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Black-White Differences in Attitudes Related to Pregnancy among Young Women[1]

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Abstract

In this paper we use newly available data from the Relationship Dynamics and Social Life (RDSL) study to compare a wide range of attitudes related to pregnancy for 961 Black and white young women. We also investigate the extent to which race differences are mediated by, or net of, family background, childhood socioeconomic status, adolescent experiences related to pregnancy, and current socioeconomic status. Black women are less positive, in general, than white women, toward young non-marital sex, contraception, and childbearing, and have less desire for sex in the upcoming year. This is largely because Black women are more religious than white women, and in part because they are more socioeconomically disadvantaged in young adulthood. However, in spite of these less positive attitudes, Black women are more likely to expect sex without contraception in the next year, and to expect more positive consequences if they were to become pregnant, relative to white women. This is largely because, relative to white women, Black women have higher rates of sex without contraception in adolescence, and in part because they are more likely to have grown up with a single parent. It is unclear whether attitudes toward contraception and pregnancy preceded or are a consequence of adolescent sex without contraception. Some race differences remain unexplained – net of all potential mediators in our models, Black women have less desire for sex in the upcoming year, but are less willing to refuse to have sex with a partner if they think it would make him angry, and expect more positive personal consequences of a pregnancy, relative to white women. In spite of these differences, Black women's desires to achieve and to prevent pregnancy are very similar to white women's desires.

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Keywords

Attitudes; Sex; Contraceptive Use; Pregnancy; Race

Introduction

The unequal distribution of teen and unintended pregnancies by race is an important health-related disparity, alongside others, including infant mortality, life expectancy, and chronic disease (e.g., Williams and Jackson 2005). Relative to white women, Black women have earlier first births (age 21 versus 24) and have larger families (2.4 versus 2.2) than white women (Martinez et al. 2012: Tables 6 and 7). The teen pregnancy rate is more than twice as high for Black women (43.9 per 1000) than for white women (20.5 per 1000) (Martin et al. 2013: Table A). The Black-white disparities in unintended pregnancy are large – Black women evaluate 69% of their pregnancies as unintended, while the corresponding number for white women is 42% (Finer and Zolna 2014), and the unintended pregnancy rate for Black women is more than double (92 per 1000) the rate for white women (38 per 1000) (Finer and Zolna 2014). The abortion rate is more than three times higher for Black teens (44.3 per 1000) than for white teens (13.8 per 1000) (Kost et al. 2010: Table 1.0).

The U.S. Department of Health and Human Services, in its Healthy People 2020 goals, has identified the reduction of unintended pregnancy as a key nationwide health improvement priority. Understanding the substantial racial variation in unintended pregnancy is fundamentally important for its overall reduction, given the disproportionate share that occurs to Black women. But the Black-white disparity in unintended childbearing is puzzling – why do Black women have so many more pregnancies that they evaluate as unintended, relative to white women? This paper contributes to our understanding of this question, by assessing Black-white differences in pregnancy desires within the context of other attitudes related to pregnancy.

We focus on a particularly important period in the life course: the transition to adulthood. Although the *proportion* of pregnancies that is unintended is highest in the early teen years (e.g., 98% for those under 15, 89% for 15-17 year olds), the highest *rates* of unintended pregnancy are concentrated in the late teens and early twenties. The rate per thousand for age 15-17 is 42; age 18-19 is **105**; age 20-24 is **101**; and age 25-29 is 69 (Finer and Zolna 2011). The data we use here – from the Relationship Dynamics and Social Life (RDSL) study – is based on a sample of 18 and 19 year olds who are followed into their early twenties.

We focus on an unusually large set of attitude measures, drawn from 34 distinct questions asked of 961 young women in the RDSL. Other sources of survey data on the transition to adulthood, such as the National Longitudinal Study of Adolescent Health (AddHealth), include many fewer measures of attitudes. Race differences in pregnancy-related attitudes – toward sex, marriage, contraception, premarital childbearing, etc. – have been discussed in the qualitative literature (e.g., Anderson 1990; Burton 1990; Edin and Kefalas 2005; Levine 2013; Stack 1974), but little empirical research has systematically examined race differences in attitudes using population-based samples. (For important recent exceptions see Cherlin et

al. 2008 and Rocca and Harper 2012, discussed in the text below. Also see South 1993, discussed below). Previous research about race differences in pregnancy desire itself has been somewhat inconsistent, sometimes finding that Black women have more desire for pregnancy, or sometimes more ambivalence than their white peers (Abma et al. 2010; Jaccard et al. 2003; Schwarz et al. 2007).

Prototype Willingness Model

We focus on general attitudes, individual desires and expectations, and willingness to engage in unplanned or undesired behaviors. As shorthand, we refer to all four concepts as "attitudes." These concepts are drawn from the Prototype-Willingness model, a dual-processing model developed by Gibbons and Gerrard (1997) in part to explain adolescents' risky behavior, such as sex without contraception. In this model, decisions are made in two ways. One decision pathway, similar to the Theory of Reasoned Action (Ajzen and Fishbein 1980), is analytic and responsive to general attitudes and desires, which in turn influence individual expectations, intentions, and behavior. This is "deliberate" reasoning. The second decision pathway in the dual model is reactive, or "automatic". The Prototype-Willingness model incorporates the concept of behavioral willingness, which is an indicator of openness to risky behaviors, to reflect this second pathway, to predict whether even those individuals who are not positive toward the risky behavior, do not want the risky behavior, and do not expect the risky behavior will nonetheless engage in the risky behavior in some situations.

Proximate Determinants of Pregnancy: Sex and Contraception

We investigate race differences in these concepts from the Prototype Willingness model in the domains of sex, contraception, and pregnancy. Attitudes, desires, expectations, and willingness in these domains may affect pregnancy via their connection to pregnancy desires, or via sexual and contraceptive behavior. Desire to avoid pregnancy reduces risk of pregnancy (Miller 2011; Miller et al. 2013; Miller et al. 2010) via both sex and contraception -- by delaying or reducing the frequency of sexual intercourse among some women (i.e. the decision to delay serious relationships, or to delay sexual intercourse within a relationship), and by increasing contraceptive use and consistency (Moreau et al. 2013). Further, independent of pregnancy desires, attitudes toward sex and contraception, and other attitudes related to pregnancy, may influence the risk of pregnancy more directly through women's sexual and contraceptive behavior.

Determinants of Attitudes towards Sex, Contraception, and Pregnancy

Below, we describe three sets of ideas about why we might expect Black-white differences in attitudes related to sex, contraceptive use, and pregnancy: (1) family background and adolescent experiences, (2) economic opportunity and attainment, and (3) the legacy of medical experimentation and forced sterilization on low SES, African-American, and other minority populations in the U.S. We consider each of these ideas in greater detail in the paragraphs that follow.

Family Background and Adolescent Experiences—Attitudes toward sex, contraception, and pregnancy are formed, at least in part, during childhood, and childhood familial experiences vary significantly by race. In the U.S., Black children grow up with

higher rates of teen and single parenthood (Martin et al. 2013; Smock et al. 2010), and Black children experience more family instability (Abma et al. 2010; Fomby et al. 2010; Kennedy and Bumpass 2008; Raley and Wildsmith 2004; Smock et al. 2010). Furthermore, relative to white women, Black women have earlier sexual debut (Martinez et al. 2011) and use contraception less effectively (Kusunoki et al. 2013). Collective socialization theories – focused on family and neighborhood role models – stress that exposure to these behaviors encourages young people to behave similarly, and perhaps even to prefer these behaviors (e.g., Brewster 1994; Brooks Gunn et al. 1993; East et al. 2007, 2009; Trent 1994; Trent and Harlan 1994; Wilson 1987). In addition, young women themselves who have sex, do not use contraception, and/or experience a pregnancy are likely to become more positive toward those behaviors, due to cognitive dissonance, regardless of their attitudes before those experiences (Festinger 1957).

In the U.S., Black children grow up in substantially more religious families than white children (Steensland et al. 2000). The vast majority belong to historically Black churches (e.g., evangelical denominations of Baptist, Methodist, or Pentecostal), which are particularly conservative on family issues such as sex and contraception (Chatters et al. 2009; Lincoln and Mamiya 1990). Religious opposition toward sex and contraception may explain why Black women have less knowledge about contraception and are less likely to use contraception (Frost and Darroch 2008; Frost et al. 2007; Guzzo and Hayford 2012; Mosher and Jones 2010; Rocca and Harper 2012; Shih et al. 2011), and may also explain differences in attitudes.

