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Gender and Ethnic Differences in the Timing of First Sexual Intercourse

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Context: Whether the effect of gender on the risk of first intercourse is influenced by adolescents' ethnicity has received limited attention in research on age at first sex. Such information could provide a more complete understanding of adolescent sexual behavior.

Methods: Life-table analysis using data from a population-based, ethnically diverse sample of 877 Los Angeles County youths was employed to estimate the median age at first sex for each gender-and-ethnicity group. Multivariate analysis using proportional hazards techniques was conducted to determine the relative risk of sexual activity among teenagers in each group.

Results: Overall, the teenagers in the sample had a median age at first sex of 16.9 years. Black males had the lowest observed median (15.0), and Asian American males the highest (18.1); white and Hispanic males, and white and black females, reported similar ages (about 16.5 years). Hispanic and Asian American females had rates of first sex about half that of white females, although these protective effects were explained by differences in family structure. Even after controlling for background characteristics, black males had rates of first sex that were about 3-5 times the rates of the other gender-and-ethnicity groups. In addition, Asian American males were less likely than Hispanic males to be sexually experienced, and Hispanic males had almost twice the rates of sexual activity of Hispanic females.

Conclusions: Socioeconomic conditions account for ethnic differences among females in the age at first sex, and cultural influences may contribute to the difference between Hispanic males and females; explanations for black males, however, remain elusive. =paragraph

An individual's first sexual intercourse is embedded with multiple personal and social meanings. For adolescents, it contributes to redefining one's identity from child to developing teenager and reconfigures important interpersonal relationships, including those with peers, parents and sexual intimates.[1] Although sexual activity is no longer strongly linked to marriage and subsequent childbearing, as it was historically,[2] it remains a marker (one of the first) of the transition from adolescence to adulthood.[3] It places young people into a group exposed to risks of unintended pregnancy and sexually transmitted diseases, including AIDS, and these risks vary by age at onset of sexual activity.[4] As a result, research and programmatic strategies examine and attempt to modify adolescent sexual behavior.[5]

Numerous factors influence the initiation of sexual activity—individual and familial

characteristics,[6] as well as such larger social forces as community and peer influences.[7] Two of the most fundamental of these factors are an adolescent's gender and ethnicity. Indeed, the social and cultural meanings of being sexually active, as well as normative proscriptions and prescriptions about the timing of first sex, vary to a great extent according to a youth's gender and ethnicity.[8]

Most research has concentrated on females, partly because national fertility studies interview only females and because of the historical interest in teenage pregnancy. However, studies that have included both males and females have consistently shown gender differences in the age at first sexual experience.[9] Explanations for the observed younger ages at first sex for males have centered on biological and maturational differences,[10] variations in social controls, such as parental supervision,[11] and differences in the opportunity costs of becoming sexually active (and the subsequent risk of unintended pregnancy).[12] In addition, while 80% of a recent cohort of adolescents had had sex by age 20,[13] normative expectations about the appropriate age and circumstances of first intercourse vary by gender.[14]

Theoretical explanations of ethnic differences in age at first sex tend to emphasize economic and sociocultural influences.[15] The bulk of research has focused on understanding differences between blacks and whites, to some extent because of limitations in the degree of ethnic diversity in national data sets. Furstenberg and colleagues outline three possible explanations for observed ethnic differences.[16]

- One focuses on socioeconomic disadvantage, positing that poor youths' limited opportunities minimize the opportunity costs of sexual activity and possible pregnancy. This argument suggests that reducing the ethnic differentials in socioeconomic conditions would attenuate the relationship between ethnicity and age at first sex.

• A variant of the socioeconomic explanation focuses on social conditions, such as single parenthood, that are particularly prevalent among certain ethnic and disadvantaged populations. This interpretation suggests that ethnic variation in age at first sex would be reduced if differentials in social conditions were taken into account.

• Yet another possibility is that different subgroups' sexual norms, attitudes and values—in particular, blacks' more tolerant attitudes with respect to early sexual activity and parenthood—explain the differences.

Furstenberg and colleagues find limited support for the first two explanations and stronger support for the one characterized by subgroup differences in attitudes and norms regarding sexual activity.

