SELF-IDENTIFIED MULTIRACIALS AND SEXUAL DEBUT: A MOVE TOWARD EXPLANATIONS

Jamie Mihoko Doyle*
Population Studies Center
University of Pennsylvania
3718 Locust Walk
Philadelphia, PA 19104

Email: jmdoyle@sas.upenn.edu

* Paper submitted for consideration to the Annual Meeting of the Population Association of America. This research was supported by a grant from the NICHD (R01 HD38704-01A1; PI: Grace Kao). This research uses data from Add Health, a program project designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris, and funded by a grant P01-HD31921 from the National Institute of Child Health and Human Development., with cooperative funding from 17 other agencies. Special acknowledgement is due to Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Persons interested in obtaining data files from Add Health should contact Add Health, Carolina Population Center, (www.cpc.unc.edu/addhealth/contract.html).

SELF-IDENTIFIED MULTIRACIALS AND SEXUAL DEBUT: A MOVE TOWARD EXPLANATIONS

Jamie Mihoko Doyle

Abstract

Multiracial youth in the U.S. are believed to undergo struggles to attain a singular, isolate identity. This internal conflict is said to be related to deviant behavior, including early sexual debut. Yet explanations for why these patterns occur are known. Using three waves from the National Longitudinal Study of Adolescent Health, I use discrete time analysis to control for individual characteristics and parental influences and elucidate pathways for trends. Three findings are particularly salient. First, individual-level variables are chief predictors for first intercourse for Blacks, Native Americans, and Black-White multiracials. Second, I find that mixed-race adolescents tend to have earlier sexual debut relative to their single race counterparts, net of all controls. Lastly, physical attractiveness has independent effects in increasing the odds of first intercourse; however it does not explain racial differences. My results suggest that early sexual activity may indicate something more than deviant behavior for multiracial youth.

SELF-IDENTIFIED MULTIRACIALS AND SEXUAL DEBUT:
A MOVE TOWARD EXPLANATIONS

**** EXTENDED ABSTRACT ****

INTRODUCTION

Parade magazine's cover story titled, "The Changing Faces of America" depicts a portrait of seven children representing almost every shade of admixture in the racial spectrum. In popular press, multiracial children are presented as an icon of America's melting pot and an indicator of improved race relations. More specifically, many people believe the trajectory of U.S. racial categorization is heading toward one human race rather than mutually exclusive categories. Yet the interest in multiracials in social research does not stem from the broader, positive implications of their presence, but rather their maladjustment in a largely one-race society. In sociological literature, Robert E. Park (1928; 1931) and Everett Stonequist (1937) for instance, refer to multiracials as the "Marginal Men." They "live in between two worlds in both of which they are more or less a stranger." Along a similar vein, psychological research has focused on the impact of this marginality. These studies find that multiracials have higher rates of depression, anxiety, and lower self-esteem than single-race groups, which psychologists attribute to problems with racial identity formation (Gibbs 1987). Both of these perspectives predict for elevated risks of deviant behavior among mixed-race groups as compared to their singe-race counterparts.

Some researchers speculate that higher levels of sexual activity in adolesnce are one of the consequences of multiracial maladjustment. The two leading studies use Wave 1 of the National Longitudinal Study of Adolescent Health (Add Health). The first study, by David Rowe

(2002), finds that biracial Black and White respondents fall in-between single-race Black and single-race White adolescents in the mean number of sexual partners. In his conclusion he dissents environmental explanations (such as discrimination and social class), but instead advocates genetic differences for these patterns. However, anthropological, sociological, and demographic researchers repeatedly discredit the racial genetics argument as a basis for causation (Wlikinson and King 1987; Frank 2001; Zuberi 2001a, 2001b). Nevertheless, Rowe does shed some insight on general trends in sexual behavior of mixed racial youth, in spite of his weak reasoning.