In addition, Black-white differences in attitudes may be attributed to differences in union formation, particularly lower marriage rates among Black women. High levels of unemployment and incarceration among Black men, coupled with especially strong racial homogamy preferences among white men (Lin and Lundquist 2013), leave Black women with fewer partnership options than white women (Bulcroft and Bulcroft 1993; Harknett and McLanahan 2004; Lichter et al. 1992; Pettit and Western 2004; Wilson 1987).[2] Sex Ratio Theory suggests that the more abundant gender (women in this case), will lower their standards and accept mates and family formation strategies that in other circumstances they might consider unacceptable (Guttentag and Secord 1983; Tucker and Mitchell-Kernan 1995). A study of women at Historically Black Colleges and Universities found that women tolerated refusal to use condoms and non-monogamous sexual behavior in their male partners specifically because of the paucity of potential male partners (Ferguson et al. 2006). In addition, skewed sex ratios, where there are more women than men, have been empirically linked to earlier first births, especially non-marital births (South and Trent 1988), and may make single parenthood more tolerable to Black women than it is to white women. Coupled with Black men's particularly low desire for marriage (Anderson 1990; South 1993), this may translate into more positive attitudes toward non-marital sex and parenthood among Black women, relative to white women.

[2]Because women tend to date older men, even young Black women whose cohort-mates do not yet face high rates of imprisonment face a relative shortage of partners.

Economic Opportunity and Attainment—Black women have less education, lower employment rates, and fewer opportunities than white women for both education and employment, due to poverty, lower quality early education, discrimination, and disadvantaged neighborhoods (Avery and Rendall 2002; Conley 1999; Isaacs 2007; Oliver and Shapiro 2006; Orr 2003; Proctor and Dalaker 2002). Poverty itself may affect attitudes toward contraception, as poor women are less likely to have insurance to cover the financial costs of contraception (Ebrahim et al. 2009), and thus may perceive barriers to its use. In addition to differences in the affordability of contraception, there are at least three reasons why the concentrated poverty experienced by more Blacks than whites might affect attitudes related to pregnancy: uncertainty, opportunity costs, and structural disadvantage.

Uncertainty and instability of all types, which are endemic to concentrated poverty, may contribute to differences in attitudes between Blacks and whites. Burton and Tucker (2009) elegantly describe the instability and insecurity that are so pervasive in the lives of poor African-American women – employment opportunities that are limited to intermittent and low-wage jobs, few alternatives (e.g., wealthy husbands) to reduce their breadwinner burden, transient living conditions, anxiety about serious relationships, and fear of death. Uncertainty about family formation, including about the long-term chances of a marriage surviving, is high for American women in general, and it is particularly high for poor women. Because children are viewed as an attainable path to stability for the women themselves, and, they hope, for the fathers, they are valued and sought (Burton 1990; Edin and Kefalas 2005). Statistical analyses have also documented that there is, indeed, little perceived stigma for non-marital childbearing among poor women (but they do not necessarily prefer to have babies before getting married) (Cherlin et al. 2008).

Lower opportunity costs for Black women, relative to white women, may also lead to more positive attitudes toward early sex and pregnancy, and less positive attitudes toward contraception (East 1998). Armstrong and Hamilton's (2013) in-depth qualitative study found that, even among those enrolled in a four-year college, the girls with the strongest educational and career aspirations (and thus the highest opportunity costs) purposely delayed serious relationships (and thus pregnancy) in explicit recognition that their opportunity costs of family formation would be high.

Finally, Anderson (1990), Wilson (1996) and others have argued that structural disadvantages – such as lower quality schools, fewer neighborhood associations, and less cohesive neighborhood networks in general – may lead to a set of “ghetto-related” attitudes and behaviors. Statistical analyses suggest that, indeed, the neighborhood economic conditions of Blacks explains a substantial amount of variance in nonmarital pregnancy (South and Baumer 2000) and some attitudes related to early sex (Browning and Burrington 2006).

Legacy of Medical Experimentation and Forced Sterilization—Several potential reasons for race-based differences in attitudes toward contraception, and to some extent pregnancy, focus not on family background or socioeconomic explanations, but instead on race itself. The Tuskegee Syphilis Study is one of the most well-known examples of unethical medical experimentation in the United States (Reverby 2009). Operated by the

U.S. Public Health Service from 1932 through the 1970s, poor Black men with late-stage syphilis were observed closely, but were never treated for syphilis. Societal discourse about the study remains; in 1997 President Clinton offered a public apology to the men, their families, and the African-American community.

There is also a strong history of reproductive abuse in the United States, and it is particularly relevant to Black women. The federally funded, involuntary sterilization of poor women in the U.S. (and Puerto Rico) has been documented as recently as the 1970s (Boonstra et al. 2000; Gibson-Rosado 1993; Malat 2000; Presser 1969; Roberts 1997; Stern 2005). Extremely common in the south, forced sterilization earned the nickname “Mississippi Appendectomy” (Roberts 2000; Washington 2006). Even today, between 2005 and 2013, many female prisoners in California received tubal ligations without proper informed consent (California State Auditor 2014). Further, the issue of whether poor women should bear children is still at the heart of ongoing welfare debates (e.g., see Harris and Wolf 2014; Jencks 2001), and is disproportionately felt by minorities. These debates have been linked to the eugenics movement, whose goal was to “improve the inborn qualities of a race” (Galton 1904) through selective breeding and sterilization. Eugenics was quite popular in the United States in the late 19th and early 20th century, prior to World War II (Osborn 1937). Within the Black community, some argue that contraception is a “genocidal tool,” while others see it as a way to improve health and well-being in the Black population (Roberts 2000).

Many studies in the 1970s documented distrust of contraception, and medical professionals in general, in the African-American population (e.g., Darity and Turner 1972; Farrell and Dawkins 1979; Schnittker 2004; Turner and Darity 1973. But more recent studies have documented their existence, as well (Rocca and Harper 2012; Thorburn and Bogart 2005). We expect this distrust to translate to more negative general attitudes toward contraception.

Methods

Data

The Relationship Dynamics and Social Life (RDSL) study is based on a random sample of 1,003 young women, ages 18-19, residing in a Michigan county, drawn from driver's license and state ID card records. A 60-minute face-to-face baseline survey interview was conducted between March 2008 and July 2009, by the professionally trained survey interviewers of the Survey Research Center at the University of Michigan's Institute for Social Research. The interview assessed family background, demographics, attitudes, romantic relationships, education, and career trajectories. Respondents were paid $35 to participate in the interview. The incentive scheme, coupled with the cooperative nature of this age group and their interest in the subject matter, resulted in an 84% response rate (93% among located women). The main strengths of this dataset for the analyses presented here are a large and broad set of attitude measures. The data also include a relatively large population of young Black women, and a range of sociodemographic characteristics among both the Black and white women in the sample.

Measures

Column 1 in Table 1 provides the proportions (the mean, for religiosity) for all independent variables included in these analyses. We analyze the 961 respondents with complete data on the independent variables described below. Although these measures are correlated, the correlations are not high. The strongest correlation is between childhood public assistance and parental home ownership, which is only −.35.

Race—Race was measured with the following question: "Which of the following groups describes your racial background? Please select one or more groups: American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, Black or African American, or white." Those who selected more than one group were asked a follow-up question, "Which of these groups, that is [groups chosen], would you say best describes your racial background?" 3% of respondents did not choose a single race category on the follow-up question. In all, 35% percent of the sample reported their race as African American. A preceding question about Hispanic ethnicity yielded 69 Latinas, who were coded according to their answer to the race question – 28 selected African American, 41 selected white. We recognize the limitations of this binary race measure – race is socially constructed and varies with time and location, and thus our dichotomy is an imperfect indicator. This substantially limits our ability to uncover nuance in these relationships – for example, variation within the self-identified Black population, or the way dynamic and/or contextualized racial identities more subtly shape these attitudes. We hope that these statistical analyses motivate future analyses with more nuanced measures of race.

Family Background—We use three indicators of childhood family background. For the question "How important if at all is your religious faith to you?" the mean score was 2.70 on a scale from 1 (not important) to 4 (more important than anything else). Although this question refers to the present, not childhood, religiosity in young adulthood is highly related to the religiosity of the childhood home (Regnerus et al. 2004). On the second family background question – "How old was your biological mother when she had her first child?" – 37% answered less than 20. The third question asked about who the respondent lived with primarily while growing up. About half of the respondents reported growing up with two parents (either two biological or one biological and one step-parent), 40% with one biological parent only (no step-parent), and 8% in another arrangement (e.g., with grandparents, an aunt, etc.)

