

Center for Studies in Demography and Ecology



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Abstract

Teenage Expectations and Desires about Family Formation in the United States

Using data collected in 2000 on a racially and ethnically diverse sample of high school seniors, this study analyzes teenagers' expectations and desires about marriage, having children, and becoming unwed parents. The study is the first to examine all six outcomes with a common conceptual framework and data set. The conceptual framework combines family context, opportunity cost, and social-psychological perspectives. All perspectives receive empirical support. Race, ethnicity, gender, type of religious upbringing, parental education, and parental expectations for their child's education are aspects of family context that consistently show significant relationships with expectations and desires. Adolescents with higher opportunity costs – as indicated by having better grades and higher expectations and aspirations for their schooling – expect and desire to marry and have children at older ages. This finding should be regarded cautiously because there is reason to think that opportunity costs and the outcomes are jointly determined. There is modest empirical support for the social-psychological element of the framework. The study investigates several explanatory variables not considered in previous research and finds some to be important predictors of expectations and desires about family formation.

Teenage Expectations and Desires about Family Formation in the United States

A large literature has examined the personal, contextual and policy factors associated with teenage nonmarital childbearing and the two behaviors that produce it – becoming a parent and not marrying. Research has examined the major behaviors that lead to early parenthood – sexual activity, contraceptive use, becoming pregnant, and carrying a pregnancy to term – as well as pregnant teenagers’ decisions about marriage. Kirby (2001) identifies the wide range of factors found to be significantly associated with one or more of these behaviors.

This study complements the body of work on teenagers’ reproductive and marital behavior by examining their expectations and desires about family formation.¹ The questions to be addressed include: When teenagers size up their futures, how soon do they expect to marry and become parents? How commonly do they expect to become unwed parents? At what age do teenagers desire to marry and become parents? How common is it for teenagers to express a desire to be an unwed parent? What factors are associated with teenagers’ expectations and desires about family formation?

I investigate these questions using recently collected data on a racially and ethnically diverse sample of high school seniors in a metropolitan public school system. There are data for young men as well as for young women.

This study advances the literature in several ways. It contributes information on questions that have received little attention. Only four studies analyze expectations about marriage or desires about marriage. There are but two studies of expectations about parenthood and two of desires. Two studies provide evidence on expectations about nonmarital childbearing; only one has evidence on desires. Second, it provides a rich conceptual framework that combines family context, opportunity cost, and social-psychological perspectives. Third, examining all six of these outcomes with a common conceptual framework and data set provides a unified analysis that may better inform us about which explanatory variables matter for which outcomes. Fourth, the data have sufficient numbers of Asian Americans and Native Americans to allow comparisons with other racial and ethnic groups and among Asian ethnicities. This study is only the second that examines Asian Americans’ expectations and desires related to marriage

¹ This study regards “desires” and “aspirations” as synonyms.

and parenthood. It is unique in including Native Americans. Last, the study investigates several other explanatory variables also not considered in previous research.

Despite enormous public interest in teenage nonmarital childbearing and the outpouring of research on this issue, only Trent (1994a) provides a multivariate investigation of expectations related to nonmarital childbearing for individuals in their late teenage years. That study does not examine desires. Its data are for 1979, which provides information about Americans who are roughly a generation older than the teenagers in this study. Evidence is lacking on contemporary adolescents' expectations and desires about nonmarital childbearing.

In the early 1980s, young women who expected or wanted an adolescent or nonmarital birth were more likely to become young unwed mothers (Trent & Crowder 1997, Zabin et al. 1993). If such a relationship still exists, a better understanding of teenagers' expectations and desires about nonmarital childbearing will deepen our understanding of the current sources of teenage unwed parenthood.²

Related Literature

A vast literature describes and theorizes about the timing, occurrence, and sequencing of life course events such as marriage and parenthood, and provides evidence about factors related to these events (Kirby 2001, Seltzer 2000, Rindfuss 1991, Rosenzweig & Stark 1997, Waite et al. 2000). Yet quantitative studies about teenagers' and young adults' expectations and desires about family formation are sparse. Eight have appeared. The first five discussed below examine youth age 19 or younger. The other three use samples predominantly composed of individuals age 20 and older.

Trent's (1994a, b) studies are most comparable to this one. She examines whether young never-married respondents without children expect to marry within five years, to have a nonmarital birth within five years, and to have a child before age 20. Her sample is from the 1979 National Longitudinal Survey of Youth (NLSY). Trent (1994a) presents separate estimates for African Americans, Hispanics, and whites. Trent (1994b) provides estimates when the three groups are combined.³

² Expectations and desires are related to outcomes in other social domains such as educational and occupational attainment (Carr & Sheridan 2001, Sewell et al. 2004, Tolnay & Pharris-Ciurej 2003). This suggests they may be related to behavioral outcomes in this domain as well.

³ Trent (1994b) also examines expectations about number of children, and childlessness.

Smith & Zabin (1993) present descriptive data from responses to “What do you think is the best age for a woman (man) to get married? What do you think is the best age for a woman (man) to have her first baby (to become a father)? The responses may reflect students’ ideal ages for marriage and parenthood. The authors compare responses to both questions to identify students who think that it is alright to be an unwed parent, i.e. who think the best age for a first birth is less than that for marriage. The sample includes students in grades 7-12 in four inner-city schools.⁴

East (1998) examines girls’ desired ages at first marriage and first birth and perceived likelihood of nonmarital childbearing. Her sample of students in public junior high schools in southern California includes Southeast Asian Americans as well as African Americans, Hispanics, and whites. She estimates separate models for each group.

Starrels & Holm (2000) investigates young adolescents’ expectations about being married by age 24 and having a child by age 24. The study does not have information about expectations about nonmarital childbearing. Respondents range in age from 11 to 16. The sample comes from Wave 2 of the National Survey of Children, collected in 1981, and is restricted to children of married mothers in their first marriage. An attractive feature of this study is the availability of mothers’ expectations for the same outcomes.

The five studies discussed above examine youth age 19 or younger. In contrast, Bulcroft & Bulcroft (1993), Lichter, Batson & Brown (2004), and South (1993) use samples predominantly composed of individuals age 20 or older. The samples include parents and, in South (1993) and Lichter et al. (2004), formerly married persons.⁵ These three studies study expectations and desires about marriage but not about childbearing.

South (1993) uses the National Survey of Families and Households (NSFH) to examine desires about marriage among unmarried, currently noncohabiting persons age 19 to 35. In a complementary study using a similar NSFH sample, but restricted to the never married, Bulcroft & Bulcroft (1993) analyzes several views about marriage, including “perceived likelihood of marriage,” a variable similar to expectations about marriage. Both studies focus on

⁴ The phrasing of the questions leaves some ambiguity about whether students were reporting the ages they thought were best in general, or their own best or ideal ages.

⁵ Waller & McLanahan (2004) looks at unmarried parents’ expected likelihood of marrying their current partners, assessed shortly after the birth of their child. Unlike the other studies, the responses reflect expectations about marrying a specific individual, not expectations about marriage in general.

understanding racial and, in South (1993), ethnic differences in the dependent variable. The data are from 1987 and 1988.

Lichter et al. (2004) looks at single, currently unmarried women, including cohabitators and mothers. The sample from the National Survey of Family Growth 1995 provides data on marital expectations and ranges in age from 15 to 45. The sample from the 1994 wave of the NLSY 1979 has data on marital desires and spans ages 29-37.

These eight studies differ among themselves and with the current study along several major design characteristics, summarized in the appendix table. The current study differs from **all** the others in three important dimensions. It is the only one that analyzes expectations and desires for all three outcomes: marriage, parenthood, and nonmarital childbearing. Examining the resulting six dependent variables with a common conceptual framework and data set provides a unified analysis that may better inform us about which explanatory variables matter for which outcomes.

Second, because the data are for the year 2000 they provide a snapshot of contemporary teenagers' expectations and desires. With data from 1979 or 1981, Trent (1994a, b), Smith and Zabin (1993) and Starrels & Holm (2000) provide information about American youth who are roughly a generation older than the teens in this study.⁶

The third major difference is the respondents' age range. This study examines persons age 17 to 19. Many will have already been in significant romantic relationships that stimulated them to consider their feelings about marriage and childbearing. All of them are on the threshold of young adulthood, a time when behaviors and decisions related to marriage and childbearing become highly salient in their lives. In contrast, East (1998) and Starrels & Holm (2000) examine children age 11 to 16. These pre-adolescents and early adolescents will have had limited life experience both in general and with serious romantic and sexual relationships. For them the salience of marriage and childbearing lies years in the future.⁷ It seems likely that responses about expectations and desires about marriage and childbearing from persons in their late teens more accurately indicate their "true" values, more fully reflect the influence of their social background and other socioeconomic factors, and will better forecast their actual behaviors than responses from children age 11 to 16.

