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Perceived Costs and Benefits of Early Childbearing: New Dimensions and Predictive Power

Sarah R. Hayford [associate professor],

Department of Sociology, Ohio State University, Columbus.

Karen Benjamin Guzzo [associate professor],

Department of Sociology, Bowling Green State University, Bowling Green, OH.

Yasamin Kusunoki [assistant professor], and

Department of Systems, Populations and Leadership, University of Michigan, Ann Arbor.

Jennifer S. Barber [professor]

Department of Sociology, University of Michigan, Ann Arbor.

Sarah R. Hayford: hayford.10@osu.edu

Abstract

CONTEXT—Understanding the causes of early childbearing is important for reducing the persistently high rates of such births in the United States. Perceptions of possible benefits may contribute to these rates, while high opportunity costs may dissuade women from early childbearing.

METHODS—Perceptions of costs and benefits of pregnancy, as well as later experiences of pregnancy, were assessed for 701 nulligravid women aged 18–22 who entered the Relationship Dynamics and Social Life study in 2008–2009 and were interviewed weekly for up to 30 months. Bivariate t tests, chi-square tests and multivariable discrete-time event history analyses were used to assess associations of perceived personal consequences of childbearing (e.g., predicted financial costs), goals in potentially competing domains (opportunity costs) and social norms with subsequent pregnancy.

RESULTS—Twenty percent of women reported that early childbearing would have more positive than negative personal consequences. Compared with other women, those who had a pregnancy during follow-up had, at baseline, more positive perceptions of the personal consequences of pregnancy and of their friends' approval of pregnancy, and greater desire for consumer goods. In multivariable analyses, only the scales assessing perceived personal consequences of childbearing and friends' approval of childbearing were associated with pregnancy (odds ratios, 2.0 and 1.2, respectively). Goals in potentially competing domains were not associated with pregnancy.

CONCLUSION—Young women's perceptions of consequences of early childbearing predict subsequent pregnancy. That these perceptions are distinct from childbearing desires and from other dimensions of costs and benefits illustrates the complex attitudinal underpinnings of reproductive behavior.

Births to women in their teens and early 20s are associated with worse outcomes for mothers and children than are births to older women.^{1,2} These negative associations are partly due to the context of early births: Relative to older mothers, mothers in their teens and early 20s are less likely to be married and more likely to have unintended births, characteristics also linked to negative outcomes.^{3,4} In addition, early births are particularly common among women from disadvantaged backgrounds and among racial and ethnic minorities.⁵ As a result, children born to young mothers have access to fewer resources, on average, than do children born to older mothers. Understanding the causes of early childbearing is important for reducing rates of early births

More than three-quarters of births to teenagers and half of those to women in their early 20s are unintended.⁶ However, women in these age-groups often express positive feelings about childbearing and perceive benefits to early fertility,^{7–10} and these feelings and potential benefits may contribute to high birthrates. In addition, differences in the perceived costs and opportunity costs of early childbearing may explain sociodemographic variation in birth timing.^{11,12}

This study assesses multiple dimensions of the perceived costs and benefits of pregnancy among young adult women (aged 18–22) by integrating attitudinal measures with indicators of potential opportunity costs. Specifically, we examine attitudes about the consequences of pregnancy, social norms concerning early childbearing and goals in domains that may conflict with childbearing. We then analyze the relationship between these dimensions of costs and benefits and subsequent pregnancy.

COSTS AND BENEFITS OF FERTILITY

The fact that most births to women in their late teens and early 20s are unintended suggests that the processes driving early fertility are complex and cannot be understood solely by examining direct measures of fertility intentions. In fact, orientations toward childbearing are multifaceted, and the intention to not become pregnant can coexist with ambivalent or positive attitudes about childbearing or evaluations of the consequences of childbearing. Trussell and colleagues, for instance, found that only 59% of women with an unintended birth resulting from contraceptive failure felt unhappy or very unhappy about having a child, while 25% reported being happy.¹³ In a 2009 survey of unmarried young adults, more than one in four of those who thought it was very important to avoid pregnancy said that they would be at least a little pleased about a pregnancy.¹⁴ These positive or ambivalent attitudes are associated with reduced rates of contraceptive use and elevated rates of pregnancy.^{15–18} Thus, if positive orientations toward pregnancy are common among young adults in the United States, they may contribute to high rates of early childbearing.