Childhood Socioeconomic Status—Respondents were asked a series of questions to assess childhood socioeconomic status. In response to "While you were growing up, did your family ever receive public assistance?" 36% of respondents answered yes. For the question "What is the highest level of education your mother (father) completed?" 9% reported a mother with less than a high school education, 34% were high school graduates, and 57% completed at least some college. 11% reported a father with less than a high school education, 41% were high school graduates, and 48% completed at least some college. Because our analyses are stratified by race, and the inclusion of both parental education variables results in some very small cross-tabulated cells, we use a dichotomous measure that combines maternal and paternal education. 66% of the full sample had at least one

parent with at least some college education. In response to “While you were growing up, did your parents or guardians own their own home?” 71% said yes.

Adolescent Experiences Related to Pregnancy—We use five indicators of past experiences related to pregnancy. 51% of respondents reported they were 16 or younger when asked, “How old were you the first time you had sexual intercourse?” When asked, “With how many total partners have you had sexual intercourse?” 60% reported two or more sexual partners. When asked, “Have you ever had sexual intercourse without using some method of birth control such as condoms, pills, or another method?” 48% answered affirmatively. In response to “How many times have you been pregnant in your life?” 22% reported a prior pregnancy, the majority only one pregnancy. Finally, respondents were asked a series of questions about their current relationship status and living arrangements, which we used to create a measure with four mutually-exclusive categories: currently married or engaged (9%), cohabiting (10%), dating (55%), or no relationship (26%).

Current Socioeconomic Status—We measure current socioeconomic status with six questions. First, we asked for the respondent's total income in the past 12 months with 16 categories ranging from <$1,000 to $25,000 or more. Because many of these 18- and 19-year-old women still lived with their parents, and/or were still enrolled in school, their incomes are low. We divide this variable into four quartiles: < $1,000 (35%), between $1,000 and $2,999 (21%), between $3,000 and $5,999 (19%), and ≥ $6,000 (24%). In response to the question “At the end of the month, do you usually have some money left over, just enough money to make ends meet, or not enough money to make ends meet?” 19% said “not enough,” 34% said “just enough,” and 48% said “some money left over.” When asked if they owned a car, 49% said yes. They were also asked, “Are you currently receiving public assistance from any of the following sources? WIC (Women, Infants & Children Program), FIP (Family Independence Program), Cash welfare, or Food stamps.” In all, 27% of respondents indicated “yes” for at least one category of public assistance. Finally, because respondents were sampled at age 18 or 19, many were still enrolled in school and few had completed any post-secondary education. When asked “Are you going to school at all now?” and “Did you graduate from high school, get a GED, or neither?” 58% reported being currently enrolled full-time and 77% reported completing high school.

Race Differences—Columns 2 and 3 of Table 1 present these proportions separately for Black and white respondents. Bold numbers indicate the independent samples t-test (religiosity) or chi-square tests (all other variables) that revealed statistically significant differences. Note that the vast majority of variables differ significantly by race, with the Black sample experiencing more disadvantage in terms of family background and childhood socioeconomic status, riskier adolescent experiences related to pregnancy, and more disadvantaged current socioeconomic status.

Dependent Variables—The dependent variables are constructed from 34 measures of attitudes toward sex, contraception, and pregnancy. The specific question wording, response options, valid N, range, mean, and standard deviation for each measure are presented in Table 2.[3] Correlations among these measures are presented in appendix Table A1.

Regarding sex and contraception, we include four types of measures: general attitudes, desires (personal preferences), expectations, and willingness. The RDSL dataset does not include a measure of willingness to become pregnant; thus, for pregnancy, we include measures of attitudes, desires, and expectations. We allowed item-specific missing data for each measure – thus, the valid N ranges from 919 to 961. Of the 961 respondents, 822 (86%) had answers to all of the attitude questions, 7% were missing one answer, 4% were missing two answers, and only 3% were missing three or more answers.

In addition, although Table 2 presents each individual measure, we used theoretical reasoning and exploratory factor analysis to combine some of the measures into scales. For sex, the five measures of general attitudes formed a strong scale, with an eigenvector of 2.10 and all factor loadings ≥ .30. For contraception, the ten measures of general attitudes formed a strong scale, with an eigenvector of 3.85 and all factor loadings ≥ .37. For pregnancy, there were nine measures of expectations for the consequences of pregnancy, and one measure of overall expectation of pregnancy. We kept the overall expectation measure separate, to facilitate comparisons with expectations in the other two domains. The nine items about personal consequences revealed a strong scale, but one measure did not fit well with the scale – "If you got pregnant now, your family would help you raise the child." Thus, we leave that measure separate. But, we include it in our analysis because expectation of family support is sometimes proffered as an explanation for higher rates of teen pregnancy among Black women (e.g., see Burton 1990; McDonald and Armstrong 2001). Eigenvalues and factor loadings are presented for each domain in appendix Table A2.

Analysis

We perform two types of analyses with these data. First, we conduct two-tailed independent samples t-tests on each attitude measure to assess whether the mean response was different for Black and white respondents. Those results are also presented in Table 2.

Second, we estimate a series of Oaxaca-Blinder decomposition models, which are widely used to study mean differences between groups.[4] For example, these models were developed by economists to decompose gender differences in wages (Blinder 1973; Oaxaca 1973), and similar models were previously used by sociologists to decompose race differences in wages (Duncan 1969). We use these models to decompose the racial difference in attitudes into two parts: one part that is explained by differences in individual-level characteristics (e.g., family background, childhood socioeconomic status), and another part that is unexplained (and is due to the *effects* of those and other variables on attitudes).[5]

[3]Note that some of these measures were replicated from the National Survey of Family Growth cycle 6 (contraception attitude 1.7 and pregnancy attitude 1), from the National Survey of Adolescent Health waves I and II (sex attitudes 1.5 and 2, contraception attitudes 1.1, 1.3, 1.4, 1.5, 1.9, and 1.10, and pregnancy attitudes 3.1.1, 3.1.2, 3.1.5, 3.1.6, and 3.1.7), and the Intergenerational Panel Study of Parents and Children (sex attitude 1.1). Other items were created specifically for the RDSL study, some with explicit reference to the Prototype-Willingness model (Gibbons and Gerrard 1997).

[4]We also estimated OLS models for each attitude measure, and added sets of independent variables in the same way they are entered into the Oaxaca-Blinder models (see appendix Table A3). We tested whether decreases in the coefficients across nested models were significant using the method described in Clogg et al. (1995). The results of those analyses are overall quite similar. And, the coefficient in the full OLS model (including all controls) is identical to the unexplained part of the race difference after all characteristics are included in the Oaxaca-Blinder decomposition models.

We use a model-building approach, adding independent variables in blocks. We include them in approximately temporal order – childhood family background, childhood socioeconomic status, followed by adolescent pregnancy-related experiences, and finally, current socioeconomic status. However, the temporal ordering is not precise. The measures of family background and childhood socioeconomic status may be thought of as interrelated rather than temporally ordered. And adolescent pregnancy-related experiences and current socioeconomic status may not be exogenous of attitudes at ages 18 or 19, if earlier attitudes influence those experiences and are also related to later attitudes. We conducted three sensitivity tests. First, we put the childhood SES variables in the models before the family background variables. The results did not differ from Table 3. Second, we estimated the models without current socioeconomic status. Those results did not differ from Table 3. Finally, we estimated the models without adolescent pregnancy-related experiences. We discuss those models in the text below. The extent to which the overall race difference in the mean is explained by the independent variables can be thought of as *explanations* for the race difference in attitudes, rather than signaling that there are no race differences.

Results

Race Differences in Attitudes

Table 2 presents means of attitude measures separately by race, with bold numbers indicating differences that are statistically significant at the .05 level.

Sex—The Black young women in our sample hold significantly less positive attitudes about and have less desire for young, non-marital sex than white women. Black women tend to view premarital sex as wrong, to more strongly agree that they are not ready for a sexual relationship, and to express less desire for sex in the upcoming year.[6] However, in spite of these relatively negative feelings, they report less willingness than white women to refuse sex if doing so would make their male partner angry.