⁶ East (1998) does not report the year of data collection, but it seems to have been from the mid 1990s.

⁷ The mean age is 12.9 in East's sample and 13.6 in the other.

Trent (1994a, b) mixes reports from 14 to 16 year-olds with those from persons age 17 to 19. The sample in Smith & Zabin (1993) includes 13 to 16 year-olds as well as older teens. For reasons just noted, there may be concern about the quality of responses from the younger teens and their comparability with responses from older teens. If this were a problem, because Trent (1994a, b) does not have reports from youth age 11 to 13, it would be less serious in her two studies than in the others.

Bulcroft & Bulcroft (1993) and South (1993) analyze unmarried or never married non-cohabitators age 19-35. The women in Lichter et al's (2004) NLSY sample are age 29-37 in 1994 and 44 percent of those in the NSFG are age 25 or older. Persons with strong desires for marriage or who had high expectations of marriage are likely to be missing from these samples, especially among the older age groups. Such sample selection may bias the estimates.⁸

There are other notable differences and similarities between the current study and the others. It is unique in having data on Native Americans. The high Asian representation in the sample allows estimates of the relationship between expectations and desires and several Asian ethnicities: South Asian, Filipino, Vietnamese, and Cambodian. East (1998), the other study that considers Asian Americans, has information only for children of Vietnamese and Cambodian origins. The current study relies on data for high school seniors from one school district. Five of the others use nationally representative data that include non-students. Like all except East (1998) and Lichter et al. (2004), this study analyzes males as well as females.⁹ And like four of the others, the sample includes Hispanics.

A closely related stream of research addresses the nature, determinants, and behavioral effects of attitudes about marriage, childbearing, premarital sexual activity, cohabitation, and similar demographic outcomes (Thornton 1989, 1991, Thornton & Young-Demarco 2001, Thornton & Camburn 1987, Trent & South 1992, Zabin et al. 1984). Such studies usually investigate respondents' general attitudes, normative views and moral beliefs about marriage,

⁸ Lichter et al. (2004) suggests the issue may not be serious, but does not formally test for selection. South (1993) does not address this issue. Bulcroft & Bulcroft (1993) uses Heckman's (1979) two-stage procedure to correct for selection and reports that the correction did not affect the findings. The identifying assumptions for the selection equation are questionable. For example, the analysis assumes that religion and parents' education affect whether a person is in the sample – that is, not married – but do not affect that person's perceived likelihood of marriage. The conceptual basis for such an assumption is unclear. The paper does not test for over-identifying restrictions (Godfrey 1988).

⁹ Research on actual fertility focuses entirely on females because males' reports are generally regarded as unreliable (Garfinkel, McLanahan & Hanson 1998, Rendall et al. 1999). When the dependent variables are expectations and desires, there is less reason to doubt the reliability of males' reports.

divorce, premarital sexual activity, nonmarital childbearing, and similar matters, not their expectations or desires about their own behavior. A person's attitudes about a demographic outcome may affect her expectations and desires about having that outcome for herself, but are not synonymous with them.

Other research analyzes intentions about fertility, including nonmarital fertility (Freedman, Freedman & Thornton 1980, Henderson & Placek 1981, Schoen et al. 1999, Schoen & Tufis 2003, Westoff & Ryder 1977). Such studies tend to focus on expected and desired completed family size, the intent to have children at all, or the intent to have another child, but not on the expected or desired age for first becoming a parent. The literature on fertility intentions often uses samples of married persons, which of course precludes analysis of expectations and desires about getting married or nonmarital childbearing.

Conceptual Framework

The conceptual framework hypothesizes that family context, opportunity costs, and sense of confidence and control directly determine expectations and desires about marriage, having children, and nonmarital childbearing. It also posits that family context has indirect effects transmitted through its influence on opportunity costs and sense of confidence and control. Figure 1 summarizes the hypothesized relationships between the theoretical constructs and the dependent variables.

The **family context** perspective draws attention to the values, cultural background, and other characteristics of family that directly affect an adolescent's expectations and desires about family formation (Trent 1994a). For example, the family's religion is likely to affect an adolescent's views about premarital sexual activity and the importance of marriage and raising children. Trent (1994a) argues that Catholic and fundamental Protestant youth are less likely to expect early and nonmarital childbearing, and Catholic youth are also less likely to expect early marriage. The same relationships would hold for desires about these outcomes.

Family structure and size, holding income constant, are related to children's marriage and childbearing behavior (Kirby 2001, McLanahan & Sandefur 1994, Painter & Levine 2000). One may reasonably infer that family structure and size are also related to children's expectations and desires about marriage and childbearing.

Parental income, education, and expectations for their children's education are other important elements of the family context. Parents with greater education and higher expectations

for their children's education may give their children more encouragement to pursue ambitious educational and career goals and avoid early parenthood. Higher income parents may provide the same kind of encouragement and can offer greater financial support for realizing those goals. This logic suggests that these parental characteristics are likely to be positively related to adolescents' expected and desired ages of marriage and childbearing and to the likelihood that adolescents expect and desire to avoid nonmarital parenthood.

Race, ethnicity, being foreign born, and speaking a language other than English at home are partly proxies for cultural values and experiences about family life and sexual behavior. I therefore expect these characteristics to be related to adolescents' expectations and desires. The nature of the relationship would differ across these characteristics. For instance, based on theory and prior research (Kirby 2001, Trent 1994a, b, East 1998), one would expect African Americans to be most likely to expect or desire a nonmarital birth, followed in order by Native Americans, Hispanics, whites, and Asian Americans. A similar argument suggests that differences in the gender roles for which boys and girls are socialized may lead to differences by gender in expectations and desires.

Foreign born seniors who arrived in the United States at an early age have had many years to absorb American culture and its norms about sexual behavior, marriage, and family. Those who arrived as young adolescents have been exposed to the culture for relatively few years before their senior year. Most contemporary foreign born youth are from Asian and Latino societies that have more traditional views about the value of marriage and raising children and the stigma of nonmarital childbearing. In that case, I would expect age of arrival in the United States to show a negative relationship to expectations and desires about nonmarital childbearing and probably also to expected and desired ages of marriage and parenthood.

Young women may plausibly believe that early marriage and early motherhood (in or outside of a marriage) would create substantial demands on their time to meet child care and household responsibilities. Those demands would conflict with the human capital investment activities of adolescence and early adulthood – finishing high school, going to college, enrolling in other post-secondary education and training programs, seeking advanced degrees, and obtaining early work experience. The **opportunity cost** framework suggests that the higher the returns a young woman expects from her human capital investments, the less likely she would be to desire or expect early marriage, early parenthood, and unwed parenthood. Similar logic would

hold for young men with egalitarian views about gender roles, who are likely to perceive the same conflicts.¹⁰

Research by economic demographers has naturally adopted the opportunity cost framework (e.g. Duncan & Hoffman 1990, Moffitt 2000, Wolfe, Wilson & Haveman 2001). Sociologists such as Wilson (1987) and Sweeney (2002) have argued along similar lines in analyses of how changes in men's and women's economic prospects have affected marriage. Drawing on the same logic, Anderson (1989) maintained that "the ghetto adolescent sees no future to derail, no hope for tomorrow very different from today, hence, little to lose by having an out-of-wedlock child" (p. 76).

This framework implies that personal and family background characteristics related to educational opportunity and attainment, earnings ability, and other aspects of adult socio-economic status will influence expectations and desires about family formation via their effects on opportunity costs. The human capital and status attainment literatures suggest that determinants of high school seniors' future opportunity costs include characteristics such as race, ethnicity, sex, immigrant status, family structure, family size, family income, parental education levels, parental expectations about the senior's educational attainment, an adolescent's own expectations and aspirations for educational attainment, and high school achievement (Haveman & Wolfe 1995, Kao & Thompson 2003).