In this analysis, we draw on multiple theoretical frameworks to understand how these attitudes and perceptions are associated with pregnancy. Although we borrow the terminology of “costs” and “benefits” from microeconomic approaches to fertility, we do not mean to imply a narrowly economic or rational choice perspective. Costs and benefits, in our conceptualization, are inherently grounded in social contexts and relationships, including relationships with families and partners, social roles and identities (both those related to

parenting and those in other, potentially competing, domains), and social norms regarding childbearing and the preferred sequencing of motherhood and other roles. Our understanding of costs and benefits is thus consistent with social-psychological approaches that identify individual attitudes and subjective norms as key predictors of intentions and eventual outcomes.^{19,20}

Specifically, we measure three broad dimensions of costs and benefits of childbearing in early adulthood: perceived consequences of having a child, perceived norms about early childbearing and attitudes toward activities not directly related to childbearing. We thus integrate two established, but often disparate, bodies of literature. The first one focuses on fertility attitudes, while the other focuses on analyzing the opportunity costs of childbearing—that is, activities or experiences that potentially conflict with having children and that women might have to give up if they have an early birth. In addition, our analyses include a direct measure of prospective fertility intentions, to assess whether other measures of costs and benefits are independently associated with pregnancy or act through traditional measures of intentions.

Previous quantitative research has identified a wide range of attitudes toward childbearing that predict contraceptive use and pregnancy. Predictors tested in previous studies range from single-item summary measures (e.g., “Getting pregnant at this time is one of the worst things that could happen to me”; “I can handle the responsibilities of parenting”) to comprehensive multidimensional scales.^{9,17,21–23} Because some of these studies were limited to urban or clinic-based samples or were dominated by a single racial or ethnic group, it is unclear whether these measures are applicable more generally. Taken together, this body of research consistently shows that although most teenage and young adult women do not want to become pregnant, some perceive benefits to having a child at a young age. Qualitative research, again often focused on urban or disadvantaged groups, reinforces these findings. Commonly reported positive outcomes of early childbearing include a sense of meaning and purpose, support from parents and romantic partners, and a loving relationship with the child.^{10,24} Moreover, some young women believe that waiting until one is older to have children could result in medical complications or difficulty getting pregnant, and others report that younger parents have more energy and recover better from childbirth.^{25,26}

Young women—even those with more favorable attitudes toward early parenthood—are well aware of social norms encouraging delayed childbearing and of the sanctions associated with violating these norms;^{25,27} not surprisingly, few women in their late teens and early 20s explicitly plan to have a child in the near future.²⁸ We conceptualize these sanctions as “costs” of early childbearing. Although in most settings the overall climate discourages teenage childbearing, the strength of this negative assessment and the presence of countervailing positive assessments vary, and less negative or more positive normative climates are more often found in disadvantaged than in advantaged neighborhoods.^{8,29,30} The attitudes of parents and peers are a particularly important aspect of the normative context of early childbearing. For instance, perceptions that one’s mother would disapprove of sex and pregnancy have been linked to adolescents’ having more negative attitudes toward pregnancy and fewer sexual partners.^{31,32} Other work has highlighted the importance of peer

norms;³³ for example, perceiving that one's peers are sexually active is positively associated with having had sex recently.³⁴

Finally, fertility behavior is shaped by women's goals in other domains and the degree to which these goals are understood to conflict with childbearing. This idea is articulated most clearly in microeconomic approaches to fertility, which identify wages forgone when women leave the labor force or reduce the number of hours they work after having a child as "opportunity costs" of childbearing, and explain the lower birthrates of more educated women as a result of higher opportunity costs.³⁵⁻³⁷ The central insight of these theories is that fertility attitudes are not the only predictors of fertility behavior; orientations toward other activities may also be salient if those activities are perceived to conflict with bearing or raising children. For instance, Barber found that attitudes toward professional achievement and the consumption of luxury goods are associated with delayed first births, even after adjustment for attitudes toward childbearing, and argued that perceived conflict between these goals and fertility may explain this association.³⁸ Similarly, many women believe that having an early birth will make educational achievement more difficult,^{39,40} and expectations for college attendance are generally protective against early childbearing.⁴¹ Importantly, the framework does not require that activities actually conflict with childbearing, but only that women perceive them to. We hypothesize that a stronger focus on future goals implies greater opportunity costs of early childbearing, and that these greater costs will be associated with lower fertility.