A more nuanced approach and stronger theoretical backbone comes from a study of health and behavioral risks. Udry, Li, and Hendrickson-Smith (2003) find that those who self-identify with more than one race are at higher risk of engaging in intercourse in high school than any single-race group, which includes single-race Whites, Blacks, Native Americans, and Asians. The authors hypothesize that the stress involved in identity formation for multiracials may explain these trends. Since their focus was on a holistic assessment of heath and behavioral risks of multiracials, they did not conduct formal tests of this theory.

Several problems accompany both studies. First they assume that identity, in itself, is a crucial, differentiating factor separating mixed-race persons from their single-race counterparts. Forthcoming research finds that interracial assortative mating shapes the characteristics of multiracial families (Gullickson 2004), which produces a socioeconomic profile that is intermediate between single-race families with a similar ancestral overlap (Farley 2002 ; Harris 2002). Furthermore, increases in education are known to fuel interracial pairings (Qian 1997; Fu 2001). That is, since interracial marriage is not a random process (Mare 1991) and increases in

education tend to promote interracial contact, we can expect shared socio-demographic environments among mixed-racial families. Second, both studies are cross-sectional and only rely on Wave 1 of Add Health. Exposure and outcome are measured at the same point in time, therefore the direction of causation in these studies is difficult to establish. Lastly, and most importantly, both researchers do not empirically test why these differences occur. Rowe utilizes raw means for each racial group, while Udry et al. use unadjusted odds ratios to assess risks. Clearly, there is an unmet need to move forward toward *explanations* rather than just *speculations*.

The objective of this study is to begin disentangling the reasons why multiracials differ in sexual activity by examining the timing of sexual debut. This analysis moves beyond previous research in four ways. First, I utilize all three Waves of Add Health that are currently available. Since data from the third Wave recently became available, previous studies could not take advantage of its longitudinal design. Hence, the current study has the advantage of assessing the exposures before the event actually occurs. Second, I include various confounding variables in attempt to develop a more refined picture as to why multiracials are different from single-race groups. Third, I disaggregate multiracials into three groups, which were chosen based on their relative size: Black-White, Asian-White, and Native American-White. While Rowe looked only at Black-White biracials, Udry et al. amalgamated all multiracials into one group. In other words, Rowe neglected other interracial combinations, and Udry et al. ignored the heterogeneity of mixed-race sub-groups (Doyle and Kao 2004). Lastly, this analysis employs discrete time analysis with explanatory variables in an attempt to move explanations for differences in sexual behavior forward.

DATA

This analysis is based on Waves 1 through 3 of the National Longitudinal Study of Adolescent Health (Add Health), which is a nationally representative sample of 20,743 students from 80 high schools in the U.S. The first Wave was conducted from 1994-1995, the second in 1996, and the third in 2000-2001. This study takes advantage of the large overall sample size, which enables the estimation of stable statistical results for multiracial subgroups that are a relatively small fraction of the total U.S. population. I identify 592 multiracials, which includes 150 Black-Whites, 143 Asian-Whites, and 299 Native American-Whites. Other multiracial groups were too small to analyze them separately.

Since Add Health is longitudinal, several issues regarding loss to follow-up should be addressed. First, there is general attrition that is common in this type of study design. 2,142 are lost between Waves 1 and 2, and 2,765 are lost between Waves 2 and 3. These observations are censored at their respective attrition times, and only contribute person-time for the time they are at risk. From the 20,747 observations available in Add Health, we only use 18,062. The remaining 2,685 are excluded since they are mostly Hispanics, and do not include the racial groups that we consider for this study. 39,961 person-time observations are produced. Second, Add Health does not interview respondents at Wave 2 respondents who were seniors at Wave 1. Excluding this group would reduce the number of biracial Black-Whites by 11%, Asian-Whites by 5%, and Native American-Whites by 5 %. In order to retain the highest number of multiacials possible, seniors are included in the analysis.