Social-psychological expectancy models (Ellwood 1994, Ellwood & Jencks 2003) focus on an individual's **senses of confidence and personal control**. Plotnick (1992), drawing on social-psychological theories of problem behavior (Jessor & Jessor 1977), self-esteem (Rosenberg 1990) and internal control (Rotter 1966), argues that higher levels of self-esteem, locus of control, and educational aspirations and expectations are likely to lower young women's chances of nonmarital childbearing. One may infer that these personal characteristics would also influence expectations and desires about nonmarital childbearing in the same way. A similar line of argument may apply to young men.

¹⁰ Young men with traditional views about gender roles may expect that early marriage will not impede their plans (and perhaps facilitate them) for attending college, seeking an advanced degree and pursuing a career. They may also think that early parenthood, whether married or not, will have little effect on their schooling and work if the mother and other women shoulder most child care responsibilities. Because such men perceive no opportunity costs of marriage and parenthood, their expectations and desires about marriage, parenthood and nonmarital childbearing would be largely determined by other variables.

Expectancy models can produce the same predictions for women as the opportunity cost framework (Ellwood & Jencks 2003). Consider a young woman who has low educational aspirations and foresees poor opportunities in the labor market in part, perhaps, because of low self-esteem and perceived lack of control. Both perspectives imply that she is more likely to expect and desire early marriage and motherhood as alternative means to personal satisfaction and social approval. She would also be more likely to expect and desire nonmarital childbearing. For young men, expectancy models do not yield clear implications about the relationships between self-esteem, locus of control, and expected and desired age of marriage and parenthood.

Contextual variables such as local economic conditions and the cost and availability of abortion may affect opportunity costs and, hence, the outcomes. Contextual variables indicative of local culture, such as the extent of nonmarital childbearing in the neighborhood and local norms about marriage and family life, may also affect the outcomes. This study does not consider the theoretical or empirical role of contextual variables because the data come from one school district, and, hence, have little or no variation in extra-familial context.

Data and the Dependent Variables

The data are from a cross-sectional survey of high school seniors in a racially and ethnically diverse metropolitan public school district in the Pacific Northwest.¹¹ The survey was administered in the spring of 2000 as part of a broad study of seniors' school activities and outcomes and their future educational, labor market, and personal plans. With the cooperation of the district administration and school principals, seniors in the five comprehensive high schools in the district filled out an in-school "paper and pencil" questionnaire. In some schools seniors completed the survey in regular classrooms. In other schools students were assembled in an auditorium to take the survey. Student cooperation was very good. Less than two percent of enrolled seniors (or their parents, whose permission was required for students under age 18) refused to participate. For seniors who were absent on the day of the survey, the study team conducted four follow-up mailings, using procedures recommended by Dillman (2000). The follow-up mailings increased the sample by more than 17 percent. The final sample contains 1,156 seniors, of which 528 (46 percent) are young men.

¹¹ I thank Charles Hirschman for providing this summary of the survey and its coverage.

Evaluation of the survey's coverage is clouded by the definition of a "high school senior," and the logistics of locating persons who are nominally registered as high school students, but are not attending school on a regular basis. In theory, high school seniors are students who have completed the 11th grade, are currently enrolled in the 12th grade, and are likely to graduate from high school at the end of the year. In practice there is considerable variation from this definition. Some students consider themselves to be seniors (and are taking senior classes and listed as seniors in the school yearbook), but are classified in school records as juniors because they have not earned sufficient credits. In addition to "fourth-year juniors," there are a number of "fifth-year seniors" who were supposed to have graduated the year before. Many fifth year seniors are enrolled for part of the year or are taking only one or two courses to obtain the final credits to graduate.

About ten percent of seniors in the district are not enrolled in regular high schools, but instead are being home-schooled or are assigned to a variety of alternative programs for students with academic, behavioral, or disciplinary problems. Because many of these seniors have only a nominal affiliation with the public schools — the largest group was enrolled in high school equivalency courses at community colleges — they are less likely to respond to a request to complete a survey of high school seniors. Even among students enrolled in the comprehensive high schools, there was a considerable number of "non-mainstream" students who completed the survey at lower rates than others. Such students included the six percent of seniors who were taking community college classes for college credit and another seven percent who were in special education classes for part or all of the school day.

These problems affected the response rate and make it difficult to precisely measure survey coverage. For regular students — graduating seniors at one of the five major high schools — the response rate is around 80 percent. If one considers a broader universe of students, including students with marginal affiliation to high school and other hard-to-contact students, the effective rate of coverage of all potential seniors is probably less — perhaps around 70 percent. Although the rate of survey coverage of all high school seniors is less than desirable, the problems are endemic in student survey research. Most studies of high school students that are limited to students present on the day the survey is conducted will have lower response rates.

Dependent variables: The dependent variables "Expected age of marriage" and "Expected age of parenthood" derive from two survey questions:

At what age do you expect to get married?

At what age do you expect to have your first child?

The survey offered a choice of age ranges: before 18, 18-19, 20-21, 22-23, etc. To obtain tractable linear measures, I generally assigned the midpoint of each respondent's selected age range as the value of that respondent's dependent variable.¹²

The dependent variable "Expects to have a nonmarital birth" (Expects NMB) is derived from the same two questions. For each student who provided an age to both questions, this dependent variable is coded "yes" and given a value of 1 if the expected age of marriage is greater than the expected age of first becoming a parent, and "no" (0) otherwise. Students also had the option of responding "I do not expect to marry" and "I do not expect to have children." Those listing an age when they expect to have their first child but saying they do not expect to marry are coded "yes." Those not expecting to have a child are always coded "no." Roughly three percent of seniors report "I am or partner is pregnant" or "Have a child." They are dropped from the analysis samples.

The three corresponding variables about desires, "Ideal age of marriage," "Ideal age of parenthood" and "Ideal is to have a nonmarital birth" (Ideal is NMB) are derived from two parallel questions and the same coding scheme:

What would be the ideal age for you to marry?

If it were just up to you, what is the ideal time to have your first child?

Dropping observations lacking information on the dependent variable leaves samples ranging from 975 to 1,056.

In the questionnaire the two marriage questions appear in sequence then, following one intervening question, the two parenthood questions appear. Hence, a pair of responses leading to a "yes" about nonmarital childbearing is highly unlikely to have arisen because a respondent forgot the expected (ideal) age of marriage she had indicated when answering the expected (ideal) age of parenthood.

None of these variables is a sure predictor of future outcomes. Some seniors may be overly optimistic of their ability to control the nature and timing of their fertility and marital

¹² The response "before age 18" is coded as 17.5. For the range 31-35, I assumed a leftward skew in the distribution and assigned a value of 32. For the open range, 36 or older, I assigned 38. The currently married and those who said they do not expect to marry are omitted from the marriage analyses. Similarly, parents and those reporting they do not expect to be parents are omitted from the parenthood models.

choices. Others probably will revise their expectations and desires as they gain more life experience, and act upon the revisions. Some will not have thought much about marriage and childbearing and so may provide off-the-cuff responses. Nonetheless, if systematic relationships between the dependent and explanatory variables emerge, one may reasonably argue that the six measures reflect real expectations and desires, albeit with unknown degrees of measurement error.¹³

As table 1 shows, the mean expected and ideal ages for marriage are nearly identical at 25.0 and 24.9. The correlation between the two variables is 0.77. The corresponding ages of parenthood are also highly correlated ($r = 0.83$) and their means nearly equal at 26.4 and 26.2. Among the 31 percent of seniors whose expected and ideal ages of marriage differ, most (19 of the 31 percent) expect to marry after their ideal age. Among the 24 percent of seniors whose expected and ideal ages for having their first child differ, most (15 of the 24 percent) expect to have their first child after their ideal age.

The mean parenthood ages exceed the mean marriage ages by about 16 months, but many individuals' responses do not follow this normative ordering. Columns 5 and 6 show that 10.3 percent of the seniors expect to be an unwed parent and almost the same share, 11.1 percent, would like to be an unwed parent.

For the age variables, the means for females are 0.8 to 1.0 years less than the means for males. Among females, 10.9 percent expect to be an unwed parent and 12.3 percent would like to be. Among males the percentages are slightly lower – 9.5 percent for both variables.