Contraception—Race differences in women's attitudes toward contraception are more complicated. Although nearly all of the attitude measures differ significantly by race, Black women are more positive than white women toward some aspects of contraception, and less

[5]Note that the mean race difference can also be decomposed into three parts with the Oaxaca-Blinder method – race differences in endowments (value for the independent variables), race differences in the coefficients, and the interaction between race differences in endowments and coefficients. We present the two-part decompositions for four reasons: First, our theory/hypotheses are about endowments; we have no hypotheses about how family background, adolescent experiences related to pregnancy, or socioeconomic status differences would have different attitudinal consequences for Blacks and whites. Second, there are very few significant race differences in the coefficients for the independent variables, with three exceptions: although religiosity leads to more negative attitudes about sex, this is less true for Blacks than for whites; although being in a relationship increases expectations of sex for whites, this is less true for Blacks; and whites with two prior pregnancies are *less* negative toward contraception and *more* positive toward pregnancy than those without prior pregnancies, while Blacks with two prior pregnancies are *more* negative toward contraception and *less* positive toward pregnancy than those without prior pregnancies. Third, for attitudes toward contraception and pregnancy, race differences in individual-level characteristics contribute dramatically more to the mean race differences in attitudes than race differences in coefficients or the interaction between the two types of race differences. In the case of attitudes toward sex, however, race differences in coefficients are more important. We describe those exceptions in the Results section.

[6]We also examined differences between the 571 white and 205 Black non-pregnant 18- and 19-year-old women in the 2006-2010 National Survey of Family Growth (NSFG). There were no race differences in responses to the questions about sex: “Any sexual act between two consenting adults is all right”; “It is all right for unmarried 18 year olds to have sexual intercourse if they have strong affection for each other”; and “It is all right for unmarried 16 year olds to have sexual intercourse if they have strong affection for each other.”

positive toward others. On average, Black women perceive greater access to contraception than do white women – fewer consider birth control expensive, fewer believe that they cannot afford birth control, and more consider birth control easy to get. However, Black women generally hold less favorable attitudes toward using contraception, more strongly agreeing that it takes too much planning to have birth control available, it is too much of a hassle to use, and that it makes women feel sick. Finally, more Black than white women perceive moral dilemmas with contraception – that requesting condom use raises issues of trust in the relationship, that birth control is morally wrong, and that girls who use contraception are "looking for sex."[7] Black and white women hold similarly strong desire to use birth control if they do have sex, but Black women perceive a 7% higher probability than white women of having sex without contraception in the coming year.

Pregnancy—Black women tend to be more negative about non-marital childbearing in general than white women, but desire for pregnancy and desire to avoid pregnancy are very similar across race. However, Black women expect more positive personal consequences of a pregnancy. More Black than white respondents believe that pregnancy would reduce their loneliness, that they could handle the responsibility, that it would make their partner happy, and that it wouldn't be all that bad to get pregnant. Fewer Black than white women think that they would have to grow up too fast, that they would have to quit school, or that they could not afford to raise the child. Black and white women are similar in terms of expectations for family support.[8] Despite these overall more positive expectations, and national trends that suggest Black teen's pregnancy rates are about twice as high as whites' (Zolna and Lindberg 2012), Black respondents do not expect pregnancy during the upcoming year any more than the white respondents.

Multivariate Oaxaca-Blinder Decomposition Models

Table 3 presents the Oaxaca-Blinder decomposition models for the race differences in attitudes. Column 1 presents the difference between the mean for Blacks and the mean for whites (same as in Table 2), along with the standard error and statistical significance of the difference. Columns 2 through 5 present the decompositions, by blocks of independent variables described above: family background, childhood socioeconomic status, adolescent experiences related to pregnancy, and current socioeconomic status. These numbers represent the amount of the mean difference that is explained by race differences in individual characteristics, in terms of the specific blocks of independent variables. Columns 6 and 7 present the total amount and percent, respectively, of the mean race difference that is explained by race differences in individual characteristics in the model. The number in

[7]In the NSFG, young Black women expected less embarrassment than young white women in response to "What is the chance that it would be embarrassing for you and a new partner to discuss using a condom?" There was no race difference in "What is the chance that if your partner used a condom during sex, you would feel less physical pleasure?" (somewhat similar to the RDSL contraception question #7, except that the RDSL question refers to "birth control" rather than condoms) and "What is the chance that if a new partner used a condom, you would appreciate it?" Thus, NSFG analyses may indicate slightly more positive attitudes toward condoms among young Black women relative to young white women; the only RDSL measure that focuses on condom use, specifically, is item 1.8.

[8]In the NSFG, young Black women were more positive than young white women in response to "If you got pregnant now how would you feel?" but there was no race difference in "It is okay for an unmarried female to have a child" (similar to RDSL pregnancy question #1). Thus, young Black women are more positive than young white women about the personal consequences of a pregnancy in both datasets, but feel similarly (NSFG) or more negatively (RDSL) than white women about single parenthood.

column 8, representing the unexplained portion of the mean difference, is equivalent to the coefficient for race in an OLS regression model including all of the independent variables – this is the extent to which the race difference is net of the individual characteristics represented by the independent variables in the model. The statistical significance of the number in column 8 indicates whether there is a significant race difference *net of* the explanatory variables in the model.

Sex—Table 3 demonstrates that family background – mainly religiosity (not shown in tables, see appendix table A3) – explains much of Black women's, relative to white women's, less positive general attitudes toward young non-marital sex and their lower desire to have sex in the next year. Current socioeconomic status (mainly lower income and educational attainment, not shown in tables) further explains Black women's lower desire for sex in the upcoming year.

Adolescent pregnancy-related experiences, although they are statistically significant variables in the models, do not explain differences in attitudes or desires for sex, because those experiences are associated with more positive attitudes and more desire, but Black women are both more likely to have those experiences and to be less positive and desirous. Thus, the positive number indicates that Black women are even less positive toward young non-marital sex and less desirous of sex than we would expect, given their adolescent pregnancy-related experiences.

The independent variables explain 77% of the mean difference in general attitudes toward young non-marital sex, leaving no statistically significant race difference net of those variables. Race differences in the desire for sex in the upcoming year, however, are statistically significant net of these potential explanatory factors, which explain only 40% of the race difference. None of the independent variables – either clustered or individually – explains why Black women are less willing than white women to refuse sex.[9]

Contraception—Family background and current socioeconomic status explain much of Black women's overall more negative general attitudes toward contraception, relative to white women's. Religiosity and income are key (not shown in tables) – Black women are more religious and poorer (see Table 1), and more religious and poorer women are more negative toward contraception than the less religious and wealthier. The model explains 91% of the mean race difference in general attitudes toward contraception.[10]

[9]We also estimated three-part Oaxaca-Blinder decomposition models, where the explained difference includes differences attributable to race differences in individual characteristics, but also includes race differences in *coefficients* for the independent variables (i.e., race interactions in the pooled model), and the interaction between race differences in characteristics and race differences in coefficients. These models showed that for desire to have sex and willingness to refuse sex, the race differences in coefficients account for more of the mean race difference in the attitude than did the race differences in the individual characteristics. However, in a pooled model, none of the coefficients is statistically different for Blacks and whites. Thus, the explanatory power of the race differences in coefficients is due to the cumulation of many small race differences that are individually indistinguishable from zero.

[10]However, if the nine measures of attitudes toward contraception are modeled separately, a more varied picture of race differences emerges. Net of all mediating factors in our models, Black women find contraception cheaper and easier to access than white women, but find it to be more hassle to use and more likely to make women sick, and that asking for condom use signals distrust. Thus, although the factor analysis strongly suggests that these items measure a single underlying construct for both Black and white women, there are clearly race differences within that single construct.

In contrast, Black women's higher expectation for sex without contraception in the upcoming year, relative to white women's, is largely explained by adolescent pregnancy-related experiences. Specifically, the Black women were more likely than white women to have had sex without contraception in adolescence, which translates into higher expectations for sex without contraception in the future. The model explains 67% of the mean race difference. If we omit adolescent pregnancy-related experiences from the decomposition model, the race difference is not as well explained, with a borderline significant race difference remaining net of the explanatory factors (total explained = 2.27, $p>.10$; total unexplained = 4.61, $p<.10$). However, the race difference in expectations may actually be net of adolescent experiences, if different *prior* expectations were causally related to those experiences.

Pregnancy—African-American women's less positive general attitudes toward non-marital childbearing, relative to white women's, is almost fully explained by family background – again, specifically, religiosity. Note that adolescent pregnancy-related experiences, as was the case for attitudes toward sex, do not explain the race difference in general attitudes toward non-marital childbearing. Black women are more likely to have experienced a pregnancy as adolescents, but that experience is associated with more positive general attitudes toward non-marital childbearing.