Beyond sociodemographic characteristics that are standard in most analyses, the choice of other variables requires some clarification. A staple variable is *exposure*, which I measure by

whether the respondent is in a romantic relationship in Wave 1. Another factor gaining attention is *attitudes toward sexual activity*, which I measure by religious attendance, respondent's view of mother's approval of sexual acts, and whether a parent has discussed sex with the respondent. Three particularly unconventional variables I include are what I call *demand-oriented phenotypic traits*. These include relative physical development (at Wave 1), body mass index, and physical attractiveness (the latter two are time-varying covariates). It is hypothesized that the proclivity of multiracials toward early sexual activity may perhaps be due to the exotic allure attached to mixed-race persons, which are popularized by the media, (King 2001) rather than inherent tendencies toward deviance. By incorporating demand-oriented phenotypic traits, this analysis may help tease out the intricacies of sexual behavior among mixed-race adolescents.

Dependent Variable: Onset of First Intercourse

Age at first intercourse helped to construct the dependent variable. Add Health asks respondents at each wave "Have you ever had sexual intercourse?" If the respondent elicits a positive response ("yes"), a follow-up question asks, "At what age did you first have intercourse?" Since the second question was asked in both Waves 1 and 3, it was particularly useful in dealing with the seniors at Wave 1 who were not interviewed at Wave 2. The event of interest is sexual debut among those who were virgins at wave 1. If the age at first intercourse they report is between the ages that they were (or were supposed to be, in the case of seniors) at Wave 1 and Wave 2[1], the duration variable is coded as "1". They "survived" one Wave being a virgin. A similar coding was operationalized between Waves 2 and 3, with duration equal to 2 if they "survived." Observations are censored after the third wave.

[1] More specifically: Age at Wave 1< Age at first intercourse $\leq$ Age at Wave 2

Some respondents do not remember the year or age that they first had intercourse or reported a sort of "expected" date of first intercourses, which introduces two problems. Inconsistencies in dates reported across surveys are evidence of this problem. When this occurs, I use the reported age most proximate to the corresponding Wave. Take, for example, a male respondent who is aged 15 at Wave 1, 16 at Wave 2, and 20 at Wave 3. At Wave 2 he reports having intercourse at 14, but at Wave 3 he reports age 16. Wave 2 is more proximate wave to the particular age reported, so age 14 is recorded. Secondly, some respondents report having sex at a later time than their actual age, perhaps "anticipating" first intercourse by that time. Valid responses are only those that are less than or equal to the student's age at the time of the survey.

Independent Variables

Individual characteristics, which include physical maturity, age, race, socioeconomic status, religiosity (Meier 2003), and dating behavior, are all well-established confounders for early sexual debut (Udry 1979; Morris, Jenkins, and Benjamin1983; Zelnik, Kantner, and Ford 1981; Newcomer and Udry. 1983). Physical maturity is self-reported by the respondent, and is coded as a variable with three categories: "I look younger than most," "I look average compared to others," and "I look older than most." The last category is the reference. Age and race are also self-reported by the respondent. Age is a time-varying covariate in the model, with measurements at Wave 1, Wave 2, and Wave 3. Religiosity is an additional time-varying covariate coded as follows: "Attends religious services once per week or more," "Attends religious services less than once a week," and "Never attends." Dating behavior is captured by one dummy variable indicating whether the respondent had a romantic relationship within the last 18 months at Wave 1.

Variables for familial influences draw from recent studies of sexual behavior using Add Health. Perceptions of maternal permissiveness of sexual behavior by respondent (Jaccard and Dittus 2000) and discussions with children about sex are known to influence onset of first intercourse (Hayes 1987). Perceptions of permissiveness are reported by the respondent and are categorized as follows: disapproves, neither approves nor disapproves, and approves. Discussions with children about sex are taken from the parent questionnaire which asks," How much have you talked to [respondent] about sex?" which I code as a dichotomy: "not at all" and otherwise. Maternal education is reported by the respondent to the parent questionnaire, which is usually the biological mother.