Seniors who expect a nonmarital birth generally expect early parenthood. Among such seniors, 57 percent expect parenthood by age 23 and 82 percent expect it by age 25. For the full sample the corresponding percentages are 16 and 40. Among seniors desiring a nonmarital birth, 54 percent desire parenthood by age 23 and 87 percent desire it by age 25. In the full sample the corresponding percentages are 17 and 45.

There are clear differences by race and ethnicity. The mean marriage ages for African Americans, Native Americans, and Asian Americans fall in the narrow range 25.3 to 25.7. All exceed the mean ages for Hispanics and whites by 0.6 to 1.1 years. For parenthood, Native Americans, Asian Americans, and whites have the higher means, which range between 26.2 and

¹³ Measurement error in the dependent variable does not bias regression estimates, but does inflate their standard errors. Hence, tests of significance will tend to be conservative.

26.9. For both the expected and ideal measure, each race and ethnic group shows a larger mean age of parenthood than mean age of marriage. The difference between these means varies. It is largest for whites, followed by Asian Americans, Hispanics, and Native Americans. It is smallest for African Americans, for whom the difference is only 0.2 to 0.3 year. The larger the difference, the less likely it is that a group member would report a higher expected or desired age of marriage than parenthood, or, put otherwise, would expect or desire unwed parenthood. This expectation is borne out by the race and ethnic rankings in columns 5 and 6. Between 6 and 8 percent of Asians and whites expect or desire to be an unwed parent. Among African Americans and Native Americans the percentages are about three times larger: 20.9 to 22.6 percent. Hispanics fall in between.

Though seniors who expect to be unwed parents overlap with those who indicate they desire to be, the two groups do not closely match. The divergence between the two may be more than expected *a priori*. Of the seniors providing data on both dependent variables, 5.1 percent have “yes” responses for both, 5.1 percent expect to be an unwed parent but do not think this is ideal, and 6.2 percent would like to be an unwed parent but do not expect to be. Thus, these two dependent variables appear to tap different constructs. Because of the divergence between the two sets of seniors, the explanatory variables related to each outcome may well differ.

Estimation Strategy and the Independent Variables

The objective of this study is to understand factors related to expectations and desires about family formation. The estimation strategy, therefore, focuses on identifying the direct paths between family context, opportunity costs, and sense of confidence and control and the six dependent variables.

Figure 2 presents the structure and specification of the estimation model. I represent family context by a set of family background and exogenous personal characteristics. The theoretical discussion listed a number of possible characteristics. Below I discuss the specific ones used in the empirical work and explain their construction. In principle, the coefficients on these characteristics indicate the direct effects of these variables, net of indirect effects acting through their impacts on opportunity costs and sense of control and confidence. In practice,

because of the limitations of the available opportunity cost and psychosocial variables, coefficients on the family context variables pick up part of the indirect effects as well.¹⁴

Even with very rich data, financial measures of opportunity cost are difficult to construct (for examples see Duncan & Hoffman 1990 and Wolfe, Wilson & Haveman 2001). The data available for this study do not have enough information to construct such measures. I use three proximate indicators instead: high school grade point average and own educational aspirations and expectations.

The model represents senses of confidence and control by measures of self-esteem and locus of control. Own educational aspirations and expectations may also be indicators of this construct as well as of opportunity costs. This makes it harder to interpret the meaning of significant coefficients on these latter two variables.

Teenagers who expect or desire early marriage, early childbearing, or nonmarital childbearing may, as a result, lower their educational aspirations and expectations. They may place little importance on earning grades adequate for admission to community or four-year colleges. In that case opportunity costs and the outcomes would be jointly determined, which would bias the estimates. Given this possibility the analysis also takes a reduced form approach by estimating models that omit the indicators of opportunity costs.¹⁵

To estimate models for the four linear dependent variables I use OLS regressions. I use logit regressions to estimate models for the dichotomous indicators about nonmarital childbearing.

Independent variables: The data provide several measures of family background. Mother's and father's schooling are coded as dummy variables equal to one if the relevant parent has no more than a high school degree. Family structure is represented by a dummy variable equal to one if the student's parents are married to each other and by number of siblings. Religious upbringing is coded by dummy variables for Baptist, Catholic, other Christian or Jewish, and a non-western religion. "Non-western" includes Buddhism, Hinduism, Islam, and Taoism. Eight percent of those providing a response selected a non-western faith. The omitted category is no religion.

¹⁴ Essentially, there is an omitted variable problem because other salient indicators of opportunity costs and sense of control and confidence are not in the regressions.

¹⁵ The data set precludes an instrumental variables approach. It contains no variables for which one can plausibly argue that they affect opportunity costs but not the dependent variables.

The data provide parental expectations of their child's final level of education, as reported by the student. The measure equals one if one parent expects the senior to obtain at least a bachelor degree, two if both parents have this expectation, and zero otherwise.¹⁶

Individual exogenous variables include a dummy variable for gender, coded one for female, and dummy variables for African American, Hispanic, Asian American, and Native American (American Indian, Hawaiian, or Pacific Islander). There are three other indicators of cultural and ethnic background as well: dummy variables for being foreign born and for speaking a language other than English at home, and age at the time of arrival in the U.S. The latter is set to zero for the native born.

One indicator of opportunity costs, performance in high school, is measured by the senior's cumulative grade point average, recorded on a four point scale. This figure was obtained from administrative records, not student self-reports. Educational expectations (aspirations) are represented by a dummy variable equal to one if the senior reports he expects to (would like to) earn at least a bachelor degree. The conceptual framework implies that grades, expectations, and aspirations will have positive relationships with expected and desired age of marriage and of having children, and negative ones with expected or desired nonmarital childbearing.¹⁷ Because of high correlation between educational aspirations and expectations ($r = 0.77$), each empirical model includes one of these two variables.

The psychosocial variables are indices of self-esteem and locus of control. Both are based on small standard sets of items and measured on a one to four scale. Higher values indicate greater self-esteem and stronger internal locus of control. The conceptual framework hypothesizes that both indices have positive relationships with expected and desired ages of marriage and parenthood, and negative ones with expected or desired nonmarital childbearing.¹⁸

Table 2 provides descriptive statistics for the independent variables in the "Expects NMB" sample. Corresponding figures for the other five samples are nearly identical. Young

¹⁶ This coding dispenses with estimation problems that can arise from the high co-linearity ($r = 0.67$) of mothers' and fathers' expectations. If the student does not know a parent's expectations or there is only one parent present in his life, the maximum value of this variable is one.

¹⁷ Stewart (2003) finds that young women's educational and occupational aspirations are positively related to age of first birth.

¹⁸ To minimize loss of observations, I include missing value dummies for all explanatory variables not answered by some members of the analysis sample. For each variable except religion, data are missing for no more than five percent of the sample. Religion is not reported by 47 percent. Coefficients for omitted variable dummies do not appear in the tables but are available upon request.

women comprise 55 percent of the sample. Racial and ethnic diversity is high. Asian Americans make up almost a fifth of the sample. African Americans comprise 17 percent, Hispanics eight percent, and Native Americans five percent. One quarter speaks a language other than English at home and one sixth is foreign born. Among foreign born the mean age of arrival in the United States is seven. About 60 percent have married parents. The mean number of siblings is 2.7. Thirty-five percent of fathers and 41 percent of mothers have a high school degree or less.

Most parents expect their child to earn at least a bachelor degree. Well over half the seniors both aspire and expect to earn at least a bachelor degree. The average respondent rates his self-esteem and locus of control both at 3.1.

Estimation Results

Table 3 presents estimates of the empirical model in figure 2 (referred to as the “full” model) for the four linear dependent variables. Columns 1 and 2 show the findings for the models of expected and desired age of marriage. Columns 3 and 4 contain corresponding findings for age of parenthood. Overall, the independent variables better account for the variance of the parenthood outcomes ($R^2 = .18$ and $.15$) than the marriage outcomes ($R^2 = .12$ and $.10$).

Expected and desired age of marriage and parenthood: Three aspects of family context are consistently associated with the outcomes in table 3: gender, race and ethnicity, and religious upbringing. Young women expect and desire ages of marriage and parenthood roughly one year younger than young men. Hispanics, African Americans, Asian Americans, and Native Americans all expect to marry at an older age than non-Hispanic whites, and all except Hispanics desire a later age of marriage as well. The differences with whites range from 0.86 to 1.64 years and are larger than the unadjusted means in table 1. Race and ethnic differences in expected and desired age of parenthood are less pronounced. Relative to whites, Asian Americans expect parenthood 0.69 year later and Native Americans desire parenthood 0.84 year later ($p = .09$). The latter estimate is only significant at the .09 level. Hispanics and African Americans do not differ from whites.