We focus our analysis on women aged 18–22. Fertility spikes sharply during the late teens and early 20s, and compared with younger teenagers, women aged 18–19 show distinctive patterns of childbearing behavior.⁴² Although 18–22-year-olds are legal adults and may have more economic resources than minors do, their births are not associated with markedly better maternal or child well-being.^{43,44} Thus, understanding the factors that influence fertility in young adulthood, a time when women can choose from a range of potential life paths, remains important. During the transition to adulthood, intimate relationships become longer and more committed, and usually involve sexual intercourse.^{45,46} Norms against childbearing may weaken as young adults enter committed relationships, especially if they are able to work full-time; similarly, finishing high school may reduce the opportunity costs of a birth. Thus, establishing the costs and benefits of pregnancy for older teenagers and young adults is an important task.

METHODS

Data

We used data from the Relationship Dynamics and Social Life study (RDSL), a longitudinal survey of young women living in a single county in Michigan.⁴⁷ The study began with a 60-minute in-person interview, conducted between March 2008 and July 2009; data for all attitudinal measures were taken from this baseline interview. Respondents were then followed over a 30-month period, during which they completed weekly surveys online or by phone. Reports of postbaseline pregnancy were taken from these surveys. The data were collected by the University of Michigan's Survey Research Center, and the study was approved by the university's institutional review board.

The RDSL was designed to provide a broad description of the characteristics associated with, and that may contribute to, young women's sexual, contraceptive and fertility behavior. The baseline interview included an extensive set of questions on attitudes toward sex, birth control, pregnancy and childbearing, as well as on individual goals for education, work, personal consumption and family formation. Although the study was not designed to test the association between perceived costs and benefits of childbearing and fertility, it included measures of multiple dimensions of costs and benefits as part of its goal of understanding childbearing in early adulthood.

All women aged 18 and 19 who lived in the county, including those temporarily absent for school or job training, were eligible for the study. Respondents were randomly selected from the Michigan driver's license and personal identification database; details on the completeness of this sample frame and on selection procedures have been described elsewhere.⁴⁷ The baseline sample consisted of 1,003 women, of whom 992 (99%) agreed to enroll in the longitudinal component of the study. Women who missed one or more weekly interviews could rejoin the study at any point; those who completed an interview within a week of the scheduled date were not considered to have missed an interview. Of women who enrolled in the longitudinal component, 84% participated for at least six months, 75% participated for at least 18 months and 61% completed their last weekly interview at least 30 months after the baseline interview. Women received a small monetary incentive (\$1) for the completion of each weekly interview, as well as bonuses for every five interviews completed and occasional small tokens of appreciation (e.g., pens, lip balm).

We excluded from our analysis the 252 women who had had a pregnancy prior to baseline, because they had experienced some of the actual, rather than perceived or hypothetical, costs and benefits of pregnancy. Even if a prior pregnancy had not been carried to term (as was the case in about half of these instances), our measures of such costs as perceived reaction of friends and parents would likely have meant different things for women who had been pregnant and those who had not. In preliminary analyses, we found that the associations of both the costs and benefits of pregnancy and the control variables with subsequent pregnancy differed between nulligravid women and those who had had a pregnancy. A full examination of differences in the costs and benefits of pregnancy according to previous pregnancy experience would require different theories and measures. We also excluded 39 women with missing values for independent or dependent variables. The resulting analytic sample comprised 701 women who were interviewed an average of 63.7 times, for a total of 44,681 weekly interviews.

Measures

Pregnancy—The dependent variable was a pregnancy. In each weekly interview, women were asked “Do you think there might be a chance that you are pregnant right now?” Respondents who answered yes were asked if they had had a pregnancy test; only respondents who answered yes to the latter question were classified as having a pregnancy. For respondents who took part in every weekly interview, our estimate of the start of the pregnancy is accurate to the week. For women who missed one or more interviews, some measurement error in dating the start of the pregnancy exists. We also may have missed

some pregnancies that started and ended between weekly interviews. However, the potential for measurement error is small: Ninety percent of interviews were completed within 14 days of the previous interview, and only 5% took place more than 28 days after the previous one. Thus, for the large majority of cases, we were able to precisely identify when the respondent became aware of the pregnancy.