Finally, young Black women expect more positive (or fewer negative) personal consequences than white women, if they were to get pregnant, which is substantially explained by family background and adolescent experiences – namely, growing up with a single parent, and having sex without birth control.[11] Note that if we exclude adolescent pregnancy-related experiences from the decomposition model, the explanatory role of family background increases slightly (.14, $p<.01$), the explanatory role of current socioeconomic status increases dramatically (.10, $p<.01$), and the total portion of the race difference that is explained increases slightly (.24, $p<.001$). (If both sets of variables are omitted, the total explained portion of the race difference remains similar, with more explanatory power shifted to family background.) This suggests that Black women expect more positive consequences of a pregnancy than white women, due to experiences in childhood, which influence subsequent experiences in adolescence and early adulthood.

Discussion

Young women – both Black and white – espouse moderate attitudes toward young non-marital sex, desires for a sexual relationship, and expectations of having sex. They report a relatively strong willingness to refuse sex with a partner, even if it would make him angry. Their overall attitudes toward contraception are positive. They are negative about unmarried childbearing in the abstract, have very low desire for pregnancy, very high desire to avoid pregnancy, and perceive a very low chance that they will get pregnant in the upcoming year. However, they have strong expectations that their family would help them raise the child if

[11]The difference that is net of the mediators in the model is largely driven by net differences in three items: “If you got pregnant now, you would have to quit school,” “If you got pregnant now, your partner would be happy,” and “If you got pregnant now, you could not afford to raise the child.”

they had one, and overall they perceive only moderate negative personal consequences of pregnancy. These attitudes are largely un-conducive to pregnancy.

We find consistent Black-white differences in attitudes toward sex, contraception, and pregnancy, which may explain part of why young Black women's pregnancy rates, and particularly their unintended pregnancy rates, are higher than white women's. Compared to white women, Black women are less positive about sex and less desirous of sex in the coming year, but are also less willing to refuse to have sex with a partner if it would make him angry. Black women are more negative than white women toward contraception and are more likely to expect to have sex without contraception in the upcoming year. They have more negative general attitudes toward pregnancy, but anticipate more positive consequences of becoming pregnant at this time in their lives. Together, this constellation of race differences in attitudes is consistent with a path toward earlier pregnancy.

If they are less willing to refuse sex, Black women may be more likely than white women to have sex even when they don't desire pregnancy and don't have contraception available. It may also be because they perceive contraceptive use as difficult, fraught with side effects, and morally questionable that fewer Black than white women use contraception, choose effective methods, and use them consistently (Jacobs and Stanfors 2013). Finally, although both Black and white young women state a strong desire to avoid pregnancy and very little desire to become pregnant, young Black women's greater tolerance for the personal consequences of pregnancy may reduce their commitment to implementing those desires. Through these three processes, even these small but consistent differences in attitudes may accumulate into substantial behavioral differences that could explain some of the disparity in unintended pregnancy rates.

Further research should address the extent to which attitudes explain racial disparities in *behavior*. Although recent research by Rocca and Harper (2012) demonstrates that perceptions about contraception (safety, side effects, and overall knowledge) do not explain race differences in contraceptive use, the attitudes toward contraception examined in the current study may have more explanatory power. For example, because condoms are the most commonly used method among Black women, the perception that asking a partner to use a condom is a signal of distrust may explain why they are, on average, less consistent contraceptors (Kusunoki et al. 2014). In addition, young Black women's negativity toward non-marital sex may explain why they tend to use a method that requires less advance planning, condoms, rather than more effective methods like birth control pills. Our findings that, relative to white women, Black women perceive contraception to be less expensive and easier to access, but to require more planning and to interfere more with pleasure, suggest that Black women may be answering these questions in reference to condoms, while white women may be more likely to be thinking of oral contraceptive pills (which are more expensive, harder to access, require less planning, and do not interfere directly with pleasure).

We found substantial support for our ideas about religiosity – that Black women may be more negative toward sex, contraception, and non-marital pregnancy because they are more religious than white women. Religiosity, however, does not seem to play a major role in

Black women's expectation to have sex in the next year, their willingness to refuse sex, or their perceptions of the personal consequences of pregnancy. We also found support for the role of socialization. Growing up with a single mother partially explained Black women's more positive expectations of the personal consequences of pregnancy. Although we did not directly test ideas about collective socialization, we suspect that Black women's tolerance of the personal consequences of a pregnancy at this young age may be due in part to mothers' experiences, or other extended family role models or neighbors who have had such experiences. The role, albeit small, played by income and educational attainment in explaining Black women's more negative attitudes toward contraception than white women's are consistent with ideas about the role of race and poverty. However, we cannot tell whether it is the instability, lower opportunity costs, or structural disadvantages associated with poverty, or poverty itself, that are related to attitudes toward contraception. Finally, we found that young women who have had sex without contraception in the past expect to have sex without contraception in the future, and expect more positive personal consequences of a pregnancy. Of course, it is unclear whether these expectations preceded sex without contraception, or sex without contraception produced these expectations. We suspect that both of these processes are at work.

In addition, some key race differences in attitudes toward sex, contraception, and pregnancy remain statistically significant even after accounting for family background, socioeconomic characteristics, and adolescent pregnancy-related experiences. Black women have less desire for sex in the next year, are less willing to refuse sex if it would make their partner angry, and are more positive about the potential personal consequences of a pregnancy – regardless of their family background, childhood or current SES, or adolescent experiences. We do not provide evidence for or against the role of sex ratios in producing these unexplained attitudinal differences. However, we speculate that they may be important, given empirical research demonstrating that Black women both notice and respond to low sex ratios of men to women (Ferguson et al. 2006). Census data show that in U.S. counties with at least 50,000 African Americans, the sex ratio for 18-19 year old women is 107 men per 100 women for whites versus 100 men per 100 women for Blacks (author calculation). Sex ratios get smaller and the disparities get wider with older ages – 99 versus 87 for ages 20-24, and 100 versus 81 for ages 25-29 (author calculation). Given that women tend to date older men, and that white men have strong preferences for racial homogamy in dating (Lin and Lundquist 2013), it is plausible that these differences may produce different attitudes for Black and white women. Further research should examine differing sex ratio contexts and explore whether they are associated with attitudes or behaviors related to sex, contraception, and pregnancy, and whether those differences further explain the race differences described here.

We also cannot provide evidence for or against the role of past medical experimentation and forced sterilization in producing these unexplained differences in attitudes toward contraception. Although previous research confirms that Black women are more likely than white women to hold suspicious beliefs about contraception (Thorburn and Bogart 2005), we do not know why. We speculate that this history may play a role. This is an important topic for ongoing and future research.

In spite of attitudes that are relatively un-conducive to pregnancy, low levels of desire for pregnancy, and low expectations of pregnancy, about one-fifth of the 961 women analyzed here became pregnant during the subsequent 2.5 years: 25% of the Black women and 17% of the white women (author calculation). As other researchers have concluded, there is a gap between young women's stated desires and subsequent behavior, and the gap is larger for Black women than for white women (Finer and Zolna 2011). Others have speculated that Black women may want their pregnancies, but feel societal pressure to label them as unintended, due to social norms that place higher value on white fertility compared to Black fertility (Harris 2010; Harris and Wolfe forthcoming). We find no evidence here that the measures used to assess attitudes – including pregnancy desires – are interpreted differently by Black and white women. Factor analyses revealed that the different attitude measures are correlated similarly for whites and Blacks (not shown in tables), standard deviations of the measures are similar for Black and white women (see Table 2), and independent variables were related to the attitude measures in similar ways for Black and white women (not shown in tables). However, race differences in the other attitudes explored here might explain why Black women have more unintended pregnancies, even if their intentions hold similar meaning to them as white women's, by understanding them within a broader personal context – if Black women are less willing to refuse sex and are more negative about contraception, then even when lacking pregnancy desire, they may be more likely to become pregnant. If they perceive more positive (or fewer negative) consequences of pregnancy, they may be less committed to implementing their pregnancy desires. We do not interpret this to mean that their pregnancy desires are qualitatively different. Future research must continue to explore reasons for this race gap in unintended pregnancies, and to explore whether Black and white women's pregnancy intentions are meaningfully different.