Few studies using nationally representative data have included Hispanics. Furthermore, although Hispanics are heterogeneous with regard to national origin, few national data sets contain samples large enough to allow for comparisons within Hispanic subgroups. One exception, an analysis of data from the National Longitudinal Survey of Youth, found that age at first intercourse varies between Mexican Americans and other Hispanics.[17] Other studies focusing on Hispanics of Mexican descent often used convenience or clinic samples, which reduced the generalizability of their findings.[18] However, an analysis of a population-based probability sample of Los Angeles adolescent females reported that U.S.-born Mexican Americans were

similar to non-Hispanic white young women in their timing of first intercourse, but that teenagers born in Mexico initiated sexual activity at older ages.[19]

Furthermore, few studies have comprehensively compared differences in age at first sex for both genders and across multiple ethnic groups. Although a recent analysis using data from the 1992 Youth Risk Behavior Survey (YRBS) estimated age at first sex by gender and ethnicity,[20] only three ethnic groups were compared: blacks, non-Hispanic whites and a heterogeneous grouping of Hispanics. Also, no variables other than ethnicity were included in the descriptive analysis. Finally, no statistical tests were performed to determine the significance of the association between gender, ethnicity and age at first sex.

The majority of studies that have examined both gender and ethnic effects on the timing of first intercourse have stratified the data according to gender,[21] thereby preventing any comparison of ethnic effects across gender (e.g., is the difference between blacks and whites similar among males and females?). The purpose of this article is to estimate the effects of youths' gender and ethnicity on their risk of first sexual intercourse. We test both the main effects of each on the risk of first sex and the extent to which the effects of gender are conditioned by adolescents' ethnicity. We also include family background characteristics known to be associated with age at first sex (family structure and socioeconomic status) to ascertain the extent to which the observed gender or ethnic differences are due to variations in family background.

Our data come from a population-based sample of Los Angeles County youths. Los Angeles is one of the largest and most ethnically, culturally and economically diverse counties in the country. According to the 1990 census, 37% of the population identified themselves as Hispanic, compared with only 9% nationwide. Approximately 11% of the county's population is Asian, compared with 3% nationally. Additionally, 33% of residents are foreign-born, compared with 8% nationally; half of these immigrants arrived in the 10 years prior to 1990.[22]

METHODS

The Survey

We analyze data from a longitudinal survey of stress and mental health conducted among a representative sample of Los Angeles County youths aged 12-17. The first round of the survey took place between October 1992 and April 1994, and the second between March 1994 and May 1995. The sample was selected using a census-based sampling frame and is therefore more diverse than a convenience sample or one drawn from a small number of schools. Yet its regional nature allows us to analyze gender and ethnic effects within a more uniform set of social and cultural contexts than would be possible using a national sample.

SAMPLE SELECTION AND FIELD PROCEDURES

Participants were selected from a multistage, area probability sampling frame of Los Angeles County, based on census tracts, blocks and households. County census tracts were stratified according to socioeconomic status, ethnicity and the proportion of households with children. A total of 49 tracts were selected, with the probability of selection proportional to size. Blocks were selected randomly within tracts, every

address on selected blocks was listed and household addresses were selected at fixed intervals with a random start.

Fieldworkers went door-to-door to determine whether an adolescent aged 12-17 was a permanent resident at the address. They ascertained the ages of household members before identifying the target ages, to avoid bias due to the selective omission of eligible persons as a means of avoiding participation in the study. In households that included two or more teenagers, the one whose birthday would occur soonest after the interview was selected. Consent was obtained from the adolescents and their parents.

Of the 13,925 household addresses sampled, 87% were screened for eligibility. The remainder were not screened for a variety of reasons: No one was home when fieldworkers made repeated visits (5%), the initial contact was refused (3%), the enrollment period ended before the household could be reached (2%), access was barred by a security system (2%) or other problems occurred (1%). Of the screened households, 12% contained an eligible adolescent—a slightly lower proportion than the 15% we expected on the basis of census data.