At each wave, Add Health asks the interviewer a battery of questions about the respondent. I utilize the question "How physically attractive is the respondent?" I code this as unattractive, average, and attractive. This may be an imperfect measure of physical attraction, seeing as respondents are in their teens, and interviewers tend to be adults. However, no other study (to my knowledge) collects a nationally representative sample of multiracial adolescents that also incorporates measures of beauty or attractiveness. So imprecision is accepted due to the lack of alternative data resources.

Special Considerations: Racial Coding

This study utilizes an eleven-category racial/ethnic scheme. Add Health asked respondents at Wave 1, "Are you of Hispanic or Spanish origin?" and "What is your race? If you are of more than one race, you may choose more than one." Single-race Whites, Blacks, Asian, and Native Americans are identified if they answered, "no" or "don't know" to the Hispanic

origin question, and if only one race was selected on the survey. "Hispanics" refer to those who responded, "yes" to the Hispanic origin question, regardless of what race was also selected. All students identified as multiracial in this study are non-Hispanic. Indeed, Hispanics can also be multiracial. However, in order to simplify the analysis and prevent an unwieldy number of racial/ethnic combinations, the analysis is restricted to non-Hispanic multiracials. If a respondent chose only two races, we define them as multiracial. Not all possible permutations of multiple race categories are considered. I observe only the groups with the highest number of respondents.

METHODS

The models are structured in a three-dimensional sociological framework. First, *individual characteristics* are at the core and the focus of the analysis. However, respondents are nested within, and are influenced by *families*. Even beyond families, individuals are influenced by a broader *society*. My analysis, therefore, is as follows. First, Model 1 includes only race to assess the risk of intercourse for each group without controlling for any other factors. In Model 2, I include individual level characteristics. This group of variables consists of: gender, age, body mass index (BMI)[2], religious attendance, whether respondent is in a relationship, and relative physical development. Model 3 captures familial influences, such as maternal education (a measure of socio-economic status), whether the parent has discussed sex with their child, and whether the respondent perceived parental approval of sexual behavior. In the final model, I include a measure of societal influences by using the interview's rating of the respondent's physical attractiveness.

[2] BMI is measured by [(Weight in pounds)/(Height in inches)^2]*703

All models are estimated by PROC GENMOD with the repeated statement option to account for the clustering within schools, and Grand Sample Weights are added to correct for the Add Health sampling design.

RESULTS

Descriptive Statistics

Table 1 displays the descriptive statistics of respondents by race. Several pronounced findings emerge from these data. First, biracial Black-White[3] adolescents have the highest percentage of college-educated mothers, which even exceeds that of single-race Whites at 54%. Asian-White biracials also surpass single-race Whites at 50%, which is a percentage comparable to Asians. Single-race and mixed race Native Americans, on the other hand, have the highest percentage of mothers with less than high school education[4]. Secondly, the three multiracial groups considered have the highest percentage of mothers who have talked to them about sex with all groups above 80%. This pattern may perhaps partially explain previous findings by Udry et al.

[Table 1 about here]

Lastly, and most interestingly, we consider two factors relating to as *demand-oriented phenotypic traits.* Recall that these characteristics include physical maturity, BMI, and physical attractiveness. When looking at the distributions for physical attractiveness, multiracials have the highest proportion of respondents scored as "attractive" by interviewers, with the highest percentage being among Black-White biracials at 60%. Among single-race groups, Whites have

[3] Those who self-identify both as non-Hispanic Black and non-Hispanic White.
[4] Since Add Health over sampled for Blacks with college-educated parents, and number displayed come from un-weighted statistics, these results may be study design effects. Weights to correct for this are incorporated in regression models.

the highest percentage at around 50%. Another example relates to relative physical maturity. Native American-White and Black-White biracials rate themselves higher, on average, on relative physical development than any other group at 45% and 52%, respectively. Singe-race Whites trail behind the aforementioned groups at 40%.