Finally, we find a pattern of race differences in attitudes specifically related to partners. Black women are less willing to refuse sex if it would make their partner angry, more strongly believe that asking a partner to use a condom signifies distrust, and have greater expectations that their partner would be happy about a pregnancy. Considering male partners' desires when assessing a pregnancy's intention status may explain why some unintended pregnancies occur. That the attitudes related to partners represent the largest Black-white differences we found in our analyses suggests the importance of this consideration for understanding race differences in unintended pregnancy. It also suggests that, at least in this age group, there may be important differences between the partners of white and Black women. Further research should investigate these differences – for example, whether Black women are more likely than white women to have romantic partners who desire pregnancy, or whether Black men are more negative than white men toward women requesting condom use.

Limitations

The present study has important limitations. The narrow geographic focus (a single county in Michigan) of the RDSL study is notable. However, although the sample is not nationally representative, Michigan falls around the national median in measures of cohabitation, marriage, age at first birth, completed family size, non-marital childbearing, and teenage childbearing (see Lesthaeghe and Neidert 2006). More important, the county has a large

Black population (about 35%), and the proportion of Black residents in the major city within the county is even higher.[12] The U.S. has 65 cities that are at least 25% Black, comprising at least 10 million of the United States' 39 million Black residents. Thus, the women in the RDSL sample live in a situation like many African Americans in the United States. On the other hand, the study includes only a small number of Latinas, who were classified as either white or Black in our analyses – a limitation that we hope motivates future researchers to implement similar studies on larger and more diverse populations.

More importantly, this statistical portrait of Black-white differences in attitudes ignores much of the nuance inherent in each of these concepts. Race is not a simple dichotomous variable. Attitudes are not easily reduced to Likert-scale questions. We have not identified variations in these overall patterns, and have not uncovered anything about the young women whose attitudes do not fit these patterns. Thus, this analysis does not, for example, provide much insight into the processes that produce variation in attitudes within race (Jarrett 1997). The RDSL includes follow-up data on the young women summarized here, along with more than 70 in-depth, semi-structured interviews with Black and white women. We consider the current analysis a necessary first step in the process of understanding these race differences in attitudes and related behaviors.

Appendix

[12]We do not give the percentage in order to protect the anonymity of the study location.

Table A2

Eigenvalues and Factor Loadings for Factor Analysis of Attitude Measures

	Full Sample				Black women only				White women only			
	Eigenvalue for Factor	**Proportion of Variance Explained**	**Factor Loadings**	**Uniqueness**	**Eigenvalue for Factor**	**Proportion of Variance Explained**	**Factor Loadings**	**Uniqueness**	**Eigenvalue for Factor**	**Proportion of Variance Explained**	**Factor Loadings**	**Uniqueness**
Sex												
1. Attitude toward Young, Non-marital Sex (Factor)	2.10	>1.00			1.48	>1.00			2.44	>1.00		
1.1 Young people should not have sex before marriage.			.76	.42			.67	.55			.79	.37
1.2 It is alright for young people to have premarital sex even if they are just friends.			.62	.61			.61	.63			.62	.62
1.3 If a girl has been seeing a guy for a while, she should have sex with him.			.30	.91			.33	.89			.30	.91
1.4 You are not ready to have a sexual relationship with anyone.			.69	.52			.49	.76			.79	.38
1.5 If you had sexual intercourse now, you would feel guilty.			.75	.44			.56	.69			.85	.28
Contraception												
1. Attitude toward Contraception (Factor)	3.85	.95			3.85	.94			4.04	.92		
1.1 In general, birth control is too expensive to buy.			.63	.60			.79	.37			.58	.67

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	Full Sample				Black women only				White women only			
	Eigenvalue for Factor	**Proportion of Variance Explained**	**Factor Loadings**	**Uniqueness**	**Eigenvalue for Factor**	**Proportion of Variance Explained**	**Factor Loadings**	**Uniqueness**	**Eigenvalue for Factor**	**Proportion of Variance Explained**	**Factor Loadings**	**Uniqueness**
1.2 You can't afford to pay for birth control.			.66	.56			.70	.51			.66	.56
1.3 It is easy for you to get birth control.			.57	.68			.63	.60			.57	.68
1.4 It takes too much planning ahead of time to have birth control on hand when you're going to have sex.			.79	.38			.80	.36			.78	.39
1.5 In general, birth control is too much of a hassle to use.			.71	.49			.66	.57			.74	.46
1.6 Using birth control is likely to make a woman feel sick.			.41	.83			.31	.91			.47	.78
1.7 Using birth control interferes with sexual enjoyment.			.56	.69			.44	.81			.66	.56
1.8 If a woman asks her partner to use a condom, he will think that she doesn't trust him.			.37	.86			.25	.94			.43	.82
1.9 Using birth control is morally wrong.			.68	.54			.67	.55			.67	.55
1.10 If a girl uses birth control, she is looking for sex.			.69	.52			.67	.55			.70	.51
Pregnancy												
3.1 Personal Consequences of Pregnancy	3.40	>1.00			2.59	1.00			3.87	>1.00		

	Full Sample				Black women only				White women only			
	Eigenvalue for Factor	Proportion of Variance Explained	Factor Loadings	Uniqueness	Eigenvalue for Factor	Proportion of Variance Explained	Factor Loadings	Uniqueness	Eigenvalue for Factor	Proportion of Variance Explained	Factor Loadings	Uniqueness
(Factor)												
3.1.1 Getting pregnant at this time in your life is one of the worst things that could happen to you.			−.72	.49			−.57	.67			−.81	.35
3.1.2 If you had a baby now, you would feel less lonely.			.43	.81			.24	.94			.53	.72
3.1.3 If you got pregnant now, you could handle the responsibilities of parenting.			.78	.39			.77	.40			.79	.38
3.1.4 If you got pregnant now, your partner would be happy.			.64	.59			.48	.77			.72	.49
3.1.5 It wouldn't be all that bad if you got pregnant at this time in your life.			.81	.34			.73	.47			.85	.27
3.1.6 If you got pregnant now, you would be forced to grow up too fast.			−.62	.62			−.52	.73			−.67	.55
3.1.7 If you got pregnant now, you would have to quit school.			−.38	.86			−.30	.91			−.38	.85
3.1.8 If you got pregnant now, you could not afford to raise the child.			−.70	.50			−.70	.50			−.70	.51

Note: Three measures of attitudes toward pregnancy: “How much do you want to get pregnant during the next month?” “How much do you want to avoid getting pregnant during the next month?” and “What are the chances that you will get pregnant during the next year?” were not included in the factor analysis.

Table A3

Portion of Difference in Means Explained by each Independent Variable, from Oaxaca-Blinder Decomposition Models

	Sex				Contraception				Pregnancy					
	1. Tolerant Attitude toward Young, Non-marital Sex (factor)	**2. Desire to have sex in the next year**	**3. Expect to have sex in the next year**	**4. Willingness to refuse sex with a partner if it would make him angry**	**1.Positive Attitude toward Contraception (factor)**	**2. Desire to use contraception**	**3. Expect to have sex without contraception in the next year**	**4. Willingness to have sex without contraception**	**1. Tolerant Attitude toward unmarried woman having a child**	**2.1 Desire to get pregnant during the next month**	**2.2 Desire to avoid pregnancy during the next month**	**3.1 If you got pregnant now, your family would help you raise the child.**	**3.2 Personal Consequences of Pregnancy (factor)**	**3.3 Expect to get pregnant during the next year**
Difference in means (from Table 2)	**−.30**	**−.45**	−3.61	**−.57**	**−.15**	−.10	**6.88**	.07	**−.20**	.03	.003	−.01	**.32**	−.16
Family background														
Religiosity[a]	**−.30**	**−.18**	**−6.61**	−.01	**−.06**	**−.08**	−.68	.02	**−.30**	.01	−.01	.02	.02	−.02
Biological mother less than 20 years old at first birth	.01	.00	−.16	−.04	−.02	.00	−.05	.02	−.02	.02	−.02	.01	.04	−.06
Family structure (ref=two parents)														
One biological parent only	−.01	−.04	−.19	.00	.00	**.00**	.34	−.02	.03	.02	.01	**−.03**	**.06**	.67
Other	.01	−.01	−.30	.01	.01	−.02	.31	.00	.02	.01	.02	**−.02**	.01	.06
Childhood Socioeconomic Status														
Received public assistance	−.02	.01	−.21	.00	−.02	−.02	−.32	.01	.00	**−.03**	.02	−.01	.01	−.05
At least one parent has at least some college	.01	−.01	−.25	−.02	**−.02**	.01	.11	**.03**	−.01	.00	−.01	.00	.00	−.13
Parents were home owners	−.01	.00	.69	−.01	**.03**	−.03	.68	**−.06**	.00	.02	−.02	.02	−.01	.24
Adolescent Experiences Related to Pregnancy														
Age at first sex 16 years or less	.00	.02	.11	.02	.00	.00	.05	−.02	.01	−.01	.02	−.02	.03	.23
Number of sexual partners 2 or more	**.08**	**.09**	**3.99**	−.01	**.01**	**.00**	.38	**.04**	.02	−.01	−.01	−.02	.02	.37
Ever had sex without birth control	**.06**	**.10**	**3.11**	−.04	**−.02**	−.03	**4.70**	**.20**	.01	**.06**	**−.06**	.00	**.16**	**1.77**
Prior pregnancies (ref=0 pregnancies)														
1 prior pregnancy	.01	−.02	.22	−.01	.00	−.01	−.43	−.01	**.03**	−.02	.00	.00	.03	−.30
2 prior pregnancies	**−.02**	−.02	.14	.03	−.01	.00	−.15	.00	.00	−.01	.01	−.01	.05	−.11
Current Relationship status (ref=none)														
Married or engaged	**−.04**	**−.08**	**−2.20**	.00	.00	.02	−.47	−.01	.00	**−.03**	**.04**	.00	**−.10**	**−.81**
Cohabiting	−.01	−.03	−.70	.00	.00	.01	−.09	.00	.00	−.01	.01	.00	−.03	−.24
Dating	**.05**	**.08**	**2.74**	−.01	.01	.01	**.47**	.02	.01	.01	.00	.00	**.04**	**.64**