Perceived costs and benefits of pregnancy—We focused on three dimensions of costs and benefits of early childbearing: perceived consequences, social norms and goals in potentially competing domains (opportunity costs). We used six measures to capture these dimensions: the respondent’s perceptions of the consequences of pregnancy for herself; her general perceptions of the benefits of early childbearing; her perceptions of her friends’ approval of childbearing; her perceptions of her parents’ approval of childbearing; the respondent’s goals for personal consumption (i.e., desire for consumer goods); and how much the respondent wanted to go to college in the next year.

To select these predictors, we began by generating a list, based on the literature, of dimensions of costs and benefits of childbearing. We then searched the RDSL for potential measures of these dimensions. Most RDSL items were adapted from scales used in previous fertility research. Items on personal consequences of pregnancy and on perceived parents’ and friends’ reactions to sexual and reproductive behavior were adapted from the National Longitudinal Study of Adolescent to Adult Health (Add Health).⁴⁸ Items on consumption goals were adapted from the Intergenerational Panel Study of Parents and Children,⁴⁹ while those representing general attitudes toward early childbearing were developed specifically for the RDSL on the basis of existing research on the potential benefits of such childbearing.^{50,51} Items measuring the personal consequences of childbearing, attitudes toward early pregnancy and consumption goals were developed for use in scales. We conducted exploratory factor analysis to verify that scale items loaded together on distinct factors as expected. The items that make up each scale are listed in Appendix Table 1 (Supporting Information).

We constructed simple scales by averaging items. At this stage, we dropped some items that were not asked of all respondents (e.g., predicted response of partner to a pregnancy, which was asked only of women with partners). We further refined the scales by removing items with low shared variance. For instance, we dropped from the consumption scale a question about the importance of having a savings account. In constructing our final model, we also took into account substantive concerns and results from initial multivariable analyses. For example, the RDSL included multiple items measuring perceptions of parents’ and friends’ approval of various sexual, contraceptive and reproductive behaviors. These scales have high internal consistency (Cronbach’s alpha, 0.79 and 0.68, respectively), but in multivariable models, they did not provide additional explanatory power beyond single-item measures of attitudes toward having a child. Our preferred models therefore included only the single item.

The personal consequences of pregnancy scale (eight items; Cronbach’s alpha, 0.76) covers multiple domains, including financial costs, increased responsibility and conflicts with school, as well as summary measures of consequences (e.g., “Getting pregnant at this time

in your life is one of the worst things that could happen to you”). The original response options ranged from 1 (strongly agree) to 4 (strongly disagree); a neutral response option was available only for respondents who insisted and was originally coded as 5. On average, 1% of the sample provided a neutral response on these items. We recoded the items on a scale of 1–5 in which the neutral response was coded as 3. This measure was constructed such that larger values indicate stronger disagreement with negative consequences (i.e., a more positive evaluation of the consequences of pregnancy). Items were reverse-coded as necessary. In exploratory analyses, we tested whether positive items (e.g., “If you had a baby now, you would feel less lonely”) and negative ones (e.g., “If you got pregnant now, you would be forced to grow up too fast”) differentially predicted pregnancy. We found no evidence of differences in predictive ability; in fact, scales constructed only of positive items and those constructed only of negative items produced associations with subsequent pregnancy that were nearly identical in magnitude. We therefore included the combined scale in our final models.

The scale for general benefits of early childbearing (six items; Cronbach’s alpha, 0.57) also addresses outcomes in multiple domains, including both women’s and children’s physical health (e.g., “It is better to get pregnant young because young women’s bodies recover faster”; “Babies born to older mothers have more health problems”) and the social implications of fertility timing (e.g., “It is hard for kids to have the oldest parents at their school”). While the consequences of pregnancy scale asked the respondent specifically about how a pregnancy would affect her life, the items on the early childbearing scale asked about having a child at a young age in general. As with the consequences of pregnancy scale, we recoded the items to a scale of 1–5, such that 5 represented the most positive assessment of early childbearing.

Friends’ and parents’ approval of early childbearing were measured using single items. The questions are worded identically: “How would your [friends/parents] react if you had a baby?” Respondents answered with a number ranging from 0 (not at all positively) to 5 (extremely positively).