In a subsequent visit, initial interviews were completed with 877 adolescents—62% of those who were eligible. Because of time constraints, fieldworkers were unable to interview 13% of eligible adolescents. (Omitting this group raises the response rate to 71%.) Another 10% of eligible adolescents did not participate because their parents refused, 6% because they refused, 3% because the adolescent was not home any time an interviewer visited and 6% because of other reasons. For the second round of the survey, 675 (77%) of the original respondents were reinterviewed.*

Lay interviewers trained specifically for this investigation conducted each interview at the respondent's home or in a private setting of the teenager's choice. Interviews were conducted in English or Spanish, and the ethnicity of the interviewer was matched to the major ethnicity in the neighborhood. The Spanish questionnaire was a verified translation of the English version. Supervisory personnel randomly monitored interviews.

SAMPLE

Characteristics for the initial sample correspond closely to 1990 census data for gender and age. To adjust for some variations in age across ethnic groups, we weighted the sample to match the 1990 census distribution by ethnicity and to be evenly distributed by single year of age. Weights also adjust for variability in selection probabilities resulting from the presence of households with several eligible adolescents. The application of these weights compensates for threats to external validity inherent in teenagers' nonparticipation.

On average, the 877 adolescents in the sample were 14.5 years old, and they were about equally divided between males and females. We excluded a small number of respondents who reported having had their first heterosexual intercourse prior to age 11, because the circumstances with respect to sexual activity are unique for those who have sex at such a young age. The descriptive statistics are based on the weighted analytic sample of 870. For the multivariate analysis, results are based on the unweighted sample.

MEASUREMENT

Our dependent variable is the number of months from exact age 11 to first heterosexual intercourse. We obtained this information by asking respondents if they had ever had sexual intercourse and, if so, how many months ago they had first had sex. These questions were asked in both the original survey and the follow-up interview. We developed a small number of coding rules that accounted for the vast majority of discrepancies in reports between the two surveys.[†] All other variables are based on responses to the initial survey.

Given the sensitive nature of questions regarding sexual activity, we incorporated a number of steps to minimize potential biases. Procedures to maximize overall design validity and reliability included conducting interviews in private settings that the respondents found comfortable, training interviewers in techniques for handling potentially awkward or embarrassing questions, and having supervisors closely monitor interviewers. Also, the questions on sexual behavior were asked midway through the interview, after numerous sensitive questions had been asked about the adolescent's personal life, emotions, family and so forth. Furthermore, the survey content dealt primarily with stress and mental health, avoiding potential selection bias on the basis of prior sexual behavior.

The two primary independent variables of interest are gender and ethnicity. According to the conceptualization developed by O'Sullivan-See and Wilson,[23] ethnicity is embodied in shared beliefs, norms, values and preferences that vary together. We measured ethnicity by asking a set of questions regarding how respondents identify themselves. The first question was: "In Los Angeles, people come from many different cultural backgrounds. They may be Latino, Black, Asian, Native American, White or of some other ethnicity. With which one of these racial/ethnic groups do you most closely identify?" We also asked all respondents who did not identify themselves as Hispanic or Latino if they considered themselves to be of Hispanic, or Latino, origin. The first question proved sufficient to establish the respondent's ethnicity; only 24 additional teenagers identified themselves as Hispanic on the basis of the second question, and these respondents were included in the first category they mentioned.

In general, we expected blacks to report younger ages at first sex than whites, Hispanics or Asian Americans. In addition, we expected the effects of gender on age at first sex to depend on the youth's ethnicity. (For example, females may not be less likely than males to have sex in all ethnic groups.)

We also included several indices of youths' socioeconomic and family background. Family structure was coded into four categories: living with both biological parents, living with a single parent (in this sample, almost exclusively the mother), living in a stepfamily and other situations (for the most part, with family members other than parents). As with much past research, we expected to see higher rates of first sex among those living in a single-parent situation than among those living with both biological parents. The analysis also included mother's education (coded as high school dropout, high school graduate or at least some college) and household income (coded into quartiles).

ANALYSIS

Both the descriptive and the multivariate analysis were based on survival analysis techniques, for two reasons. First, we expected the risk of initiation of sexual activity to increase as adolescents get older. Second, since the majority of individuals in the sample were still very young at the time of the second interview, many still had not had sex by then (i.e., the dependent variable is right-censored).

We used Kaplan-Meier life tables to analyze the effects of each independent variable on the timing of first sexual experience. These estimates are nonparametric and are therefore not subject to biases due to violations of distributional assumptions of the underlying hazard. Since the number of events is quite small at later intervals, we used the generalized Wilcoxon test to examine homogeneity across the categories of covariates; we also examined homogeneity using the log-rank test.

