship between socio-demographic and cultural factors on the one hand and the reported occurrence by respondents of key events of early socio-sexual development on the other, variation remained much as predicted from other studies (Johnson et al., 1994; Lynskey & Fergusson, 1993; Sundet, Magnus, Kvaløy, Samuelson, & Bakkevig, 1992; West et al., 1993). Males, the young, the previously married, non-Europeans, the less educated, and those professing no religious affiliation were all more likely to report early sex. Aside from age and religion, however, this pattern was not uniformly replicated across all three dimensions of socio-sexual development. There may be a number of explanations for this. First, it is possible that the different aspects tap slightly contrasting domains of behavior (Stanton, Romer, Ricardo, & Black, 1993). Second, and perhaps more likely, this lack of uniformity may simply reflect the dynamic and complex nature of the phenomenon; for example, there is conflicting evidence of sexual conservatism rather than liberalism in some ethnic minority groups (Cochran, Mays, & Leung, 1991), of a narrowing over time in racial and income

differences (Forrest & Singh, 1990), and also in the gender gap (Sundet et al., 1992). In addition, we have focused on a different society, New Zealand.

The second element in the analytical framework relates early socio-sexual development to subsequent sexual practices and outcomes. Previous studies have tended to concentrate on early intercourse as the key milestone in the development of a range of subsequent sexual practices and outcomes, including early pregnancy (Melchert & Burnett, 1990), greater numbers of partners (Durbin et al., 1993; Evans et al., 1991), risky contraceptive practices (Kraft, Rise, & Traeen, 1990) and reports of STDs (Erickson & Trocki, 1992; Greenberg et al., 1992; Kjaer et al., 1990). The current study suggests, however, that prior sexual experiences may be just as important (see Tables 5 and 6). Although early intercourse is predictive of a greater number of partners, same-gender sex, reporting an STD, and failure to use a condom, this diverse, experimental and "risky" pattern of behavior is even more marked for those reporting early pre-intercourse sexual experiences. An early regular sexual partnership is not related to this pattern to nearly the same degree. Although clearly consistent with the considerable body of research on early intercourse (Andersson-Ellstrom, Forssman, & Milsom, 1996), this finding has not previously been widely reported in the literature and suggests that programs of intervention need

to be aimed at younger age groups and at broader correlates of behavior (Jakobsen, Rise, Aas, & Anderssen, 1997).

A number of methodological issues have to be considered with the current survey. While the results of this research are largely in conformity with the literature on patterns of early sexual activity and partnership in Western Europe and North America, there may remain some doubt as to whether findings established in a small, multiracial social democracy in the South Pacific can be generalised to other countries of the developed world. An analysis of the results of nationally representative surveys on key sexual practices for New Zealand, the United States, and the United Kingdom are reassuring, however (Davis and Lay-Yee, 1996); while on most measures the New Zealand data indicate a generally more conservative sexual culture, on the crucial matter of first heterosexual intercourse the median age -- 18 for both males and females -- is exactly the same across all three countries.

As expected, there was evidence of right-censored data for younger respondents, particularly in the case of coitus and partnership. Adjusting for these values, however, made practically no difference in estimates of the overall sample median, and had only a minor effect on medians for specific subsamples. This is in contrast to Sundet et al. (1992), who found adjusted estimates for age at first coitus to be a year higher than unadjusted figures. Nevertheless, their adjusted

median of 18.2 years is very close to the figure derived in the current study.

The response rate of 63% for a representative national sample could be a matter of concern; however, only a fifth of the refusals cited the subject matter of the survey, and poorer response rates among men, the young, and those in major urban centers are generic to survey research and not specific to telephone surveys or to studies of sexual behavior (Davis et al., 1993). A further feature of the New Zealand survey that requires consideration is the fact that it relied on a telephone methodology. At the time of the study in New Zealand nearly everyone (approximately 95% of the population) had a telephone, and research among telephone owners in a face-to-face survey on a health-related topic suggests that little discrepancy in results was likely to eventuate when those without telephones are omitted (Wyllie, Black, Zhang, and Casswell, 1994). In general, direct comparison of the results of face-to-face and telephone methodologies in eliciting information on sexual behaviour shows no consistent differences in their results (ACSF, 1992).

Another issue in this and other studies of its kind is the reliability and validity of information collected on such a sensitive area as sexual behavior. While it is not possible to provide complete reassurance on this score in the current paper, there are indications of the acceptable quality of the

data. Overall item non-response in the survey was under one percent, and never more than five percent, even for the most sensitive questions. Furthermore, the pattern of item nonresponse did not show a strong and consistent relationship with a range of respondent characteristics (Davis et al., 1993). Also, for at least two items where one might expect a close correspondence in overall rates between males and females, anal sex and frequency of sexual intercourse, the figures are closely comparable. Finally, on one of the measures that is fundamental to this study, age at first intercourse, estimates cross-culturally are remarkably stable. Turner et al. (1995) have concluded that, on the assumption of equivalent reporting biases across cohorts, data on trends in reported sexual behavior are robust.