Discrete Time Models

Although patterns in the descriptive statistics are relatively explicit, my aim is to elucidate the extent to which these factors influence the risk of first intercourse during adolescence. Table 2 displays results from the regressions in the form of odds ratios. From Model 1 (baseline), we can see that--with the exception of Asian-Whites—multiracials have high risks of intercourse relative to Whites. Black-Whites, for instance, the odds for intercourse are 74% higher than Whites, which is a risk profile that is more similar to single-race Blacks at 71%. Native American-Whites have a higher odds than single-race Native American and Whites to have intercourse during the three Waves of data collection. Asians are, by far, the least likely to abdicate their virginity during this period (odds ratio=0.62).

It would be interesting to know how much of these differences are due to individual characteristics that are beyond racial attributes. After adding the respondent's characteristics to Model 1, the disparity in intercourse risk compared to Whites widens for all groups, increasing the risk for all except for single-race Asians. For Black-Whites and single-race Blacks, their odds ratios elevate substantially and to similar levels. They are more than two and a half times more likely than single-race Whites to have their sexual debut during the three Waves.

This trend suggests that differences in distributions of individual-level characteristics significantly mediate the differences among these groups. If we juxtapose findings from the

descriptive table, one can conjecture that religious attendance for Blacks may be protective, as evidenced by the proportion that attend religious services once per week or more (46% at Wave 1). Therefore, after taking this factor into account, the disparity between Black and White widens. The spike in odds for Black-Whites, on the other hand, could be explained by a different phenomenon: exposure. Just as 60% are rated as attractive by interviewers, 61% of biracial Black-Whites are involved in romantic relationships at Wave 1. When taking into the opportunity to have sexual intercourse, again, the relative gap compared to Whites broadens.

Model 3 incorporates familial characteristics. While the coefficients for Black-White and single-race Black biracials responded similarly to the addition of individual characteristics, their patterns begin to diverge in Model 3. For instance, while family characteristics appear to help explain away the Black-White disparity, pushing the odds closer to unity with Whites, the odds for Black-White biracials elevate once again. A similar change is observed among single-race Asians, although to a lesser degree. Since both Asians and Black-Whites exhibit similar socioeconomic characteristics (as exhibited by 58% having a college educated mother for both groups), after taking them into account, Asians drift closer to Whites in the risk of sexual intercourse, while Black-Whites take the position as the adolescents at the highest risk out of all groups considered. Other minority groups, such as mixed-race Native American-White and single-race Black and Native Americans experience attenuation in risk after family-level variables are considered.

The final model particularly differentiates this analysis from other analyses. Model 4 incorporates a measure of physical attractiveness, which is (again), rated in a three point scale: unattractive, average, and attractive. Interestingly, in spite of multiracial groups (Black-Whites, in particular) having the highest percentages of an “attractive” rating, adding physical

attractiveness marginally effects their coefficients. Net of all controls, Black-Whites persistently experience the highest odds for sexual debut compared to Whites, while single-race Asians have the lowest.

CONCLUSION

Virginity is often lost in the transition from childhood to adulthood. The decision to abdicate it (particularly early on) move beyond proclivities toward deviance and are driven by more factors than race alone since it is only an attribute. Instead of attempting to intuitively piece together a story for why some multiracial groups experience higher risks of sexual behavior through the flatness of cross-sectional rates, I introduce the depth of time and the breadth of explanation. Discrete Time analysis using nationally representative, longitudinal data enabled the incorporation of explanatory variables and accounted for the timing of first intercourse. Furthermore, survival analysis allows the utilization of time-varying covariates, such as age, BMI, religious attendance, and more, painting a more realistic picture of the dynamic mechanisms of events such as sexual debut.

Indeed, the current study only begins to unravel the complexity of sexual activity. Three findings are particularly salient, and provide some explanation for the observed trends. First, individual-level variables are chief predictors, as evidenced by the striking increase in the risk for intercourse for groups such as Blacks, Native Americans, and Black-White multiracials. Second, these results are partially consistent with the study by Udry et al., which finds that mixed-race adolescents tend to have elevated risks of sexual debut relative to their single race counterparts even net of individual characteristics, socioeconomic status, and more. Lastly, while physical attractiveness does have independent effects in increasing the odds of intercourse, it has marginal influences on racial differences.