The multivariate analysis was based on a proportional hazards model that does not assume any specific functional form for the baseline hazard.[24] However, one requirement of the model is that the hazard for each category of an independent variable be proportional to the others. We tested for proportionality by visually inspecting the log-log survival function plotted for every category of each independent variable.[‡] Exponentiating the coefficients gives the partial risk ratio for each category of every variable. The ratio measures the rate of transition to first sex among teenagers in a given category relative to those in a comparison category, other factors held constant.

RESULTS

Close to half of the respondents were Hispanic (Table 1); of these, 40% were of Mexican descent, 38% were born in Mexico and the remainder came from a variety of backgrounds (not shown). More than half of the respondents (58%) lived with both of their biological parents. Household income and maternal education were highly variable; the median household income was $27,382 (not shown).

Table 1. Percentage distribution of survey respondents, percentage who have ever had sex and median age at first sex, by selected characteristics, Los Angeles County (N=870)

Characteristic	% distribution	% who have had sex	Median age at first sex
Total	100.0	26.6	16.9
Gender			
Male	53.4	29.7	16.6***
Female	46.6	23.3	17.2
Ethnicity			
White	25.9	27.0	16.6***
Black	11.1	45.6	15.8
Hispanic	48.7	24.4	17.0
Asian American	10.7	14.2	18.1
Other	3.6	34.2	17.4
Family structure			
Both biological parents	57.9	19.4	17.6***
Single parent	26.0	35.9	16.4
Stepfamily	12.6	36.2	16.2
Other	3.5	44.4	16.6
Household income			
1st quartile	27.8	31.1	16.6
2nd quartile	21.6	26.1	17.5
3rd quartile	24.6	24.8	16.8
4th quartile	26.0	24.3	17.0

Mother's education (yrs.)			
<12	41.3	24.9	17.2
12	23.4	24.3	17.0
>12	35.3	28.7	17.0

*p<.05. **p<.01. ***p<.001. *Notes:* Percentage distribution is based on weighted N. Significance testing is based on Wilcoxon test for homogeneity across survival strata, using unweighted data.

Overall, the teenagers surveyed reported a median age at first intercourse of 16.9 years (Table 1). Males reported a significantly younger age than females (16.6 vs. 17.2). Significant ethnic differences also were apparent: Blacks reported the youngest median age at first intercourse (15.8), and Asian Americans the oldest (18.1). In addition, adolescents living with both biological parents reported a later median age at first intercourse (17.6) than adolescents living in any other family situation (16.2-16.6). There were no significant differences in the age at first sex according to household income or mother's education.

These bivariate findings provide preliminary evidence that gender and ethnicity each influence the timing of first sexual experience. However, these relationships express only the gross main, or average, effects. When we recomputed the medians for each gender-and-ethnicity combination, significant differences emerged across ethnic groups for each gender (Table 2). Among males, blacks reported the youngest median age at first sex (15.0); whites, Hispanics and members of other ethnic groups had similar, intermediate median ages (16.5-16.8); and Asian American males reported the oldest median age at first intercourse (18.1).

Table 2. Median age at first sex, by ethnicity, according to gender		
Ethnicity	Males	Females
White	16.6***	16.6*
Black	15.0	16.3
Hispanic	16.5	17.3
Asian American	18.1	
Other	16.8	

*p<.05. ***p<.001. The number of female respondents who had had sex was too small for calculation of a reliable median. Note: Significance testing is based on Wilcoxon test for homogeneity across survival strata,using unweighted data.

Age at first sexual experience did not vary as much by ethnicity for females, although we did find significant differences. White and black females reported younger median ages at sexual initiation (16.6 and 16.3, respectively) than Hispanics (17.3). Life-table medians could not be computed for Asian American or other females because too few of these women had had sex. We could, however, calculate that one-quarter of Asian American females had had sex by 16.4 years of age.

Several groups reported very similar median ages at first sex (about 16.5 years): white and black females; and white, Hispanic and other males. The two most striking deviations are the relative lack of sexual experience among Asian American youths, particularly females, and the comparatively early onset of first sex among black males (approximately 2-3 years earlier than among any females or other males). These findings offer some support for the hypothesis that the effect of gender on median age at first sex is dependent on ethnicity, and that the variation across ethnic groups is greater for males than for females.