The focus of this research has been on trends in early sexual activity and partnership, and implications of early socio-sexual development for subsequent sexual practices and outcomes. While, the findings of the current study bear out a predictable pattern, they also suggest a more novel hypothesis; namely, that the stages of early socio-sexual development are closely related and have powerful long-term consequences for subsequent practices and outcomes. In particular, it is noteworthy that those engaging in early pre-intercourse sexual experiences, despite also reporting early and rapid progress to a long-term sexual partnership, are much

more likely to report a greater number of partners, same-gender sex, anal sex, and STDs in later life. This has clear implications for preventive strategies. First, if the trend toward earlier onset of sexual activity continues, even while accompanied by a rapid and earlier transition to long-term partnership, then we are likely to see increases over time in reported levels of numbers of partners, same-gender sex, anal sex, and STDs; secondly, if the crucial influence is that of pre-intercourse sexual experience, then preventive strategies must envisage intervention at an earlier age and with a slightly different focus than has hitherto been the case.

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Table 1. Censored^a Values for Three Events of Socio-Sexual Development, by Birth Cohort and Gender

Socio-Sexual Events By Birth Cohort	Survival Analysis By Gender						
	Number of Events Reported				Event Not Reported		
	Yes - Event		No - Event		Percentages		
	M	F	M	F	M	F	Both
Sexual Experience - All	1034	1270	8	6	0.8%	0.5%	0.6%
1937-1946	205	288	2	1	1.0%	0.3%	0.6%
1947-1956	334	402	2	1	0.6%	0.2%	0.4%
1957-1966	329	394	0	1	0.0%	0.3%	0.1%
1967-1973	166	186	4	3	2.4%	1.6%	1.9%
Sexual Intercourse - All	1006	1241	36	35	3.5%	2.7%	3.1%
1937-1946	207	284	3	5	1.4%	1.7%	1.6%
1947-1956	334	403	4	3	1.2%	0.7%	0.9%
1957-1966	323	389	8	6	2.4%	1.5%	1.9%
1967-1973	142	165	21	21	12.9%	11.3%	12.0%
Regular Partner - All	994	1243	56	42	5.3%	3.3%	4.2%
1937-1946	206	284	5	6	2.4%	2.1%	2.2%
1947-1956	332	405	6	5	1.8%	1.2%	1.5%
1957-1966	319	392	14	6	4.2%	1.5%	2.7%
1967-1973	137	162	31	25	18.5%	13.4%	15.8%

^a In a survival analysis framework the term "Censored" identifies those cases in which a given event has not occurred. In the context of the current table this refers to those respondents who were either not sexually experienced or who had not had sexual intercourse, or who had not as yet developed a longer-term relationship at the time of interview.

Table 2. Sample Distribution, Age of Socio-Sexual Activity and Partnership, By Gender and Cohort. (Percentages, Median^a Values, and Tests of Equality)

Gender and Birth Cohort	Sample Distribution		Median Age Of Onset Of Events					
	N	%	Experience		Intercourse		Partnership	
			(Raw ^b)	Adj. ^c	(Raw ^b)	Adj. ^c	(Raw ^b)	Adj. ^c
Gender ^d								
Males	(1,061)	44.9%	(15.3)	15.4	(18.0)	18.1	(20.0)	20.3
Females	(1,300)	55.1%	(16.2)	16.2	(18.6)	18.6	(19.7)	19.8
Birth Cohort ^e								
1937-1946	(507)	21.5%	(16.7)	16.7	(20.5)	20.5	(21.9)	21.9
1947-1956	(754)	31.9%	(15.9)	15.9	(18.5)	18.5	(20.3)	20.4
1957-1966	(736)	31.2%	(15.6)	15.6	(17.9)	17.9	(19.1)	19.2
1967-1973	(364)	15.4%	(14.8)	14.9	(17.1)	17.4	(17.6)	18.0
Total	(2,361)	100.0%	(15.8)	15.8	(18.3)	18.4	(19.8)	20.0

^a Calculated for "grouped data", with each year being treated as divisible. ^b Excludes censored data

(those respondents not reporting event by interview date). ^c Derived from survival analysis using the

life-table method for grouped data; includes censored data. ^d Test of equality between genders:

significant at .0001 level for log-rank and wilcoxon for all three events, except first intercourse (log-

rank, p=.025) and first regular partner (wilcoxon, p=.001). ^e Test of equality over cohorts (by gender):

significant at .0001 level for log-rank and wilcoxon for all three events.