One trend that warrants further exploration is the substantially elevated odds of first intercourse for biracial Black-Whites as compared to Whites, net of all controls. With their relatively high percentages of "attractive" rating for physical allure and with an overwhelming majority involved in romantic relationships by the first wave (an indicator of sexual opportunity or "exposure"), one might suspect an elevated risk for first intercourse. However, even after taking these factors into account, they persistently have the highest odds. In addition, they also share a similar socioeconomic environment to Asians, as exhibited by the 58% who have a college educated mother. This suggests that sexual activity may indicate something more than deviant behavior concentrated among socio-economically disadvantaged, urban youth. Perhaps researchers need to retrofit what constitutes "deviance" in light of evolving societal norms. Clearly, researchers need to move further beyond the realm of *speculations* and advance toward *explanations*.

Literature Cited

1. Doyle J.M., Kao G. Multiracials, social integration, and race relations. Annual Meeting of the American Sociological Association. 2004.

2. Farley R. Race Reporting in the Census of 2000: How Do Multiracial Groups Compare to Monoracial Groups on Key Characteristics? 2002. Ann Arbor, Michigan, University of Michigan. PSC Research Report.

3. Frank R. 2001. A Reconceptualization of the Role of Biology in Contributing to Race/Ethnic Disparities in Health Outcomes. *Population Research and Policy Review* 20(6):441-55

4. Fu VK. 2001. Racial Intermarriage Pairings. *Demography* 38(2):147-59

5. Gibbs JT. 1989. Identity and marginality: Issues and treatment of biracial adolescents. *American Journal of Orthopsychiatry* (57):265-78

6. Gullickson AO. The Interracial Context of Educational Partnering within Marriage . Annual Meeting of the Population Association of America. 2004.

7. Harris DR. 2002. Does it matter how we measure? Racial classification and the characteristics of multiracial youth. In *The New Race Question: How the Census Counts Multiracial Individuals,* ed. Perlmann J, Waters MC, 62-101 pp. New York, New York: Russell Sage Foundation. 62-101 pp.

8. Hayes CD. 1987. editor. In *Risking the Future: Adolescent Sexuality, Pregnancy, and Childbearing*, Washington, DC: National Academy Press.

9. Jaccard J, Dittus PJ. 2000. Adolescent Perceptions of Maternal Approval of Birth Control and Sexual Risk Behavior. *American Journal of Public Health* 90(9):1426-30

10. King RC. 2001. Mirror, mirror on the wall: Mapping discussions of feminism, race, and beauty in Japanese American beauty pageants. In *The Sum of Our Parts: Mixed Heritage Asian Americans*, ed. Williams-Leon T, Nakashima CL, 163-171. pp. Philadelphia, PA: Temple University Press. 163-171. pp.

11. Mare RD. 1991. Five Decades of Educational Assortative Mating. *American Sociological Review* 56(1):15-32

12. Meier AM. 2003. Adolescents' Transition to First Intercourse, Religiosity, and Attitudes About Sex. *Social Forces* 81(3):1031-52

13. Park RE. 1928. Human migration and the Marginal Man. *American Journal of Sociology* 33: 881-92

14. Park RE. 1931. Mentality of racial hybrids. *American Journal of Sociology* 36:534-51

15. Qian Z. 1997. Breaking the Racial Barriers: Variations in Interracial Marriage Between 1980 and 1990. *Demography* 34(2):263-76

16. Sieving RE, Mcneely CS, Blum RW. 2000. Maternal Expectations, Mother-Child Connectedness, and Adolescent Sexual Debut. *Archives of Pediatrics & Adolescent Medicine* 154(8):809-16

17. Stonequist EV. 1937. *The Marginal Man: A Study in Personality and Culture Conflict* New York: Russell and Russell, Inc.