To test for relative differences in the effects of the interaction between gender and ethnicity on the timing of first intercourse, we conducted two multivariate analyses, using proportional hazard techniques. In the first, we estimated the gross effects for each gender-and-ethnicity category; in the second, we estimated the net effects of each, controlling for differences in family background characteristics. (Teenagers in the "other" ethnicity category were excluded from the analysis because that category was small and very heterogeneous.)

Compared with white females, black males had a significantly higher rate of first sex (risk ratio, —Table 3).[§] On the other hand, Asian American males were less likely than white females to be sexually experienced (0.4). Both Hispanic and Asian American females had significantly lower rates of sexual activity than white females (risk ratios, 0.6 and 0.4, respectively).

Table 3. Regression coefficients and risk ratios from multivariate analyses indicating the effects of gender and ethnicity on timing of first sex, alone and controlled for background characteristics

Variable	Uncontrolled		Controlled	
	Coeff.	Risk ratio	Coeff.	Risk ratio
Ethnicity				
White females		1.000		1.000
White males	-0.327	0.721	-0.267	0.765
Black males	1.110***	3.033	1.035***	2.818
Hispanic males	0.111	1.118	0.169	1.184
Asian American males	-1.041*	0.353	-0.834	0.434
Black females	0.118	1.125	0.068	1.071
Hispanic females	-0.584*	0.557	-0.475	0.622
Asian American females	-0.882*	0.414	-0.661	0.516
Family structure				
Both biological parents		na		1.000
Single parent	na	na	0.538**	1.713
Stepfamily	na	na	0.791***	2.205
Other	na	na	0.548	1.731
Mother's education (yrs.)				
12		na		1.000
<12	na	na	-0.139	0.870
>12	na	na	0.115	1.123
Household income				
Upper three quartiles		na		1.000
1st quartile	na	na	0.221	1.248
N	838		838	
-2LL	2,606.35		2,579.61	
d.f.	7		14	
X2	57.45***		84.04***	

*p<.05. **p<.01. ***p<.001. *Notes:* The "other" ethnicity category was excluded because it was small and very heterogeneous. Mother's education is adjusted for mother's presence in the home. na=not applicable.

Adding family background characteristics to the calculations significantly improved

the fit of the model (goodness-of-fit chi-square, 26.74, p<.001) and reduced to nonsignificance the effects for Asian American males and females and for Hispanic females. These results suggest that part of the observed effect in the first regression analysis may be explained by family structure. Indeed, correlations between gender-and-ethnicity groups and family structure were significant for several of these groups (not shown).

For example, being a black male was significantly and negatively correlated with living with both biological parents, and was significantly and positively correlated with living in a single-parent or other type of household. Therefore, the reason that black males have first intercourse so young is partly that they are significantly more likely to be living in family situations that also increase their risk of becoming sexually active. Nevertheless, even when family characteristics were taken into consideration, black males initiated sexual intercourse relatively early.

Family structure was strongly associated with youths' risk of sexual activity, in the expected directions, even when ethnicity, gender and family socioeconomic status were taken into consideration. Confirming the findings of many prior studies, youths living with one parent had significantly higher rates of first sex than those living with both biological parents (risk ratio, 1.7). Youths living in stepfamilies also had elevated rates of first sex (2.2). Analyses performed separately for each gender yielded very similar results for males and females (not shown). The timing of sexual activity was not significantly influenced by the level of mother's education or of household income when gender, ethnicity and family structure were taken into account.[**]

We next made pairwise comparisons for each gender-and-ethnicity group. The risk ratios were calculated from those in the regression analysis and are computationally identical, which means that they are adjusted for family structure, mother's education and household income. Table 4 shows the results, arrayed as the upper half of a matrix. (The first row duplicates the results of the regression analysis including family background variables because white females are again the comparison group.) The columns show the risk ratios for each gender-and-ethnicity group relative to every other group (i.e., the numerator is held constant, and the denominator, or comparison group, changes).