The desire for consumer goods scale (five items; Cronbach’s alpha, 0.70) was constructed from a question that asked respondents how important it is for them to have each of five specific luxury items (e.g., a plasma TV and stylish clothes) “now or in the future.” Response categories ranged from 0 (not at all important) to 5 (very important).

We measured educational goals using a single question, “How much do you want to go to college during the next year?”* The RDSL includes multiple questions about educational goals, including items about the respondent’s predicted chances of going to college and of graduating from college, her desire to attend college in the next year, how far she wanted to go in school and how far she thought she would actually go. We selected the measure of desire to attend college in the next year because the question, which was adapted from Add Health, was most parallel in substance and wording to our other measure of potentially competing goals, the consumption scale. Response options for the desire to attend college

*This question was asked of all respondents; for women already enrolled in college, it refers to the desire to continue in school.

question ranged from 0 (“not at all”) to 5 (“extremely”). The distribution of responses for this variable was highly skewed: Eighty-seven percent of women replied “extremely,” while fewer than 1% said “not at all.” We therefore coded this variable dichotomously, “extremely” versus all other responses.

Control variables—To assess whether costs and benefits provide additional explanatory power for understanding pregnancy risk, we included a prospective measure of fertility intentions in all models. The RDSL asked respondents to report on a scale of 0–5 how much they wanted to get pregnant, and how much they wanted to avoid pregnancy, in the next month. Ninety percent of respondents did not actively want a pregnancy and did want to avoid a pregnancy.¹⁵ We included positive desire for a pregnancy, rather than negative desire, because it was more strongly associated with pregnancy in exploratory models. Since previous research has found that the perceived costs and benefits of childbearing differ by race and ethnicity,^{7,52} we included dummy variables indicating whether respondents were white, black or Hispanic. (Seven women reported another racial or ethnic identity; because of the small sample size, we combined this group with white women.)

In accordance with research suggesting that disadvantaged women perceive more benefits and fewer costs of early childbearing,²⁴ we included two measures of social disadvantage: whether the respondent was currently receiving public assistance and a childhood disadvantage index. We created the latter by adding four dichotomous variables indicating whether the respondent’s mother had been younger than 20 at the time of her first birth, whether the respondent’s mother’s had less than a high school education, whether the respondent had lived with both biological parents during childhood and whether the respondent’s family had received public assistance during her childhood. The items measuring conditions in childhood asked respondents about when they “were growing up”; thus, the definition of childhood was subjective and may have varied across respondents.

We included high school grade point average (measured on a four-point scale) as a proxy for personality characteristics, such as conscientiousness, that may be directly associated with pregnancy⁵³ and may confound the measured association between educational expectations and pregnancy. Models also adjusted for the respondent’s age at baseline to account for variation by age in pregnancy rates and, to account for duration dependence, a quadratic function of time elapsed since baseline (in months). Finally, we incorporated a measure of how long the respondent stayed in the study. In each person-week, we included a time-invariant measure of the week that the last weekly survey was filled out. This measure reflects the respondent’s level of cooperation with the study and may correlate with accuracy or consistency of reporting.

Analysis

We began with bivariate analysis to describe the perceived costs and benefits of childbearing and to assess their associations with subsequent pregnancy. We tested for significance using t tests and chi-square tests. We also calculated correlation coefficients among the continuous measures of costs and benefits, as well as between these measures and the prospective measurement of desire to get pregnant. We then proceeded to multivariable analysis to

examine the role of other characteristics in explaining any associations. No weights or adjustment for survey design were necessary, because the RDSL is a simple random sample. We used discrete-time event history analysis to model the time-varying likelihood of experiencing a pregnancy. Because data are precise to the week, we used person-weeks as the unit of analysis.* For this short duration of observation, the likelihood of experiencing a pregnancy was essentially equivalent to the pregnancy rate, so we refer to associations with the pregnancy rate. Some women experienced multiple pregnancies during the observation period; we modeled only the first pregnancy and censored weeks after the first pregnancy in the analysis. We estimated two models: The first included only the costs and benefits measures, while the second adjusted for prospective fertility desires and sociodemographic controls. All analyses were conducted in Stata version 12.1.