Compared to seniors raised without a religion, Baptists expect and desire ages of marriage and parenthood at substantially earlier ages. The differences range from 1.28 to 2.17 years or roughly half the standard deviation of the mean age. Seniors who are Christian but neither Baptist nor Catholic, or who are Jewish, also expect and desire younger ages of marriage and parenthood. The size of the relationship is always smaller than for Baptist seniors.

Several other aspects of family context show no relationship with the four outcomes. These include the three other indicators of ethnic and cultural background, parental education, parental expectations about the senior's educational attainment, and both measures of family structure – parents' marital status and number of siblings.

The indicators of opportunity costs show strong, significant relationships with the four outcomes in the predicted directions. Seniors expecting a bachelor degree or higher expect and desire to marry and become parents at a later age than seniors with lower educational ambitions. The age difference is about one year for expectations and between seven and ten months for desires. When the model includes educational aspirations instead of expectations, results are nearly identical.¹⁹ Grade point average similarly shows a strong positive relationship with all outcomes. A one standard deviation (0.89) increase in this average is associated with an increase in the marriage ages of about six months and in the parenthood ages of almost 12 months.

The two indicators of sense of confidence and control show little relationship to the outcomes. The one significant coefficient of the eight suggests that locus of control has a positive relationship with expected age of parenthood.

The pattern of coefficients for each explanatory variable foreshadows the results for models of the probability of expecting or desiring a nonmarital birth. Suppose a variable has a significant negative relationship with expected age of marriage, and an insignificant relationship with expected age of parenthood. Seniors with higher values on this characteristic would expect to marry earlier than other seniors, but would not differ in the age they expect to become parent. One would forecast such seniors to be less likely to expect nonmarital parenthood. By similar logic, if a variable has insignificant relationships with both outcomes, or if it has a significant relationship with both outcomes and the two coefficients have the same sign and approximate size, the variable is likely to show no relationship with expectations of nonmarital parenthood.

Expectations and desires about nonmarital childbearing: With these points in mind, consider the logit models of nonmarital childbearing in table 4. Being female is not associated with Expects NMB. This result is consistent with table 3, in which the significant negative coefficients on expected age of marriage and parenthood have nearly the same magnitude. Being female has a weak positive relationship with Ideal is NMB. This, too, is in accord with the slightly larger negative coefficient on "female" in table 4's expected age of parenthood model.

¹⁹ All four coefficients are significant. Their magnitudes are .967, .567, 1.081, and .642.

There are large, significantly positive relationships between being African American and the probability of expecting and desiring nonmarital parenthood. These findings are consistent with table 3, which shows strong associations between being African American and expecting and desiring later marriage and no associations with expected or desired age of parenthood. The large positive relationships between being Native American and both outcomes similarly accord with estimates in table 3. The same holds for the insignificant relationships between Asian American ethnicity and both outcomes and for the differing associations between Hispanic ethnicity and both outcomes.

Being Baptist has larger negative effects on expected and desired age of parenthood than on expected and desired age of marriage. One therefore expects a negative relationship with expected and desired nonmarital childbearing. Both coefficients in table 4 are negative, but neither is significant. Table 4's other findings on religion do not show as tight a connection with the corresponding findings in table 3. Though the Catholic and non-western religion dummy variables are insignificant in all models in table 3, they have significant ($p = .06$ and $.08$ respectively) negative associations with Expects NMB. And though the coefficients on the "Other Christian or Jewish" dummy variable are almost the same for expected age of marriage and parenthood, this variable has a large negative relationship with Expects NMB.

The coefficients on speaking a language other than English at home, foreign birth, and age of arrival in the U.S. are insignificant in table 3. Yet interestingly, all are related to one or both nonmarital childbearing variables. Speaking a language other than English at home is weakly associated ($p = .09$ or $.10$) with lower chances of both outcomes. Ideal is NMB is positively related to foreign birth. This is offset by the negative relationship with age of arrival. Foreign born adolescents who arrived in the U.S. at age five or older are, on net, less likely to desire nonmarital parenthood than their native classmates.²⁰

Because higher educational expectations increase expected (desired) age of marriage and parenthood by almost the same amount, they have no effect on the probability of expecting (desiring) a nonmarital birth. Because a higher grade point average has a larger positive effect on both ages of parenthood, one expects a negative relationship with expected and desired nonmarital childbearing. Both coefficients in table 3 are indeed negative, but neither is

²⁰ The absolute value of the ratio of the two coefficients, $.882$ and $-.202$, is 4.37 . Sixty percent of the sample's foreign born seniors arrived at age five or older.

significant ($p = .18$ or $.19$). Stronger internal locus of control is associated with a lower likelihood of desiring nonmarital childbearing

An alternative way to analyze factors associated with expected nonmarital childbearing is to define the dependent variable as expected age of marriage minus expected age of parenthood. A positive coefficient means that increases in an explanatory variable tend to increase the expected age of marriage relative to the expected age of parenthood. This means that persons with higher values for that variable are more likely to expect to be unwed parents. One can proceed analogously to examine factors associated with desired nonmarital childbearing.

Estimates of such models (not shown but available upon request) generally confirm the relationships revealed by the logit models. The coefficients on the dummies for race and ethnicity and on age of arrival in the U.S. have the same signs and significance levels as in table 4. The corresponding coefficient on being foreign born has the same sign as in column 2, but is significant at the ten percent level. Locus of control shows a stronger negative relationship than in the logit models. The notable discrepancy with the logit models is the lack of relationship between religion and either age difference. Also, unlike the logit model, having parents married to each other has a significant ($p = .07$) negative association with Expects NMB.

Reduced form estimates: As observed earlier, if opportunity costs and the dependent variables are jointly determined, estimates of the model in figure 2 may be biased. To address this possibility, I estimated reduced form models that omit the indicators of opportunity costs and include all the other explanatory variables in tables 3 and 4.

In the reduced form models of expected and desired ages of marriage and parenthood, the signs and significance levels of the coefficients are very similar to those in table 3. (Results not shown but available upon request.) There are three important exceptions. First, parental expectations about the senior's educational attainment become strongly significant ($p < .01$) rather than being insignificant. In line with the theoretical framework, higher expectations are associated with older ages in all four models. The magnitudes of all four coefficients range between 0.34 and 0.41. Second, father's education now shows a significant relationship with three of the four outcomes. The exception is expected age of parenthood. Children of fathers with no more than a high school degree report lower expected and desired ages of marriage and parenthood. Third, locus of control has a significant, positive coefficient in models of expected and desired age of parenthood.

Similarly, in the reduced form logit models the signs and significance levels of coefficients are nearly identical to those in table 4. The only exceptions are that higher parental expectations now have a negative association with Expects NMB ($p = .07$) and number of siblings has a positive association with Ideal is NMB ($p = .07$).

The reduced form models suggest three conclusions. Including indicators of opportunity costs does not bias estimates of the other explanatory variables' coefficients.²¹ The relationship between parents' expectations for their child's educational attainment and the outcomes is fully mediated by their effect on the child's own educational expectations and aspirations and her grades. And the same appears to be true, to a lesser extent, for father's education.

Alternative specifications: To explore more closely the relationship of ethnicity to the six outcomes, I classified Asian American respondents' ethnicities as East Asian, Vietnamese, Cambodian, and Filipino/other Asian. Each group accounts for 4.5 to 5 percent of the sample. When I re-estimated the models with these dummy variables in place of the Asian American dummy, neither F tests of the four linear regressions nor χ^2 tests of the two logit regressions reject the hypothesis that the four coefficients are equal.

Much research finds family structure and parents' (especially mother's) education to be important predictors of adolescent outcomes. Yet in tables 3 and 4 only one of the 18 coefficients on these variables is significant, and only at the ten percent level. To examine family structure more fully, I replaced the dummy variable for whether the student's parents are married to each other by one for whether the student lives with both parents (married or not). The coefficient again is insignificant in all six models.

To probe the unexpected lack of association between parental education and the outcomes, I estimated full and reduced form models that included either the mother's or the father's education instead of both. In another alternative I specified parental education as the sum of the two parents' variables. Table 5 shows the results.