Table 4. Risk ratios from pairwise comparisons of effects of gender and ethnicity on timing of first sex

Comparison group	White females	Black females	Hispanic females	Asian American females	White males	Black males	Hispanic males	Asian American males
White females	1.00	1.07	0.62	0.52	0.77	2.82***	1.18	0.43
Black females		1.00	0.58	0.49	0.72	2.64**	1.10	0.40
Hispanic females			1.00	0.84	1.24	4.55***	1.90***	0.69
Asian American females				1.00	1.48	5.42***	2.27*	0.83
White males					1.00	3.66***	1.53	0.56
Black males						1.00	0.42***	0.15***
Hispanic males							1.00	0.36*

Asian American males										1.00

*p<.05. **p<.01. ***p<.001. *Notes:* A risk ratio of 1.00 indicates the relevant comparison group, when reading along the rows. Risk ratios are adjusted for family structure, mother's education and household income. Bonferroni correction for multiple comparisons was performed.

The results confirm that with differences in family background characteristics considered, rates of first sex did not differ significantly by ethnicity among females. Ethnic differences were significant for males, however. Black young men had 3.7 times the rate of first sex of their white counterparts, and 2.5-5.0 times the rate of Hispanic and Asian American males (whose risk ratios were 0.4 and 0.2, respectively). In addition, black males initiated sex earlier than females of every ethnic group, and Hispanic males began sex earlier than Hispanic and Asian American females.

DISCUSSION

The unadjusted median age at first sex for this sample (16.9 years) is comparable to the nationwide median of 17.3 obtained from the 1992 YRBS.[25] In our sample, black males reported the youngest median age at first sex (15.0 years), and white and Hispanic males and white and black females all reported somewhat higher ages (around 16.5 years). Again, these estimates are close to those obtained from the YRBS. Also, the similarities in median ages at first sex for several groups concur with data indicating that gender and ethnicity differentials have been converging in recent cohorts of teenagers.[26] The teenagers in our sample were younger when first interviewed than those participating in the YRBS; however, because we have longitudinal data, we were able to analyze their sexual experiences at approximately ages 15-20, similar to the ages of the YRBS respondents, over slightly different calendar time.

The YRBS is the most appropriate data set to compare with our own because the nationwide survey included a contemporary sample of both males and females belonging to a variety of ethnic groups. However, our sample differs in some important ways. First, close to 80% of Hispanics in the Los Angeles sample were of Mexican origin; thus, respondents to our survey were more homogeneous with respect to country of origin than the national sample.

A major strength of our work is that we were able to analyze the experiences of historically underrepresented groups of youths that comprise some of the most rapidly increasing sectors of society.[27] For example, our sample provides some of the first community-based estimates for Asian American youths. However, because of the regional nature of this sample, we cannot make generalizations beyond youths living in Los Angeles County.

Compared with white females, black males in Los Angeles had a significantly higher rate of first sex (younger age at sexual initiation); Asian males and females, as well as Hispanic females, had significantly lower rates. However, family background factors were strong predictors of rates of first sex, as they have been in many other studies.[28] The protective effects observed for Hispanic and Asian American females could be explained by their differences in family structure: These young women were more likely to be living with both biological parents than were their white counterparts. Lauritsen, using data from the National Youth Survey, also found that ethnic

differentials for females disappeared when family background was included.[29] She concluded that differences between white and black females are linked to socioeconomic differences and that cultural explanations for these differentials may not be necessary.

Teenagers living with a single parent or in a stepfamily had significantly higher rates of transition to first sex than did those living with both biological parents. Several explanations for this observation have been set forth. Parenting behavior—in particular, parental control of youths—may vary by family structure.[30] In single-parent families, the absence of a second adult may contribute to the parent's difficulty in monitoring and controlling a teenager's activities. However, this factor would not explain why teenagers living in stepfamilies also have elevated rates of first sex.

Another possibility is that family structure captures the effects of family disruption, rather than of different parenting behaviors.[31] An examination of the impact of parental separation on youth outcomes found that young people whose parents separated had initiated sex earlier than teenagers whose parents stayed together.[32] Although our analysis did not specifically test these two explanations, our findings are more consistent with the family disruption argument.

