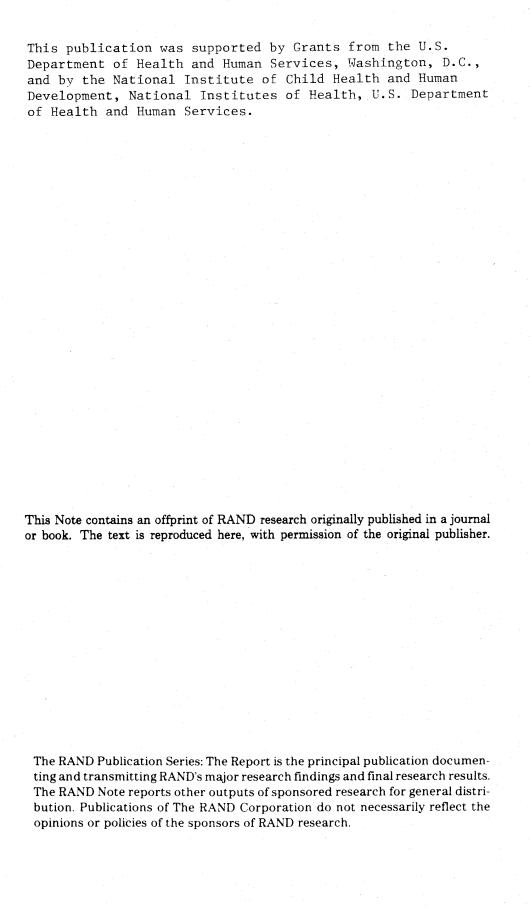
A RAND NOTE

Teenagers Willing to Consider Single Parenthood: Who Is at Greatest Risk?

Allan F. Abrahamse, Peter A. Morrison, Linda J. Waite

February 1988





A RAND NOTE

N-2707-HHS/NICHD

Teenagers Willing to Consider Single Parenthood: Who Is at Greatest Risk?

Allan F. Abrahamse, Peter A. Morrison, Linda J. Waite

February 1988

Prepared for The U.S. Department of Health and Human Services The National Institute of Child Health and Human Development



Teenagers Willing to Consider Single Parenthood:

Who Is at Greatest Risk?

By Allan F. Abrahamse, Peter A. Morrison and Linda J. Waite

Allan F. Abrahamse is a statistician, Peter A. Morrison is director of the Population Research Center and Linda J. Waite is a senior researcher at The Rand Corporation, Santa Monica, Calif. This article was prepared under Adolescent Family Life Research Grant No. APR000912 from the Department of Health and Human Services. The research has drawn on core services supported by Center Grant P50-HD12639, awarded to Rand's Population Research Center by the National Institute of Child Health and Human Development. The study is part of the center's ongoing inquiry into the demography of American families. The authors thank the following colleagues at Rand—David E. Kanouse, Joyce E. Peterson, John Uebersax and Gail L. Zellman-and Frank F. Furstenberg, Jr. (University of Pennsylvania) for their valuable comments on earlier drafts. The authors, of course, remain solely responsible for the analysis and conclusions reported here. Each of the authors of this article contributed equally to the research.

Summar

Data from the High School and Beyond panel study indicate that of 13,061 female high school sophomores who responded to both the baseline questionnaire in 1980 and a 1982 follow-up, 41 percent of blacks, 29 percent of Hispanics and 23 percent of non-Hispanic whites said they either would or might consider having a child outside of marriage. Such willingness was higher among young women who, according to their background characteristics, were at greater risk of teenage parenthood. In addition, young black women were more willing to consider having a child while single than were white or Hispanic respondents, at every level of risk. The data also show that, with the possible exception of Hispanics, willing respondents generally registered much higher rates of nonmarital childbearing over the two years following the baseline survey than the young women unwilling to consider nonmarital childbearing.