Table 3. Median^a Age of Key Events in Early Sexual Activity and Partnership, by Birth Cohort and Gender

Early Sexual Activity And Partnership					
Birth Cohort	Median Age(1)	Median Age(2)	Median Lag	Median Age(3)	Median Lag
	First Experience	First Intercourse	Time Lag (2) - (1) ^b	First Reg. Partner	Time Lag (3) - (2) ^b
Males					
1937-1946	16.3	20.4	4.1	23.1	2.7
1947-1956	15.5	18.0	2.5	20.6	2.6
1957-1966	15.0	17.7	2.7	19.5	1.8
1967-1973	14.6	17.2	2.6	17.8	0.6
Females					
1937-1946	16.9	20.6	3.7	21.4	0.8
1947-1956	16.2	18.9	2.7	20.3	1.4
1957-1966	15.9	18.0	2.1	19.1	1.1
1967-1973	15.2	17.6	2.4	18.1	0.5
Females - Males^b					
1937-1946	0.6	0.2	-0.4	-1.7	-1.9
1947-1956	0.7	0.9	0.2	-0.3	-1.2
1957-1966	0.9	0.3	-0.6	-0.4	-0.7
1967-1973	0.6	0.4	-0.2	0.3	-0.1

^a In cases of censored data, current age was allocated. The grouped data method was used. ^b Difference between medians. ^c Difference between time lags.

Table 4. Age at Early Sexual Activity and Partnership, by Socio-Demographic

Factors^a.

Socio-Demographic Predictors	Odds Ratios For Age Of Event		
	First Sexual Experience ^b	First Sexual Intercourse ^c	First Regular Partnership ^d
Gender	2.25*	2.52*	1.07
Males/Females	(1.88-2.71)	(1.96-3.24)	(0.86-1.32)
Birth Cohort	2.18*	2.82*	2.56*
1947-1956/1937-1946	(1.63-2.93)	(1.74-4.56)	(1.63-4.00)
1957-1966/1937-1946	2.75*	4.35*	5.86*
1967-1973/ 1937-1946	(2.05-3.68)	(2.73-6.95)	(3.83-8.97)
1967-1973/ 1937-1946	4.21*	6.42*	16.77*
1967-1973/ 1937-1946	(2.92-6.07)	(3.74-11.03)	(10.34-27.18)
Marital Status	1.01	0.84	1.10
Single/Now Married	(0.78-1.32)	(0.59-1.18)	(0.82-1.47)
"Other"/Now Married	1.36	1.97*	1.18
"Other"/Now Married	(0.96-1.93)	(1.28-3.02)	(0.77-1.81)
Region	0.94	1.19	0.82
Major Urban/Urban-Rural	(0.75-1.17)	(0.89-1.61)	(0.63-1.06)
Minor Urban/Urban-Rural	0.99	0.99	1.03
Minor Urban/Urban-Rural	(0.76-1.30)	(0.69-1.41)	(0.76-1.39)

Ethnic Group	0.86	1.64*	0.76
NonEuropean/European	(0.64-1.15)	(1.17-2.31)	(0.54-1.05)
Education	1.09	1.83*	1.88*
<Secondary/PostSecondary	(0.90-1.31)	(1.40-2.38)	(1.50-2.36)
Religion	2.06*	1.27	1.87*
None/Other	(1.53-2.78)	(0.87-1.86)	(1.32-2.65)
	1.42*	0.92	1.29
Major Protestant/Other	(1.06-1.91)	(0.63-1.36)	(0.91-1.84)
	1.09	0.92	1.31
Roman Catholic/Other	(0.76-1.55)	(0.58-1.46)	(0.87-1.98)

^a Adjusted odds ratios with 95% confidence intervals in brackets. ^b Before age 15 (N=2,298, ever sexually experienced). ^c Before age 16 (N=2,298, ever sexually experienced). ^d Before age 18 (N=2,315, ever had sexual intercourse).

* p<0.05.