18. Wilkinson DY, King G. 1987. Conceptual and Methodological Issues in the Use of Race as a Variable - Policy Implications. *Milbank Quarterly* 65:56-71

19. Zuberi T. 2001. One Step Back in Understanding Racial Differences in Birth Weight. *Demography* 38(4):569-71

20. Zuberi T. 2001. THICKER THAN BLOOD: How racial statistics lie. Minneapolis, Minnesota: University of Minnesota Press.

Table 1: Percentage Distribution of Sample Characteristics by Respondents' Race, Un-weighted Estimates*

	White	Black	Asian	Native American	Black and White	Asian and White	Native American and White
Sample Type							
Present in All Waves	6,874	2,361	271	146	81	79	166
Loss After Wave 1	1,321	571	161	22	18	15	34
Loss After Wave 2	1,753	695	169	39	38	26	45
Seniors	2,006	777	271	33	13	23	54
Total N	**11,954**	**4,404**	**872**	**240**	**150**	**143**	**299**
Incident Cases of Sex	**5,842**	**1,613**	**696**	**119**	**62**	**64**	**133**
Sex [b]							
Male	49.68	47.84	52.61	48.33	47.33	47.55	52.17
Female	50.32	52.16	47.39	51.67	52.67	52.45	47.83
Age (Wave 1)[a]	16.1	16.1	16.6	16.0	15.9	15.9	16.0
	(1.7)	(1.8)	(1.6)	(1.7)	(1.8)	(1.7)	(1.7)
Body Mass Index (BMI)[a]							
Wave 1	22.3	23.2	21.9	24.0	22.7	22.0	23.0
	(4.3)	(4.7)	(4.3)	(5.8)	(4.3)	(4.7)	(5.1)
Wave 2	22.7	23.7	22.2	24.7	23.0	22.1	23.4
	(4.5)	(5.0)	(4.5)	(4.5)	(4.5)	(4.8)	(5.3)
Wave 3	26.2	27.3	25.3	28.8	26.7	25.8	27.2
	(5.9)	(6.8)	(5.8)	(5.8)	(5.8)	(6.0)	(6.0)
Religious Attendance [b]							
Wave 1							
Once per week or more	33.85	46.4	45.84	36.25	38	36.36	29.43
< Once per week	38.31	34.36	31.94	28.33	34	27.97	31.77
Never	12.67	7.13	8.09	14.58	10.67	13.99	16.72
Wave 2							
Once per week or more	23.82	33.29	30.46	24.58	30	23.78	16.72
< Once per week	27.39	23.93	21.34	25	28.67	20.28	24.08
Never	9.48	4.61	6.77	10.42	6.67	11.19	12.37
Wave 3							
Once per week or more	10.97	18.1	18.84	8.33	10	6.99	9.36
< Once per week	41.19	39.76	38.56	35.42	30	37.06	37.46
Never	21.72	12.58	17.73	30	22.67	27.27	26.09
Romantic Relationship in the Last 18 Months? [b]							
No	41.68	48.21	56.73	48.33	38.67	46.15	38.13
Yes	57.8	51.07	42.6	51.67	61.33	53.85	61.87
Relative Physical Development [b]							
I look younger than most	18.04	28.75	28.92	27.08	23.33	27.27	19.06
I look average compared to others	39.89	32.99	46.28	32.08	30	39.86	28.43
I look older than most	40.73	36.38	23.18	40	45.33	30.77	51.17

( ) are standard deviations to the displayed means

[a] Reported are means

[b] Reported are column percents

Table 1: Percentage Distribution of Sample Characteristics by Respondents' Race, Un-weighted Estimates*