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	Sex				Contraception				Pregnancy					
	1. Tolerant Attitude toward Young, Non-marital Sex (factor)	**2. Desire to have sex in the next year**	**3. Expect to have sex in the next year**	**4. Willingness to refuse sex with a partner if it would make him angry**	**1.Positive Attitude toward Contraception (factor)**	**2. Desire to use contraception**	**3. Expect to have sex without contraception in the next year**	**4. Willingness to have sex without contraception**	**1. Tolerant Attitude toward unmarried woman having a child**	**2.1 Desire to get pregnant during the next month**	**2.2 Desire to avoid pregnancy during the next month**	**3.1 If you got pregnant now, your family would help you raise the child.**	**3.2 Personal Consequences of Pregnancy (factor)**	**3.3 Expect to get pregnant during the next year**
Current Socioeconomic Status														
Individual income (ref=1st quartile)														
2nd quartile	.00	.01	.03	.00	.00	.00	−.01	.00	.00	.00	.00	.00	.00	−.01
3rd quartile	.00	−.01	−.12	.00	.00	.00	.02	.00	−.01	.00	.00	.00	.00	.03
4th quartile	.00	**−.02**	**−.42**	.00	.00	**.00**	−.31	−.01	−.01	.00	.01	.00	−.02	−.19
Income security (ref=more than enough)														
Not enough to make ends meet	.00	.02	.01	−.01	−.01	−.02	**.57**	**.03**	.00	**.02**	−.01	−.02	.00	.12
Just enough to make ends meet	.00	.00	.02	.00	.00	.00	.25	.00	.01	.00	.00	.00	.00	.01
Owns a car	−.02	−.01	−1.00	−.01	**−.03**	.00	**1.03**	.03	.01	−.01	.00	−.03	.02	.32
Receiving public assistance	−.01	−.04	**−1.22**	−.03	−.01	.08	**−1.41**	**−.07**	.00	−.01	−.01	.01	−.01	**−.99**
Enrolled in school full-time	.00	.00	−.02	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00	.03
Completed high school	−.01	**−.02**	**−.48**	−.02	**−.01**	−.01	.20	.01	−.01	.01	.00	.00	.00	.06
Total	**.23**	**.18**	2.81	.14	**.14**	.09	**−4.58**	**−.21**	**.19**	−.04	.02	**.13**	**−.30**	−1.62

Note: Bold numbers indicate p < .05, two-tailed tets.

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Table 1

Descriptive statistics for the RDSL sample

	Proportion among:		
Measure	**Full Sample (n=961)**	**Black (n=333)**	**White (n=628)**
Black	.35	--	--
Family background			
Religiosity	mean = 2.70	**3.17**	**2.44**
Biological mother less than 20 years old at first birth	.37	**.54**	**.27**
Family structure			
Biological parents/biological and step parent	.52	**.29**	**.65**
One biological parent only	.40	**.57**	**.31**
Other	.08	**.14**	**.04**
Childhood Socioeconomic Status			
Received public assistance	.36	**.52**	**.28**
At least one parent has at least some college	.66	**.58**	**.71**
Mother's education			
Less than high school	.09	.11	.08
High school graduate	.34	.38	.33
At least some college	.57	**.52**	**.60**
Father's education			
Less than high school	.11	.12	.10
High school graduate	.41	.42	.40
At least some college	.48	.45	.50
Parents were home owners	.71	**.51**	**.81**
Adolescent Experiences Related to Pregnancy			
Age at first sex 16 years or less	.51	**.62**	**.46**
Number of sexual partners 2 or more	.60	**.70**	**.54**
Ever had sex without birth control	.48	**.60**	**.42**
Prior pregnancies			
0 prior pregnancies	.78	**.65**	**.84**
1 prior pregnancy	.14	**.21**	**.11**
2 prior pregnancies	.08	**.14**	**.05**
Current Relationship status			
None	.26	**.25**	**.27**
Married or engaged	.09	**.05**	**.11**
Cohabiting	.10	**.08**	**.11**
Dating	.55	**.62**	**.51**
Current Socioeconomic Status			
Individual income			
<$1,000 (1st quartile)	.35	**.42**	**.32**
$1,000-$2,999 (2nd quartile)	.21	.22	.21
$3,000-$5,999 (3rd quartile)	.19	.16	.20

	Proportion among:		
Measure	**Full Sample (n=961)**	**Black (n=333)**	**White (n=628)**
>=$6,000 (4th quartile)	.24	**.20**	**.27**
Income security			
Not enough to make ends meet	.19	**.23**	**.16**
Just enough to make ends meet	.34	**.37**	**.32**
Some money left over	.48	**.40**	**.52**
Owns a car	.49	**.29**	**.59**
Receiving public assistance	.27	**.43**	**.18**
Enrolled in school full-time	.58	.57	.58
Completed high school	.77	**.72**	**.80**

Notes: All measures are dichotomous, except religiosity, which ranges from 1 (not important) to 4 (more important than anything else).

Bold numbers indicate statistically significant (p<.05) difference between black and white respondents; two-sample t-test for religiosity and chi-square test for all other variables