Table 5
Males, Sexual Practices and Outcomes by Age at Early Sexual Activity and Partnership:
Results of Logistic Regression Analyses - Odds Ratios with 95% Confidence Intervals
(Adjusted for All Socio-Demographic Factors and Prior Socio-Sexual Events)

DEPENDENT VARIABLES		ODDS RATIOS FOR PRACTICES AND OUTCOMES BY SOCIO-SEXUAL EVENT		
PRACTICE AND OUTCOME ITEMS		First Sexual Experience ^a	First Sexual Intercourse ^b	First Regular Partnership ^c
Last 4 Weeks ^d	Sex > 4 Times	1.38* (1.00-1.91) (N=747)	1.04 (0.68-1.59) (N=743)	1.60* (1.04-2.45) (N=739)
Last 3 Months ^d	No Condom Use (contraception)	1.09 (0.76-1.55) (N=893)	2.53* (1.57-4.08) (N=884)	0.83 (0.54-1.28) (N=882)
Previous Year ^d	> 1 Partner	2.02* (1.29-3.16) (N=919)	1.68* (1.02-2.77) (N=910)	2.39* (1.46-3.91) (N=904)
	Commercial Sex	0.44 (0.11-1.73) (N=184)	0.39 (0.06-2.63) (N=182)	5.38 (0.87-33.09) (N=180)
Ever ^e :	> 5 Partners	3.46* (2.59-4.64) (N=951)	6.06* (3.86-9.51) (N=945)	2.05* (1.37-3.07) (N=941)
	Anal Sex	3.13* (1.88-5.21) (N=931)	1.45 (0.83-2.55) (N=921)	1.30 (0.72-2.36) (N=916)
	Oral Sex	2.00* (1.45-2.75) (N=979)	1.15 (0.74-1.80) (N=965)	0.83 (0.55-1.27) (N=959)
	Same-Gender Sex	7.69* (2.30-25.78) (N=978)	1.72 (0.66-4.44) (N=968)	0.31 (0.09-1.06) (N=966)
	STD	3.17* (1.99-5.05) (N=994)	2.39* (1.47-3.88) (N=984)	1.24 (0.74-2.08) (N=978)
	No Condom Use (Prevent STD)	0.88 (0.66-1.19) (N=970)	1.15 (0.79-1.69) (N=960)	0.87 (0.60-1.26) (N=958)

^a Before age 15. ^b Before age 16, controlling for sexual experience. ^c Before age 18, controlling for sexual experience and first coitus. ^d For those reporting sexual intercourse in the last 12 months. ^e For those reporting ever having had sexual intercourse. * p<0.05.

Table 6
Females, Sexual Practices and Outcomes by Age at Early Sexual Activity and Partnership:
Results of Regression Analyses - Odds Ratios with 95% Confidence Intervals
(Adjusted for All Socio-Demographic Factors and Prior Socio-Sexual Events)

DEPENDENT VARIABLES		ODDS RATIOS FOR PRACTICES AND OUTCOMES		
		BY SOCIO-SEXUAL EVENT		
PRACTICE AND OUTCOME ITEMS		First Sexual Experience ^a	First Sexual Intercourse ^b	First Regular Partnership ^c
Last 4 Weeks ^d	Sex > 4 Times	0.99 (0.72-1.37) (N=908)	1.30 (0.77-2.19) (N=904)	1.72* (1.16-2.55) (N=899)
Last 3 Months ^d	No Condom Use (contraception)	1.45 (0.99-2.10) (N=1,072)	0.97 (0.55-1.73) (N=1,065)	1.27 (0.83-1.95) (N=1,058)
Previous Year ^d	> 1 Partner	1.90* (1.13-3.18) (N=1,080)	2.65* (1.29-5.42) (N=1,073)	0.98 (0.52-1.84) (N=1,065)
Ever ^e :	Commercial Sex	--	--	--
	> 5 Partners	1.94* (1.41-2.67) (N=1,197)	4.09* (2.56-6.54) (N=1,190)	1.07 (0.72-1.59) (N=1,181)
	Anal Sex	1.34 (0.84-2.15) (N=1,117)	1.06 (0.50-2.21) (N=1,109)	0.50* (0.26-0.96) (N=1,102)
	Oral Sex	1.90* (1.42-2.54) (N=1,184)	1.09 (0.68-1.75) (N=1,175)	1.41 (1.00-1.98) (N=1,167)
	Same-Gender Sex	7.18* (2.54-20.28) (N=1,227)	3.82* (1.31-11.18) (1,218)	1.23 (0.38-3.94) (1,209)
	STD	2.39* (1.46-3.91) (N=1,231)	2.93* (1.56-5.53) (N=1,222)	0.80 (0.44-1.48) (N=1,212)
	No Condom Use (Prevent STD)	0.94 (0.70-1.27) (N=1,220)	0.78 (0.50-1.23) (1,211)	1.08 (0.76-1.53) (N=1,202)

^a Before age 15. ^b Before age 16, controlling for sexual experience. ^c Before age 18, controlling for sexual experience and first coitus. ^d For those reporting sexual intercourse in the last 12 months. ^e For those reporting ever having had sexual intercourse. * p<0.05.