RESULTS

Very few women in the sample wanted a child at baseline; the average score on the scale of 0–5 measuring desire for pregnancy was 0.16 (Table 1). The average age of respondents at baseline was 19. Twenty-six percent of the women in the sample were black, and 8% were Hispanic; the remainder were white or, in 1% of cases (not shown), reported other racial identities. On the measure of childhood disadvantage, the average score was about 1 on a scale of 0–4. The mean high school grade point average was about a B (3.1 on a four-point scale), and 12% of respondents were receiving public assistance at baseline. On average, respondents spent 68.75 weeks in the study (not shown), indicating that the typical respondent participated for more than a year.

Values tended to be low on the two direct measures of pregnancy attitudes (Table 2). The average score was 2.59 on the personal consequences of pregnancy scale, and 2.49 on the general attitudes toward early childbearing scale; both scores were below the neutral response value of 3, indicating that respondents perceived pregnancy to have more costs than benefits. Respondents reported that neither friends nor parents would react well to their becoming pregnant, although they expected responses from parents (mean, 1.44 on a 0–5 scale) to be more negative than those from friends (2.15). The average score on the measure of importance placed on consumer goods was around the midpoint of the scale. Desired educational attainment was very high: Nine-tenths of women said they “extremely” wanted to go to college next year, suggesting high opportunity costs of childbearing if women perceived motherhood as conflicting with schooling. However, 20% had a score of more than 3 on the personal consequences of pregnancy scale, indicating that they felt a pregnancy would be beneficial to them (not shown).

The different dimensions of costs and benefits of childbearing were not strongly correlated with each other. Scores on the personal consequences of pregnancy scale were moderately correlated with those of the scales assessing perceived friends’ and parents’ approval (coefficients, 0.42 and 0.48, respectively—not shown). Scores on the measures of friends’ approval and parents’ approval also were correlated with each other (0.63). The coefficients

*Questions in the weekly interviews referred to the period since the prior interview, unless the interview took place 14 or more days late, in which case they referred only to the prior week. This approach resulted in a small number of missing weeks in the data set.

for all other correlations were less than 0.2. The measures of costs and benefits correlated only weakly with more traditional measures of pregnancy intentions: The coefficient for the correlation between personal consequences of pregnancy and desire to become pregnant was 0.28, and coefficients for all other correlations were less than 0.2.

Overall, 14% of respondents reported a pregnancy during the 44,681 person-weeks of follow-up, a proportion equivalent to a pregnancy rate of 0.12 pregnancies per person-year. Three of the six measures of perceived costs and benefits were significantly associated with pregnancy (Table 2). As we had expected, women who experienced a pregnancy during the study had higher baseline scores than others on the scales for personal consequences of pregnancy (2.85 vs. 2.55) and friends' approval of pregnancy (2.74 vs. 2.06). The magnitudes of the differences were about one-half and two-fifths of a standard deviation, respectively, which are generally considered to be small-to-medium effects. Women who became pregnant also scored higher on the consumption scale (2.79 vs. 2.48), indicating that they placed more value on consumer goods than did other women; thus, consumption goals do not seem to discourage pregnancy. The magnitude of this effect was small (just under one-third of a standard deviation). The other measures of perceived costs and benefits of early childbearing were not associated with subsequent pregnancy.

Results from the initial discrete-time event history model were largely consistent with the descriptive statistics (Table 3). A one-point increase in the score on the personal consequences of pregnancy scale was associated with a doubling of the weekly odds of experiencing a pregnancy (odds ratio, 2.0). Friends' approval of childbearing and respondents' desire for consumer goods were also positively associated with pregnancy (1.2 and 1.4, respectively). In the model that took sociodemographic characteristics into account, respondent's orientation toward consumption was no longer significantly associated with subsequent pregnancy. However, personal consequences of pregnancy and friends' approval of childbearing were still predictive of pregnancy (2.0 and 1.2, respectively).

No statistically significant associations were evident between race and ethnicity and pregnancy rates in the full model; in models without family background characteristics (not shown), black women experienced higher pregnancy rates than white women. Childhood disadvantage was positively associated with subsequent pregnancy: A one-point increase in the scale score was associated with a 30% increase in the weekly odds of pregnancy. This association suggests that perceived costs and benefits of childbearing do not fully account for socioeconomic differences in early pregnancy. Finally, women who completed a larger number of weekly interviews had reduced weekly pregnancy rates (odds ratio, 0.97 per additional interview), suggesting that characteristics associated with retention in the survey, such as conscientiousness and residential stability, were negatively associated with the likelihood of becoming pregnant.