Respondents' reports on their own disciplinary problems in school and on their class-cutting and absenteeism showed that such problem behavior was related to the teenagers' willingness to consider nonmari-

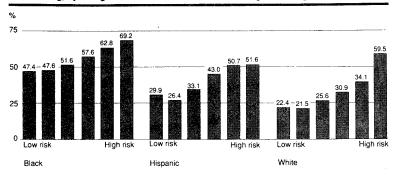
tal childbearing: Proportionally more of the respondents who ranked high on a scale of problem behavior were willing to do so, even when background differences were controlled for. In addition, when the respondents' educational expectations were used as proxy measures of the potential opportunity costs of single parenthood, the results revealed that the higher their educational expectations, the lower their willingness to have an out-of-wedlock birth. This pattern persisted when the young women's background risk of teenage childbearing was considered. Finally, at least among Hispanic and white respondents, individuals who reported several instances of depression in the previous month were more likely to claim that they would consider nonmarital childbearing than were their nondepressed peers.

Thus, the willingness to consider single motherhood can be traced to patterns of nonconforming behavior, to the educational opportunity costs of becoming a single mother and, at least among whites and Hispanics, to self-reported depression, which may be a proxy for low self-esteem.

Reprinted with permission from Family Planning Perspectives, Vol. 20, January/February 1988, pp. 13-18.

The Alan Guttmacher Institute.

Figure 1. Percentage of female high school sophomores willing to consider nonmarital childbearing, by background risk of nonmarital childbearing, according to race or ethnicity



Note: In this and subsequent figures, willing is defined as responding "yes" or "maybe" to the question "Would you consider having a child if you weren't married?"

Introduction

By 1986, a majority of all black children lived in single-parent families. In addition, 18 percent of white children lived with only one parent, double the proportion in 1970. A major reason for the high levels of single parenthood is that many children today are being born to unmarried teenagers.

Some observers argue that nonmarital childbearing by contemporary teenagers reflects an erosion of traditional social controls on reproduction. This contention has intensified public concern with the principal institutions—the family, the church and the schools—that traditionally have set and monitored standards of appropriate sexual and reproductive conduct. Such an interpretation, however, accounts only partially for the uncommonly high rates of single childbearing among contemporary U.S. teenagers. Social transformations often merely accentuate other individual factors, such as low academic ability, rebelliousness or lack of self-esteem, that predispose some adolescents to become single parents.

Despite sharing an age-group, young

Table 1. Percentage distribution of female high school sophomores, by their response to the question of whether they would be willing to consider nonmarital childbearing, according to race or ethnicity, High School and Beyond, 1982

Response	Race/ethnicity			
	Black (N=1,759)	Hispanic (N=2,242)	White (N=9,060)	
Yes	13.1	8.9	5.3	
Maybe	28.3	20.1	17.8	
No	44.7	62.9	73.5	
No response	14.0	8.2	3.5	
Total	100.0	100.0	100.0	

women in their midteens vary widely in their aspirations and attitudes, the types of peers with whom they associate and their stage of cognitive development. Nevertheless, certain relatively permanent features of their lives-family socioeconomic status, family structure, personal ability and, especially, race or ethnicity-clearly foreshadow distinctive patterns of marriage and family formation, most notably out-ofwedlock childbearing. The typical pattern among contemporary white women involves marriage in their early or mid-20s and the birth of their first child several years thereafter.2 Among contemporary black women, in contrast, the pattern is often one of teenage childbearing outside of marriage: In 1985, for example, 42 percent of black mothers were teenagers when they bore their first child (compared with 20 percent of whites), and 92 percent of such first births to black teenagers occurred out of wedlock (compared with 48 percent for white teenagers).3

Behind these racially distinct reproductive patterns lie differences in attitudes toward marriage and single childbearing. Compared with their white counterparts, black teenage women are more likely both to favor having their first birth before age 204 and to report an ideal age at first marriage that is older than the age they specify as ideal for a first birth.5 Blacks also perceive less social condemnation of single childbearing than do whites,6 as well as less unfavorable reactions to a nonmarital conception from peers and from their male partners.7 Data from the panel survey described below reflect this racial distinction.8 About half of the black female high school sophomores and one-fourth of the whites who participated in the study (when nonrespondents are excluded) said they might consider having a child out of wedlock.

High School and Beyond

The data presented in this article are taken from the High School and Beyond panel study, a large, nationally representative study begun in spring 1980 that has conducted follow-up surveys at two-year intervals since then. The baseline survey involved young women and men in the sophomore and senior classes of a nationally representative sample of 1,015 schools. In spring 1982, subsamples of the first survey sample, including all who remained in the same schools they had attended at the time of the 1980 survey and about 50 percent of those who had not remained (i.e., dropouts, transfers and early graduates), were contacted again. The response rates for the first follow-up were 96 percent among students still in school, 92 percent among early graduates, 91 percent among transfers and 88 percent among dropouts.