These specifications suggest a more important influence of parents' education on children's expected and desired ages of marriage and parenthood. The dummy variable for having a father with a high school degree or less has a significant coefficient in three of the full models and in all four reduced form models. The corresponding measure for mothers is

²¹ However, reduced form models provide no information on whether the coefficients on the opportunity cost variables themselves are biased.

significant in one full model and three reduced form models. The summed variable is significant in all eight models. These results suggest that the relationship between parental education and the four age outcomes is partly mediated by its effect on the child's grades and his own educational expectations and aspirations. The negative sign on all significant coefficients in table 5 is consistent with the theoretical expectation that children of more poorly educated parents expect and desire earlier marriage and parenthood. However, like in table 4, no alternative specification of parental education ever produces significant coefficients in the nonmarital birth models.

Family economic status is associated with many important child outcomes (Brooks-Gunn & Duncan 1997). The data set categorizes annual family income into five classes: <\$10,000, \$10,000-24,999, \$25,000-49,999, \$50,000-74,999, and \$75,000 or more. To examine whether family income is related to teenage expectations and desires about marriage and parenthood, I augmented the models in tables 3 and 4 with dummy variables for the all but the lowest income class. I also analyzed three alternative indicators of family economic status: dummy variables for whether the family owned its home, had received any income tested benefits in the previous year, or had specifically received TANF (cash welfare) the previous year.

F tests of the four linear regressions and χ^2 tests of the two logit regressions can not reject the hypothesis that the four income class dummies are jointly insignificant. Home ownership and receipt of income tested aid or TANF are also insignificant in all models.

I expanded the set of school related characteristics by adding a dummy variable for whether a senior had ever been held back a grade and a measure of attitudes about school derived from eight items.²² Like grades and educational expectations and aspirations, school attitudes and being held back may be jointly determined with the dependent variables, so estimates of these models may be biased. Students who have been held back expect to marry half a year earlier than others ($p = .08$). This variable is otherwise insignificant. More positive attitudes towards school have a negative association with expected age of marriage and parenthood and ideal age of parenthood, but show no relationship to the other three dependent variables.

One additional personal characteristic – students' reports of their health status, is not associated with any outcome.²³ Adding a dummy variable for whether a student smoked shows

²² Each attitude item is coded on a five point Likert scale. Typical item are: "teachers are interested in students," and "I don't feel safe in this school." Each item is scaled so that a higher score reflects a more positive attitude. Items are summed and the result is rescaled to range between one and four.

²³ The health dummy is coded one for students reporting "very good" or "excellent" health.

that smokers do not differ from non-smokers with respect to expectations and desires about nonmarital childbearing and age of marriage. Smokers expect and desire parenthood about 0.7 years younger than non-smokers.

Including these other family and personal characteristics in the models has virtually no effect on the magnitudes or significance levels of the coefficient estimates in tables 3 and 4. The findings in tables 3 and 4 appear to be robust.

The final alternative checks whether possible off-the-cuff responses about marriage and childbearing may have distorted the estimates. To do so, I dropped from the data all students who marked “I have not thought about it at all” in response to either “Have you thought at all about whether you would like to get married?” or “Have you thought at all about whether you would like to have children or how many children you would like to have?” This reduced the sample size for each dependent variable by 10 to 13 percent. Re-estimating the models in tables 3 and 4 on the smaller samples yields nearly the same magnitude and patterns of significant coefficients for each outcome.

Discussion

Using data collected in 2000 on a racially and ethnically diverse sample of high school seniors in one school district, this study analyzes teenagers’ expectations and desires about marriage, having children and becoming unwed parents. The only other evidence on older teenagers’ expectations about such matters comes from data collected in 1979 (Trent 1994a, b). The new results provide information about teenagers roughly a generation younger than those examined earlier.

In addition to informing us about contemporary youth, this study advances research on expectations and desires about family formation in several ways. To underpin the empirical analysis, it provides a conceptual framework that combines family context, opportunity cost, and social-psychological perspectives. The study is the first to examine all six outcomes with a common conceptual framework and data set. This unified analysis allows identification of explanatory variables that matter for most outcomes and those that matter for one or two, or none. Another contribution is to investigate several explanatory variables not considered previously.

The empirical findings derived from the study’s design shed light on four issues: the degree of empirical support for the conceptual framework, the patterns of significant findings

across the outcomes, information gained by including explanatory variables not examined previously, and the extent of intergenerational change in the factors associated with expectations about family formation.

One important conclusion is that all three elements of the conceptual framework – family context, opportunity costs, and social-psychological – receive empirical support. Two aspects of family context – gender and religious upbringing – are consistently related to teenagers' expected and desired ages for both marriage and having children. Race and ethnicity show strong relationships with expected and desired ages for marriage, and statistically significant but weaker relationships with expected and desired ages for having children. Alternative specifications and reduced form models suggest that parental education is associated with these four outcomes. They also indicate that the relationship between parental education and these outcomes is partly mediated by its effect on the child's grades and his own educational expectations and aspirations.

Family context also matters in models of expectations and desires about nonmarital childbearing, but differently. Religious upbringing, race, and ethnicity again are significant but gender and parental education are not. The estimates provide two further pieces of evidence of the importance of ethnicity and cultural background. First is the negative relationship between speaking a language other than English at home and both outcomes. Second, foreign born teenagers who arrived in the U.S. after age five are less likely to desire nonmarital childbearing. Both results suggest that teenagers from immigrant families or families otherwise less integrated into mainstream American culture have more traditional values about nonmarital childbearing.

Findings on the indicators of opportunity costs confirm theoretical predictions. Teenagers with higher opportunity costs – as indicated by having better grades and higher expectations and aspirations for their schooling– expect and desire to marry and have children at older ages. The magnitudes of the relationships are roughly equal for the two expected ages and for the two desired ages. As a result, despite the underlying strong relationships between opportunity costs and teenagers' views about the two behaviors that determine nonmarital parenthood, there is no significant association between opportunity costs and the likelihood of expecting or desiring a nonmarital birth.

Empirical support for the social-psychological part of the conceptual framework is more modest but consistent with the theory. Adolescents with a stronger internal locus of control

expect to be older when they become parents and are less likely to desire nonmarital childbearing. There is no evidence that self-esteem is related to any outcome.

Information about which explanatory variables matter for which outcomes cannot be reliably extracted from earlier studies because each examined no more than three outcomes and cross-study comparisons are compromised by major differences in the theoretical approaches, samples, and available explanatory variables (see appendix table). We can extract such information more readily from this study because it uses a common theoretical framework and data set to analyze all outcomes.

The analysis demonstrates that several explanatory variables consistently exhibit significant relationships with most outcomes, while others matter for only one or two, or for none. Race and ethnicity are significant in all models of teenagers' expectations and desires about family formation, religious upbringing in five. Gender significantly predicts all four age variables. The same is true for parental education in alternative specifications and for both parental education and educational expectations in the reduced form models. Attitudes towards school predict three of the age variables. Yet none of these variables is a significant predictor of Expects NMB and only gender is a significant ($p = .06$) predictor of Desire is NMB. Their effects on teenagers' underlying views on marriage and fertility empirically offset each other in models of expected and desired nonmarital childbearing.

Locus of control is related to several of the dependent variables, but weakly and less consistently than the family context variables just discussed. Other indicators of ethnicity and cultural background – a non-English language spoken at home, nativity, and years since arriving in the U.S. – are related only to expectations or desires about nonmarital childbearing.

Contrary to theoretical expectations, several characteristics are unrelated to teenagers' expectations and desires about family formation. These include family structure, family economic status, health status, and self-esteem.

In the full models, expected and desired ages for marriage and parenthood are all significantly related to the same small set of characteristics: gender, race and ethnic identity, religious upbringing, and parental education. In reduced form models, these outcomes are also all related to parental educational expectations. Only for expected age of parenthood is even one other characteristic (locus of control) significant at the five or one percent level. This common

set of significant variables suggests that measures of expectations and desires about marriage or about parenthood tap rather similar, if not identical, constructs in adolescents' minds.