Table 2

Descriptive statistics for attitude measures, by race

Measure	Full Sample (n=961) N	Range	Mean (SD)	Black (n=333) Mean (SD)	White (n=628) Mean (SD)
Sex					
1. Attitude toward Young, Non-marital Sex (Factor)	945	1.2-5.5	3.3 (1.0)	**3.1 (.9)**	**3.4 (1.0)**
1.1 Young people should not have sex before marriage. [a]	958	1-5	3.2 (1.2)	**3.6 (1.1)**	**3.0 (1.2)**
1.2 It is alright for young people to have premarital sex even if they are just friends.	955	1-5	2.1 (.9)	**2.0 (.8)**	**2.2 (1.0)**
1.3 If a girl has been seeing a guy for a while, she should have sex with him.	956	1-5	1.9 (.6)	1.8 (.6)	1.9 (.5)
1.4 You are not ready to have a sexual relationship with anyone.	959	1-5	2.9 (1.3)	**3.1 (1.3)**	**2.9 (1.3)**
1.5 If you had sexual intercourse now, you would feel guilty. [b]	957	1-5	2.6 (1.2)	2.6 (1.1)	2.6 (1.2)
2. Desire *How much do you want to have sexual intercourse in the next year?* [c]	950	0-5	2.1 (1.6)	**1.8 (1.4)**	**2.3 (1.6)**
3. Expectation *What are the chances that you will have sexual intercourse in the next year?*	959	0-100	63.4 (39.6)	61.0 (37.4)	64.7 (40.7)
4. Willingness *Imagine being with a partner who wants to have sex, but you do not. How willing would you be to refuse to have sex with your partner, even if it made him angry?*	960	0-5	4.1 (1.6)	**3.8 (1.9)**	**4.3 (1.3)**
Contraception					
1. Attitude toward Contraception (Factor)	900	1.7-6.7	5.5 (.6)	**5.4 (.7)**	**5.5 (.6)**
1.1 In general, birth control is too expensive to buy. [b]	939	1-5	2.1 (.9)	**2.0 (.8)**	**2.1 (.9)**
1.2 You can't afford to pay for birth control.	950	1-5	2.1 (.9)	**2.0 (.9)**	**2.1 (.9)**
1.3 It is easy for you to get birth control. [b]	951	1-5	4.0 (.8)	**4.1 (.8)**	**4.0 (.9)**
1.4 It takes too much planning ahead of time to have birth control on hand when you're going to have sex. [b]	955	1-5	1.8 (.6)	**1.9 (.7)**	**1.8 (.6)**
1.5 In general, birth control is too much of a hassle to use. [b]	952	1-5	1.8 (.8)	**2.0 (.9)**	**1.7 (.8)**
1.6 Using birth control is likely to make a woman feel sick.	934	1-5	2.6 (1.1)	**2.9 (1.1)**	**2.5 (1.0)**
1.7 Using birth control interferes with sexual enjoyment. [d]	934	1-5	1.9 (.7)	1.9 (.7)	1.9 (.6)
1.8 If a woman asks her partner to use a condom, he will think that she doesn't trust him.	959	1-5	2.3 (1.2)	**2.8 (1.4)**	**2.0 (1.0)**
1.9 Using birth control is morally wrong. [b]	957	1-5	1.7 (.7)	**1.8 (.8)**	**1.7 (.7)**
1.10 If a girl uses birth control, she is looking for sex. [b]	959	1-5	1.9 (.8)	**2.0 (.9)**	**1.9 (.7)**
2. Desire *If you do have sexual intercourse in the next year, how much would you want to use some type of birth control?*	954	0-5	4.6 (1.0)	4.6 (1.0)	4.7 (1.0)
3. Expectation *What are the chances that you will have sexual intercourse without birth control during the next year?*	960	0-100	19.2 (31.2)	**23.7 (33.1)**	**16.8 (30.0)**
4. Willingness *Imagine being with a partner who wants to have sexual intercourse, and you want to have sex, but you have no birth control available. How willing would you be to have sex without birth control?*	958	0-5	1.1 (1.4)	1.2 (1.5)	1.1 (1.4)

Measure	Full Sample (n=961) N	Range	Mean (SD)	Black (n=333) Mean (SD)	White (n=628) Mean (SD)
Pregnancy					
1. Attitude toward Non-Marital Pregnancy *It is alright for a woman to have a child without being married.*[d]	951	1-5	3.2 (1.1)	**3.1 (1.1)**	**3.3 (1.1)**
2. Desire					
2.1 How much do you want to get pregnant during the next month?	958	0-5	.2 (.9)	.3 (.9)	.2 (.9)
2.2 How much do you want to avoid getting pregnant during the next month?	956	0-5	4.7 (1. 0)	4.7 (1.0)	4.7 (1. 0)
3. Expectations					
3.1 Personal Consequences of Pregnancy (Factor)	932	−1.8-3.1	.02 (1.1)	**.3 (1.0)**	**−.1 (1.1)**
3.1.1 Getting pregnant at this time in your life is one of the worst things that could happen to you.[b]	961	1-5	3.9 (1.3)	3.8 (1.3)	3.9 (1.2)
3.1.2 If you had a baby now, you would feel less lonely.[b]	958	1-5	2.1 (.9)	**2.2 (1.0)**	**2.0 (.8)**
3.1.3 If you got pregnant now, you could handle the responsibilities of parenting.	961	1-5	2.8 (1.3)	**2.9 (1.4)**	**2.7 (1.3)**
3.1.4 If you got pregnant now, your partner would be happy.	939	1-5	2.5 (1.2)	**2.9 (1.2)**	**2.3 (1.1)**
3.1.5 It wouldn't be all that bad if you got pregnant at this time in your life.[b]	959	1-5	2.2 (1.1)	**2.3 (1.2)**	**2.1 (1.0)**
3.1.6 If you got pregnant now, you would be forced to grow up too fast.[b]	960	1-5	3.2 (1.2)	**3.1 (1.3)**	**3.3 (1.2)**
3.1.7 If you got pregnant now, you would have to quit school.[b]	959	1-5	2.3 (1.0)	**2.0 (.9)**	**2.5 (1.0)**
3.1.8 If you got pregnant now, you could not afford to raise the child.	961	1-5	3.4 (1.2)	**3.1 (1.2)**	**3.6 (1.2)**
3.2 If you got pregnant now, your family would help you raise the child.	957	1-5	4.0 (.9)	4.0 (1.0)	4.0 (.9)
3.3 What are the chances that you will get pregnant during the next year?	960	0-100	11.4 (22.4)	11.2 (22.9)	11.4 (22.0)

Bold numbers indicate statistically significant (p<.05) difference between black and white respondents, two-tailed independent-sample t-tests.

1-5: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree.

0-5: 0 = not at all, 5: very much

0-100: 0 = no chance, 100 = 100% chance.

[a] Intergenerational Panel Study of Parents and Children (IPS) 1980

[b] Add Health Wave I

[c] Add Health Wave II

[d] National Survey of Family Growth (NSFG) cycle 6.

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Table 3

Oaxaca-Blinder Decomposition estimates of the role of family background, childhood SES, pregnancy-related experiences, and current SES in explaining Race Differences in Attitudes

	1	2	3	4	5	6	7	8
	(1) Mean race difference and (2) Standard error	Amount of race difference explained by differences in:				Total Explained	% Explained	Total Unexplained
		Family Background	Childhood SES	Adolescent Pregnancy-Related Experiences	Current SES			
Sex								
1. Attitude toward Young, Non-marital Sex (factor)	**−.30*** (.06)**	**−.30*** **	−.03	**.12*** **	−.03	**−.23*** **	77%	−.07
2. Desire to have sex in the next year	**−.45*** (.10)**	**−.23*** **	−.01	**.14*** *	**−.07†**	**−.18†**	40%	**−.27*** *
3. Expect to have sex in the next year	−3.61 (2.67)	**−7.26*** **	.23	**7.41*** **	**−3.19*** **	−2.81	78%	−.79
4. Willingness to refuse sex with a partner if it would make him angry	**−.57*** (.12)**	−.04	−.02	−.01	−.06	−.14	24%	**−.43** **
Contraception								
1. Attitude toward Contraception (factor)	**−.15*** (.05)**	**−.07** **	−.005	−.008	**−.06** **	**−.14*** **	91%	−.01
2. Desire to use contraception	−.10 (.07)	**−.09***	−.04	−.01	.05	**−.09†**	91%	.01
3. Expect to have sex without contraception in the next year	**6.88** (2.23)**	−.76	.47	**4.45*** **	.42	**4.58***	67%	2.29

	1	2	3	4	5	6	7	8
	(1) Mean race difference and (2) Standard error	Amount of race difference explained by differences in: Family Background	Childhood SES	Adolescent Pregnancy-Related Experiences	Current SES	Total Explained	% Explained	Total Unexplained
4. Willingness to have sex without contraception	.07 (.10)	.01	−.02	**.23*** **	−.001	**.21** **	100%	−.14
Pregnancy								
1. Attitude toward nonmarital pregnancy.	**−.20** ** **(.07)**	**−.28*** **	−.01	**.09*** **	−.001	**−.19** **	95%	.01
2. Desires								
2.1 Desire to get pregnant during the next month	.03 (.06)	.06	−.004	−.01	.002	.04	100%	−.01
2.2 Desire to avoid pregnancy during the next month	.003 (.07)	.002	−.01	.01	−.02	−.02	0%	.02
3. Expectations								
3.1 Personal Consequences of Pregnancy (factor)	**.35*** ** **(.07)**	**.10** *	−.02	**.10** **	.02	**.21*** **	60%	**.14**†
3.2 If you got pregnant now, your family would help you raise the child.	−.01 (.07)	−.03	.003	**−.06** *	−.05	**−.13** **	100%	.11
3.3 Expect to get pregnant during the next year	−.16 (1.57)	.65	.05	**1.55** *	−.63	1.62	0%	−1.78

Notes: Each cell represents a separate regression model. Standard errors are in parentheses.

Bold numbers indicate statistical significance

†p < .10

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* $p < .05$

** $p < .01$

*** $p < .001$ (two-tailed tests). Standard errors in parentheses.