Much previous work has involved separate analyses for gender and for each ethnic group. By including all gender-and-ethnicity groups in one analysis, we have been able to provide comparative estimates for rates of first sex across these groups. One of the most compelling findings is Asian American youths' relative sexual inexperience. Also striking is black males' young age at sexual debut. By contrast, once the differences in socioeconomic conditions across ethnicities are controlled, the ethnic differentials in women's rates of first sex are not significant;[33] furthermore, rates of first sex did not differ significantly among white, Hispanic and Asian American males. However, the nature of the relationship is somewhat different for the ethnic groups studied in our sample than in earlier studies.

Furstenberg and colleagues attempted to explain why rates of sexual activity were so much higher among disadvantaged and black youths than among their more advantaged and white peers.[34] Part of what is new in our analysis is that the protective effects of being a Hispanic or Asian female were reduced when family factors were included. In other words, rather than attempting to explain higher rates of sexual activity among nonwhites, we were actually accounting for the lower rates of first sex among nonwhite females in our samples when compared with white females. We found support for the "social conditions" hypothesis for ethnic differences among females.

On the other hand, we were not able to account for the significantly higher rate of first sex among black males (when compared with every other gender-and-ethnicity group), a finding consistently demonstrated in prior research.[35] The effect for black males diminished when family characteristics were included, but their rates of first sex were still 3-5 times as high as the rates for other groups. The analyses presented here are not exhaustive in their ability to test the competing hypotheses proposed by Furstenberg, but subgroup differences in norms and expectations regarding appropriate ages for sexual activity may be operating. Anderson reported that young black males view sexual activity as a "rite of passage" to manhood,[36] and other work has shown gender differences in the perceived opportunity costs of sexual activity.[37] A definitive

explanation remains elusive, however.

Among Hispanics, males reported rates almost twice those of females. Hispanic females may be reacting to somewhat more proscriptive cultural expectations regarding sexual activity (in particular, premarital sexual activity). In a study of Hispanic female sexuality, attitudes, beliefs and values (rather than demographic characteristics) differentiated females who had engaged in sex from those who had not.[38] Other research found that Mexican-born females had lower rates of sexual activity than U.S.-born females of Mexican descent.[39] These findings illustrate the importance of carefully considering subgroups of Hispanics with respect to their national origin and birthplace.

Adolescent sexual behavior is shaped by a number of interlinking forces that include (most directly) physical maturation and familial influences, as well as a network of more indirect forces, such as peers, school and community. Our findings demonstrate that gender and ethnicity are key factors that predict adolescents' risk of becoming sexually active. Better identifying and understanding the interplay between these individual-level characteristics and a variety of social and cultural contexts is necessary for programmatic developments.

For example, in California, statewide programs are being developed that address the multifaceted nature of adolescent sexuality and include "contextual factors."[40] Program components include youth development, media campaigns, educational interventions, male involvement initiatives and legislative reform efforts. Targeted research elaborating mechanisms by which larger social forces influence adolescent behavior, teamed with appropriate programmatic strategies and policies, may represent a potentially effective approach for addressing issues related to adolescent sexuality.

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*We explicitly tested for possible biases in the sample as a result of attrition. The two samples were not significantly different with regard to age, ethnicity, gender, family structure, household income, neighborhood type or age at first sex. In addition, there were no significant differences on the basis of potential design effects (e.g., date of interview).

†Most of the inconsistencies were within a 3-6-month window and were due to rounding in reporting (i.e., "heaping errors"). To minimize potential bias due to the sensitive nature of the subject, we selected the date of intercourse according to the earlier date reported and the level of honesty with regard to respondents' overall answers to questionnaire items as assessed by the interviewer.

‡The model is specified as follows:

$$\ln h(t) = \alpha(t) + \beta' X + \varepsilon$$

, where ln*h(t)* is the log-hazard at time *t*,

$$\alpha(t)$$

is the (unspecified) baseline hazard, *X* is a vector of relevant covariates (in this case, time-invariant),

$$\beta'$$

is a vector of estimates and

$$\varepsilon$$

is an error term.

§We chose white females as the comparison category for the sake of consistency with previous research. In doing so, however, we made no assumptions regarding any experiential basis for this coding.

**We coded mother's education and household income in a variety of ways for consistency with findings based on national data sets. However, since neither of these factors was significant in our data, we chose standard coding for mother's education and collapsed household income into two categories.