Including explanatory variables not previously considered or considered in but one prior study increases our understanding of the factors related to expectations and desires about family formation. This study establishes that teenage Native Americans' expectations and desires about family formation differ from whites' and are similar to African Americans'. The evidence on Asian Americans improves on East's (1998) work on girls of Vietnamese and Cambodian heritage by including boys of the same heritage and teenagers of South Asian and Filipino heritage, and by testing for race and ethnic differences with multivariate models. This study is the first to include a dummy variable for being raised in a non-western religion. We learn that such adolescents, like those raised as Catholics, do not differ in their expectations and desires from those claiming no formal religion. The evidence about self-esteem and locus of control is unique to this study and suggests that locus of control is related to several outcomes.

Has there been intergenerational change in the factors associated with expectations about marriage, parenthood, and nonmarital childbearing? Two studies (Trent 1994a, b), using data from 1979, provide information about teenagers who are roughly a generation older than the ones examined here. Fortuitously, of all prior studies, these two are most similar to the current one, so comparing the findings may shed some light on this question.²⁴

There are three dependent variables and 12 independent variables common to this study and one or both of Trent's. Table 6 summarizes how the studies' findings on these variables compare.²⁵ Across all independent variables there is agreement on the presence or absence of a significant relationship in 51 percent of the comparisons (58 of 114). There is complete agreement that being foreign born is unrelated to any outcome for both generations. There is strong agreement (9 of 11 comparisons) that low parental education is associated with a younger expected age of marriage and parenthood and unrelated to expectations about nonmarital

²⁴ Starrels and Holm (2000) has data for 1980 but with an age range of 11 to 16 and only six explanatory variables in common with the current study, a comparison is more problematic.

²⁵ In some instances different indicators represent the same general construct listed in table 6. For example, to indicate "economic status" Trent (1994a, b) uses a dummy variable for whether a family is in poverty, while this study uses classes of family income. In making the comparisons, for some variables I reverse the sign reported in Trent (1994a, b) to make the interpretation consistent with how I measure the dependent variable. For example, Trent (1994a) finds a significant positive coefficient on "African American" for the dependent variable "Expects adolescent fertility." This implies a negative relationship between "African American" and the current study's model of "Expected age of parenthood."

childbearing. There is almost complete disagreement on whether “other religion” and being held back in school are related to expectations of any outcome – only one or two of 11 comparisons match. About half the comparisons agree for the other eight variables: number of siblings, economic status, and dummy variables for being female, Hispanic, African American, not living with two biological parents, being Baptist/fundamentalist Protestant, and being Catholic.

In sum, the extent of intergenerational agreement is modest. Whether the many differences between findings for 1979 and 2000 reflect real intergenerational change in how adolescents form their expectations about family formation behaviors, or arise from methodological differences is an open question. These differences include the age and geographic range of the samples, the precise definition of the dependent variables and some of the independent variables, and other variables not shown in table 6 that are included in Trent’s models or mine, but not both.

Accompanying the study’s contributions are several limitations. Using data from one school district bars inclusion of contextual factors and testing hypotheses about such variables. It also limits the generalizability of the results. Cross section, observational data in general make it difficult to establish causal linkages among the variables. In particular, we must accept the significant coefficients on the indicators of opportunity cost cautiously because the data do not provide convincing instrumental variables, which would allow a test of whether opportunity costs and the dependent variables are jointly determined. The data set does not contain several variables found to be important in related research, such as more detailed measures of family structure and parents’ ages of marriage and parenthood. This limits the models’ explanatory power and makes it harder to compare findings.

There are plans to track the respondents into their early adult years. In the future, therefore, it will be possible to examine how well adolescents’ expectations and desires about marriage and parenthood predict their actual behavior. Doing so would add to the very limited information about this relationship (Trent & Crowder 1997) and expand our understanding of the current sources of teenage nonmarital childbearing.

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Table 1: Means of Dependent Variables, by Sex, Race, and Ethnicity

	Expected age of marriage	Ideal age of marriage	Expected age of first birth	Ideal age of first birth	Expects nonmarital birth	Ideal is nonmarital birth
All seniors	25.0	24.9	26.4	26.2	.103	.111
Std. Deviation	3.2	3.4	3.2	3.3	.304	.314
Female	24.6	24.6	26.0	25.8	.109	.123
Male	25.6	25.4	26.8	26.7	.095	.095
African American	25.6	25.3	25.9	25.5	.209	.226
Native American	25.5	25.7	26.2	26.5	.212	.212
Asian American	25.5	25.3	26.9	26.5	.069	.079
Hispanic	24.8	24.6	25.7	25.7	.165	.115
White	24.6	24.7	26.5	26.4	.061	.075
Number of cases	1,045	1,057	976	994	1,051	1,056

Table 2: Descriptive Statistics, Sample for “Expects a nonmarital birth”

	Mean	Minimum	Maximum	Standard deviation
Expects to be an unwed parent	.103	0	1.0	.304
Female	.549	0	1.0	.498
Hispanic	.075	0	1.0	.264
African American	.168	0	1.0	.374
Asian American	.193	0	1.0	.395
Native American	.050	0	1.0	.217
Language other than English at home	.255	0	1.0	.436
Foreign born	.164	0	1.0	.370
Age of arrival in US ¹	1.037	0	19	3.160
Father - High school or less	.352	0	1.0	.478
Mother - High school or less	.413	0	1.0	.493
Mother and father married to each other	.578	0	1.0	.494
Parental education expectations	1.185	0	2.0	.898
Number of siblings	2.73	0	16	2.22
Baptist	.041	0	1.0	.198
Catholic	.141	0	1.0	.348
Other Christian or Jewish	.236	0	1.0	.425
Non-western (Muslim, Hindu, Buddhist, Taoist)	.046	0	1.0	.209
No formal religion	.068	0	1.0	.246
Expects BA or more	.635	0	1.0	.482
Aspires to BA or more	.715	0	1.0	.452
Grade point average	2.803	0	4.0	.888
Self-esteem	3.119	0	4.0	.623
Locus of control	3.054	0	4.0	.466
Number of cases	1,051			

1. Mean for cases with positive values is 6.953

Table 3: Regression Results, Expected and Desired Age of Marriage and Parenthood

Explanatory variables:	Age of marriage		Age of parenthood	
	Expected	Desired	Expected	Desired
	Coefficient (Standard error)	Coefficient (Standard error)	Coefficient (Standard error)	Coefficient (Standard error)
Female	-.994** .200	-.843** .210	-.951** .200	-.988** .208
Hispanic	.856* .393	.468 .414	.190 .401	.383 .417
African American	1.475** .284	1.119** .300	.277 .290	-.006 .300
Asian American	.990** .349	.887* .370	.686* .350	.540 .366
Native American	1.431** .470	1.644** .497	.582 .472	.843# .491
Speaks a language other than English at home	-.001 .304	-.247 .323	.007 .310	-.000 .321
Foreign born	-.000 .395	.151 .423	-.498 .405	-.560 .426
Age of arrival in US	-.003 .045	-.007 .048	.003 .044	.002 .046
Father - High school or less	-.405# .236	-.238 .248	-.357 .237	-.364 .246
Mother - High school or less	-.106 .229	-.274 .240	-.201 .231	-.305 .238
Parental education expectations	-.012 .131	.073 .139	-.038 .132	.061 .137

Mother and father married to each other	.066 .216	.000 .227	.180 .216	-.002 .225
Number of siblings	-.050 .049	-.059 .509	-.061 .051	-.067 .050
Baptist	-1.277* .622	-1.795** .659	-2.165** .628	-2.145** .655
Catholic	-.358 .462	-.408 .483	-.595 .463	-.749 .482
Other Christian or Jewish	-1.050* .434	-1.026* .453	-.918* .435	-1.435** .451
Non-western (Muslim, Hindu, Buddhist, Taoist)	-.652 .642	-.295 .666	-.754 .640	-.676 .663
Expects BA or more	1.037** .252	.830** .264	1.148** .255	.596* .262
Grade point average	.563** .190	.596** .201	1.097** .195	1.075** .201
Self-esteem	-.008 .227	.148 .238	-.295 .229	.171 .237
Locus of control	.124 .283	-.216 .298	.767** .286	.393 .294
Constant	23.812** 1.010	23.941** 1.062	22.503** 1.020	22.936** 1.049
R-square	.121	.103	.180	.154
Number of cases	1044	1056	975	993

** = significant at 1%, * = significant at 5%, # = significant at 10%

Table 4: Regression Results, Expectations and Desires about Nonmarital Childbearing