DISCUSSION

In this sample, young adult women's evaluation of the personal consequences of getting pregnant and having a child were strongly predictive of subsequent pregnancy, even after adjustment for prospectively reported fertility desires, family background, and educational

performance and aspirations. Twenty percent of women in the sample believed that pregnancy would have some positive personal consequences, and these women were more likely than others to become pregnant during the 30-month study period. Respondents who believed that their friends would be relatively supportive of childbearing also had an elevated likelihood of becoming pregnant. Women's assessment of the general benefits of early childbearing did not predict fertility behavior. These findings suggest that the high rates of early fertility in the United States are not primarily driven by general normative beliefs that it is better to have children while one is still young or that young mothers are healthier than older ones. Of course, this finding does not address the question of whether early childbearing actually is beneficial.⁵¹ Rather, we show that women's reported perceptions of general benefits are not enough to drive behavior; their assessments of how having a child would specifically affect their own circumstances are more important.

Contrary to our expectations, measures of young women's goals in domains that potentially conflict with childbearing did not predict pregnancy. Women's educational desires were not associated with subsequent pregnancy even in bivariate models. And although earlier research found that the value women place on consumer goods is associated with nonmarital fertility,³⁸ we did not observe a similar association after adjustment for socioeconomic status. Young women may not see education or the desire for consumer goods as conflicting with childbearing. Research suggests that having a child does not reduce educational expectations, and some mothers even report that having children increased their desire for achievement.^{54,55} Still, most research has found that women think that having a child will make it harder for them to complete their education.^{25,27} Given the skewed distribution of educational aspirations in our study, our measure may have been insufficiently precise to detect associations.

It is also possible that women's perceived opportunity costs of childbearing are incorporated into their assessment of the personal consequences of pregnancy. For example, survey items such as "Getting pregnant at this time in your life is one of the worst things that could happen to you" might capture such consequences as facing economic strain or having to delay schooling. However, the consequences of pregnancy scale was correlated only weakly with measures of opportunity costs, and even unadjusted models showed no associations between opportunity costs and subsequent childbearing. Thus, for young adult women, the predicted social and emotional costs and benefits of childbearing appear to be more salient than forgone educational and consumption opportunities in predicting pregnancy. Given the uniformly high desire for education in this age-group, there may not have been sufficient variation in the opportunity costs of childbearing to explain variation in pregnancy. Still, this finding is consistent with other research, such as a study that failed to find a strong empirical link between unintended fertility and wages, a more direct measure of opportunity costs.³⁶

Limitations

Like all quantitative analyses of attitudes, ours has limitations. Orientations toward pregnancy and childbearing are multifaceted and potentially contradictory. Our scales incorporated some of this multidimensionality, but no survey measure can fully capture this variation. Furthermore, attitudes toward childbearing may change over time. During the 30-

month study period, women finished school, changed jobs, and began and ended relationships. Their evaluation of the consequences of childbearing may have changed along with these life-course changes, and pregnancy might have been better predicted using attitudes measured closer to the period of risk. In addition, the generalizability of the findings may be limited by the restriction of the sample to a single county in Michigan. However, among women in Michigan, the levels of such fertility and family measures as cohabitation, teenage fertility and nonmarital fertility, and the timing of first births are similar to the national medians.⁵⁶ In addition, the sample was randomly selected and population-based, and encompassed substantial socioeconomic variation.⁴⁷ The choice of a single county allowed for the comparison of women living within a limited area and thus implicitly controlled for potential factors (such as access to family planning and abortion services) that are geographically determined.

Conclusion

The vast majority of women in our sample did not report wanting to become pregnant, and the associations between perceived costs and benefits and subsequent pregnancy were robust to the inclusion of controls for fertility intentions. The question, then, is why some women have unintended pregnancies—a question that has plagued research on unintended fertility since the first studies of this phenomenon.⁵⁷ General norms about the best time to have a child appear to be less salient than women's specific evaluations of the consequences of childbearing and how a child would fit in to their life. These evaluations are related to women's sociodemographic characteristics, but are not purely a pathway connecting these background factors with later outcomes. Instead, pregnancy attitudes appear to reflect a more personal understanding of the potential pleasures and problems associated with early childbearing.