	White	Black	Asian	Native American	Black and White	Asian and White	Native American and White
Mother's Education [b]							
< High School	14.91	13.76	15.76	32.67	13.67	12.21	21.67
High School	44.9	41.47	26.15	39.11	28.06	32.82	42.97
High School +	40.19	44.76	58.09	28.22	58.27	54.96	35.36
Has Parent Talked About Sex With Respondent? [b]							
No	6.53	6.1	28.87	12.56	2.31	6.35	2.94
yes	93.47	93.9	71.13	87.44	97.69	93.65	97.06
Perception of Mother's Approval of Sexual Behavior [b]							
Disapproves	80.93	72.69	87.34	76.5	75.69	80.15	71.11
Neither	16.29	21.38	10.76	20.74	20.83	18.38	26.3
Approves	2.78	5.94	1.9	2.76	3.47	1.47	2.59
Physical Attractiveness [b]							
Wave 1							
Unattractive	6.46	7.13	4.93	7.92	4	3.5	8.36
Average	42.66	49.82	45.7	49.17	35.33	40.56	40.13
Attractive	50.8	42.85	48.27	41.67	60	55.94	51.51
Wave 2							
Unattractive	3.81	3.13	3.24	6.67	2.67	4.2	6.35
Average	31.29	33.65	32.16	38.75	28	30.07	30.77
Attractive	36.99	32.38	31.94	30.83	48	39.16	33.44
Wave 3							
Unattractive	4.81	5.47	5.22	9.58	3.33	2.8	6.02
Average	33.34	35.31	34.07	36.25	24	25.87	39.8
Attractive	36.05	30.34	36.42	28.75	35.33	42.66	27.76

( ) are standard deviations to the displayed means
[a] Reported are means
[b] Reported are column percents

Table 2: Hierarchical Discrete Time Models with Onset of First Intercourse as the Event, Weighted Estimates Reported as Odds Ratios

Outcome	Onset of First Intercourse			
	Model 1	Model 2	Model 3	Model 4
Intercept (from parameter estimates)	-0.60	-9.64	-8.95	-9.35
Race (non-Hispanic)				
[White]				
Black	1.71*	2.89*	2.50*	2.51*
Asian	0.62*	0.52*	0.57*	0.57*
Native American	1.20*	1.31	1.15	1.14
Black and White	1.74*	2.57*	2.88*	2.86*
Asian and White	0.88	0.82	0.89	0.88
Native American and White	1.44*	1.57*	1.41*	1.42*
Gender				
[Male]				
Female		0.99	0.05	0.03
Age[1]		1.62*	1.64*	1.64*
Body Mass Index (BMI)[2]		0.99*	0.99*	0.99
Religious Attendance[3]		1.62*	1.53*	1.54*
Romantic Relationship (Wave 1)				
[No]				
Yes		3.39*	2.82*	3.00*
Physical Development (Wave 1)				
[I Look Older Than Most]				
I look Younger Than Most		0.70*	0.73*	0.74*
I Look Average		0.70*	0.70*	0.71*
Mother's Education				
[High School]				
< High School			1.12*	1.13*
High School +			0.74	0.73
Has Parent Talked About Sex With Respondent?				
[Yes]				
No			0.82*	0.82*
Perception Of Mother's Approval Of Sexual Behavior				
[Approve]				
Disapprove			0.46*	0.46*
Neither Approve nor Disapprove			1.32	1.32
Attractiveness[4]				1.15*
Number of Observations	39961	30044	23836	23786
Log-Likelihood	-3E+07	-17729397	-1E+07	-13879156
X2		26831048	8E+06	58898

[1] Age as a time-dependent covariate in years

[2] BMI is time-varying continuous variable. Calculated by (weight/ (height in inches)^2)*703. BMI <18.5 is considered underweight, 18.5-24.9 is normal, 25.0 to 29.9 is overweight, and BMI > 30 is obese.

[3] Religious Attendance is a time-varying categorical variable. 1=Attendance once per week or more, 2= less than once per week, 3=Never

[4] Attractiveness is a time-varying covariate. 1= Unattractive, 2=Average, and 3= Attractive

* p<0.05