In this article, we shall focus on the 1980 sophomores (mostly 15 and 16 years old at that time) who said that they would consider becoming single mothers: What kinds of persons are they, and what in their backgrounds, capabilities or the parenting they have received distinguishes them? Equally important, are they actually more likely to become single teenage mothers by 17 or 18?

The analytic sample used in this article is a subset of cases from the 1980 sophomore cohort-the 13,061 young women who responded to both the baseline questionnaire in 1980 and the 1982 follow-up and who neither were married nor were parents at the baseline survey. A total of 342 of these women had become single mothers by 1982. The 3,293 young women who claimed in 1980 that they might consider having a child out of wedlock are compared with their peers who rejected the idea. From those thousands of individual cases, we isolate the individual, familial and societal factors that can foster or suppress the willingness to have a nonmarital birth, and describe the relationship between the willingness to become and the likelihood of actually becoming a single teenage mother. Since our objective is to search for patterns that would warrant further detailed study, we do not report tests of statistical significance in this article.*

Premarital childbearing reflects the interplay of the biological capacity to reproduce and the social forces that discourage

^{*}A detailed report confirms the statistical significance of similar results obtained by multivariate analysis (see reference 13).

one from doing so before marriage. In the past, as a result of such forces, young people generally either postponed sexual activity until a culturally defined "marriageable" age or had marriage prescribed for them as the way to resolve a premarital pregnancy when it occurred. In recent generations, however, young women appear to have developed the biological capacity to reproduce earlier,9 and sexual activity commences at a young age: For example, 38 percent of blacks and 27 percent of whites are sexually active by age 16.10 At the same time, contemporary women typically postpone marriage for several years beyond their late teens.11 Accordingly, young women now face a prolonged period of either sexual abstinence or exposure to the risk of premarital conception. Finally, single teenagers who conceive and carry the pregnancy to term are now more inclined than ever to bear the child out of wedlock rather than marry.12

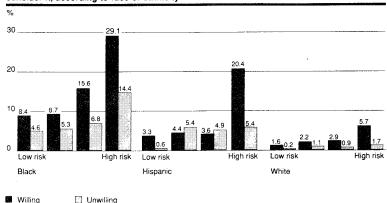
Willingness to Consider Childbearing

Contemporary social norms pertaining to nonmarital childbearing are in a state of flux, and individuals vary in their willingness to consider having a child before they marry, as is shown in Table 1. In the High School and Beyond 1980 baseline survey, each sophomore was asked, "Would you consider having a child if you weren't married?" Respondents could select one of three choices: yes or maybe (grouped together hereafter as "willing") or no (considered as "unwilling"). We interpret a teenager's willingness or unwillingness in response to this question to be an indirect reflection of how fully she has internalized normative restraints on nonmarital childbearing.

Overall, 41 percent of black respondents, 29 percent of Hispanics and 23 percent of non-Hispanic whites were classified as willing to consider nonmarital childbearing. In addition, 14 percent of blacks, eight percent of Hispanics and four percent of whites did not respond to the question; when the nonrespondents are eliminated, we find that 48 percent of blacks, 32 percent of Hispanics and 24 percent of whites claimed they were or might be willing to bear a child outside of marriage (not shown).

Before making any meaningful comparisons between those willing and those unwilling to be unmarried mothers, we must take into account certain relatively permanent differences in the young women's backgrounds, which might obscure the other influences to be examined here. For our purposes, the most important

Figure 2. Percentage of female high school sophomores surveyed in 1980 who were single mothers by 1982, by background risk of nonmarital childbearing and previous willingness to consider it, according to race or ethnicity



Note: The two lowest levels of risk and the two highest levels are combined here to ensure sufficient sample sizes at the extremes.

background variables measured in the High School and Beyond study are race or ethnicity, socioeconomic status, academic ability and parental family structure (i.e., residence in a female-headed family). Using a parenthood-risk scale that incorporates the last three of these variables,13 we stratified the respondents (separately by race or ethnicity) into six parenthood-risk groups.* By definition, the groups at higher risk within each racial or ethnic category were composed of academically less able individuals from single-parent families of comparatively low socioeconomic status; those at lower risk generally were composed of individuals with other types of personal and family characteristics.† These distinctions are as finely detailed as can be supported, given the size of the race-specific samples used in the High School and Beyond study.