One next step for research would be to understand how these factors affect fertility. The proximate determinants of pregnancy are sexual and contraceptive behavior; other research using these data show that both of these are important mechanisms connecting attitudes and behavior.²⁸ If women who perceive benefits to pregnancy use contraceptives less consistently or less effectively than other women, these attitudes could be used to target reproductive health services. Another research and policy direction would be to consider the meaning of unintended pregnancy among women who perceive benefits. For these women, the intention to prevent pregnancy may stem primarily from a lack of financial or practical resources.⁵² Providing these resources could both bring women's intentions in line with their desires and improve outcomes for mothers and children. Strengthening social support systems for young mothers is politically challenging, but may more directly address the root problems of early childbearing than does increasing contraceptive services.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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TABLE 1

Selected baseline characteristics of nulligravid women aged 18–19, Relationship Dynamics and Social Life study, Michigan, 2008–2009

Measure	Mean or % (N=701)
Desire to get pregnant (range, 0–5)	0.16 (0.69)
Age	19.16 (0.57)
Race/ethnicity	
% white [‡]	66
% black	26
% Hispanic	8
Childhood disadvantage (range, 0–4)	1.08 (1.07)
High school grade point average (range, 0–4)	3.09 (0.56)
% receiving public assistance	12

[‡]Includes a small number of women (about 1% of the sample) who did not identify as white, black or Hispanic.

Notes: All values are means unless otherwise indicated. Figures in parentheses are standard deviations.

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TABLE 2

Young women's baseline perceptions of costs and benefits of childbearing, by whether they had a pregnancy during 30-month follow-up

Measure	All (N=701)	Did not have a pregnancy (N=600)	Had a pregnancy (N=101)
Personal consequences of pregnancy (range, 1–5) ***	2.59 (0.62)	2.55 (0.61)	2.85 (0.65)
Benefits of early childbearing (range, 1–5)	2.49 (0.60)	2.49 (0.59)	2.49 (0.63)
Friends' approval of pregnancy (range, 0–5) ***	2.15 (1.74)	2.06 (1.72)	2.74 (1.76)
Parents' approval of pregnancy (range, 0–5)	1.44 (1.72)	1.40 (1.70)	1.70 (1.83)
Desire for consumer goods (range, 0–5) **	2.52 (1.13)	2.48 (1.14)	2.79 (1.05)
% who desire to enroll in college	89	88	87

**
p<.01.

p<.001.

Notes: All values are mean scale scores unless otherwise indicated. Figures in parentheses are standard deviations.

TABLE 3

Odds ratios (and 95% confidence intervals) from multivariable discrete-time event history models assessing associations between selected characteristics and pregnancy

Characteristic	Model 1	Model 2
Perceived costs and benefits of childbearing		
Personal consequences of pregnancy	2.0 (1.5–2.9) ***	2.0 (1.4–2.9) ***
Benefits of early childbearing	1.0 (0.7–1.4)	0.9 (0.6–1.2)
Friends' approval of pregnancy	1.2 (1.1–1.4) **	1.2 (1.0–1.3) *
Parents' approval of pregnancy	0.9 (0.8–1.0)	0.9 (0.8–1.0)
Desire for consumer goods	1.4 (1.2–1.7) ***	1.1 (0.9–1.3)
Desire to enroll in college	0.7 (0.4–1.3)	0.8 (0.4–1.4)
Covariates		
Desire to get pregnant	na	1.0 (0.8–1.3)
Age at baseline	na	0.8 (0.5–1.1)
Months since baseline	na	1.1 (1.0–1.2) *
Months since baseline squared	na	1.0 (1.0–1.0)
Race/ethnicity		
White (ref)	na	1.0
Black	na	1.3 (0.8–2.0)
Hispanic	na	1.0 (0.5–2.1)
Childhood disadvantage	na	1.3 (1.0–1.6) *
High school grade point average	na	0.7 (0.5–1.0)
Received public assistance	na	1.7 (1.0–2.8)
No. of weekly interviews	na	1.0 (1.0–1.0) ***
<i>Constant</i>	<i>0.0 (0.0–0.0) ***</i>	<i>0.4 (0.0–387.7)</i>
<i>Log likelihood</i>	<i>–679</i>	<i>–629</i>

*
p<.05.

**
<.01.

p<.001.

Notes: na=not applicable. ref=reference group.