Explanatory variables:	Expects a	Desires a
	nonmarital birth	nonmarital birth
	Coefficient	Coefficient
	(Standard error)	(Standard error)
Female	.234	.434#
Hispanic	.229	.226
African American	1.009*	.019
Asian American	.404	.451
Native American	1.274**	1.075**
Speaks a language other than English at home	.288	.273
Foreign born	.639	.205
Age of arrival in US	.431	.418
Father - High school or less	1.509**	1.204**
Mother - High school or less	.423	.417
Parental education expectations	-.581#	-.593#
Mother and father married to each other	.351	.347
Number of siblings	.478	.882*
Baptist	.419	.408
Catholic	-.067	-.202*
Other Christian or Jewish	.060	.085
Non-western (Muslim, Hindu, Buddhist, Taoist)	-.344	.123
Expects BA or more	.263	.265
Grade point average	.321	-.108
Self-esteem	.250	.608
Locus of control	-.132	.025
Constant	.147	.142
Log-likelihood	-.287	-.091
Number of cases	.242	.235
	.040	.076
	.051	.047
	-.723	-.400
	.600	.622
	-.952#	-.512
	.502	.520
	-1.405**	-.300
	.476	.461
	-1.504#	-.323
	.862	.724
	-.236	-.012
	.273	.261
	-.275	-.263
	.209	.198
	.029	-.150
	.251	.239
	-.298	-1.193#
	.318	-.532
	-.076	.299
	1.069	1.034
	606.3	650.4
	1039 ¹	1056

** = significant at 1%, * = significant at 5%, # = significant at 10%

1. There are 12 fewer cases than the sample size of table 2 because an empty cell problem with the missing value dummy for self-esteem required omitting 12 cases from the logit regression.

Table 5: Regression Results for Alternative Specifications of Parental Education

	Age of marriage		Age of parenthood		Expects a nonmarital birth	Desires a nonmarital birth
	Expected Coefficient (Standard error)	Desired Coefficient (Standard error)	Expected Coefficient (Standard error)	Desired Coefficient (Standard error)	Coefficient (Standard error)	Coefficient (Standard error)
Full models:						
Father - High school or less	-.444* .219	-.340 .323	-.415# .222	-.462* .230	-.242 .249	.171 .241
Mother - High school or less	-.244 .213	-.359 .225	-.332 .216	-.440* .223	.212 .236	.222 .230
Sum of parents' education dummies	-.248* .130	-.247# .138	-.286* .132	-.347* .137	.007 .148	.174 .144
Reduced form models:						
Father - High school or less	-.591** .221	-.461* .233	-.615** .228	-.598* .234	-.223 .248	.154 .241
Mother - High school or less	-.335 .217	-.421# .227	-.464* .223	-.515* .227	.224 .235	.202 .230
Sum of parents' education dummies	-.331* .132	-.312* .139	-.403** .136	-.421** .139	.019 .147	.180 .143

** = significant at 1%, * = significant at 5%, # = significant at 10%

The full models include all other explanatory variables listed in tables 3 and 4. The same is true for the reduced form models, except "Expects BA or more" and grade point average are excluded.

Table 6: Comparison of Empirical Findings for 1979 and 2000

	Number of comparisons between current study and Trent (1994a and b)	Number that agree
Female	11	5
Hispanic	2	1
African American	2	1
Not living with married biological parents	11	5
Number of siblings	11	6
Foreign born	11	11
Low parental education	11	9
Baptist, Fundamentalist Protestant	11	4
Catholic	11	6
Other Christian, Jewish	11	1
Economic status	11	7
Held back in grade	11	2
	<hr/>	<hr/>
	114	58

Appendix Table: Major Characteristics of Studies of Expectations and Desires about Family Formation

	Trent (1994a,b)	Smith & Zabin (1993)	East (1998)	Starrels & Holm (2000)	South (1993)	Bulcroft & Bulcroft (1993)	Lichter et al. (2004)	Current study
Y = Expectations about:								
Marriage	X			X		X	X	X
Parenthood	X			X				X
Nonmarital childbearing	X		X ¹					X
Y = Desires about:								
Marriage		X ¹	X		X		X	X
Parenthood		X ¹	X					X
Nonmarital childbearing		X ¹						X
National or local data	National	Local	Local	National	National	National	National	Local
Time period	1979	1981-82	Mid 1990s? ²	1981	1987-88	1987-88	1994, 1995	2000
Age range of sample	14 – 19	Grades 7-12 (age 13-18)	11 – 15	11 – 16	19 – 35	19 – 35	15-45 or 29-37	17 – 19 ³
Includes males	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Race and ethnic groups ⁴	B, H, W	B, W	A, B, H, W	B, W	B, H, W	B, W	B, H, W	A, B, H, NA, W
Other sample restrictions	Never married, without children	Enrolled in inner-city public schools	Enrolled in public junior high school	Mother must be currently in her first marriage	Currently unmarried and not cohabiting	Never married and currently not cohabiting	Unmarried	Unmarried, enrolled in public high school
Total sample size	6,684	3,646	523	724	2,073	1,434	3,732 or 1,605	976 to 1,056

1. Multivariate models are not estimated for these dependent variables.
2. The article does not report the year(s) when data were collected.
3. Less than two percent of the sample falls outside this age range.
4. A = Asian, B = Black, H = Hispanic, NA = Native American, W = White

Figure 1

Determinants of Expectations and Desires about Family Formation

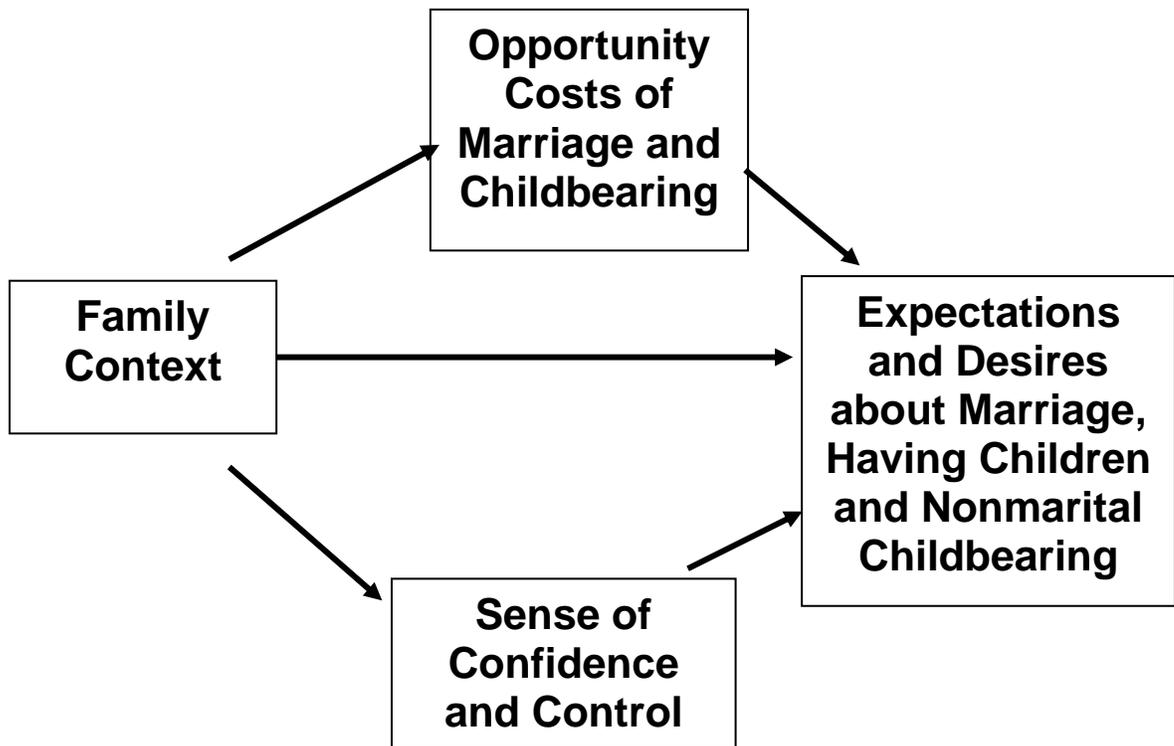


Figure 2

Estimation Model of the Determinants of Expectations and Desires about Family Formation