Figure 1 shows that the willingness to consider nonmarital childbearing was more common among young women at higher risk (as indicated by the parenthood-risk scale) than among the others. For example, 69 percent of the young black women who were at highest risk of adolescent parenthood said that they were willing to consider nonmarital childbearing, compared with 47 percent of those at lowest risk of teenage parenthood. Likewise, among Hispanic respondents, the respective proportions were 52 percent and 30 percent, and among whites, they were 60 percent and 22 percent. Apparently, norms proscribing single childbearing are weaker among respondents whose backgrounds alone foreshadow an actual elevated risk of

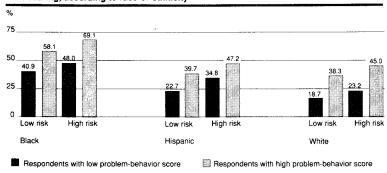
nonmarital childbearing. Note, too, that at every level of risk, young black women were more willing to consider having a child while single than were white or Hispanic respondents.

Were the respondents who expressed a willingness to consider nonmarital childbearing actually more prone to become single mothers thereafter? The data in Figure 2 show that they were, with the possible exception of Hispanics, for whom the pattern was mixed. Over the two years following the baseline survey, willing respondents generally registered much higher rates of nonmarital childbearing than did their unwilling counterparts at each level of risk. For example, in the group at highest risk, levels of childbearing were at least twice as high among those who had said they were willing than among the unwilling-29 percent compared with 14 percent. among blacks, 20 percent compared with five percent among Hispanics and six percent vs. two percent among whites. Even among young black women at the second

*The parenthood-risk scale's three components were combined into an integer-valued risk scale ranging from ~2 for respondents in both the upper socioeconomic and the upper ability quartiles who live in a two-parent family to +3 for those in both the lower socioeconomic and the lower ability quartiles who are black or Hispanic and live in a female-headed or other type of family. Exact operational definitions of socioeconomic status and academic ability are available elsewhere (see reference 13, Appendix B).

tWe observed that young women stratified in this way differed markedly in their rates of single parenthood. Rates were as high as 24 percent (among high-risk blacks) and as low as 0.1 percent (among low-risk whites).

Figure 3. Percentage of female high school sophomores willing to consider nonmarital childbearing, by degree of self-reported problem behavior and background risk of nonmarital childbearing, according to race or ethnicity



highest level of risk, 16 percent of initially willing respondents had become single mothers two years later, compared with only seven percent of those who had said they were unwilling; among whites, the comparable rates were three percent and one percent.

These data imply that for a segment of the population that refuses to consider out-ofwedlock childbearing, single parenthood is not simply an "accident," but rather is an avoidable outcome. Compared with young women who would consider having a child outside marriage, those who reject the idea appear better able to avoid that outcome, even when their backgrounds alone strongly predispose them toward it. Exactly how these teenagers avoid single parenthood cannot be determined from the High School and Beyond data, however. They may choose to be less sexually active or to initiate sexual activity later, they may be more diligent in their contraceptive use, or they may have more favorable attitudes toward marriage as a means of resolving a premarital pregnancy.

Problem Behavior and Opportunity Costs

If willingness, as it is measured here, reflects the weakness of normative restraints on single childbearing, how can its expression in certain individuals be accounted for? To do so, we introduce two complementary theoretical perspectives. The first,

derived from psychology, calls attention to the propensity of certain individuals to engage in "problem behavior." This theory postulates that certain people exhibit a constellation of alienation, rebelliousness and various types of risk-taking behavior, and that in these individuals, specific kinds of problem behavior—alcohol and drug use, misbehavior in school, criminal behavior, aggression, lying and stealing—"go together."

A large body of psychological literature amplifies and supports the notion that risk-taking and problem behavior are related. We postulate here that problem-behavior theory may pertain as well to the social control of reproduction, in that the willingness of some young women to consider nonmarital childbearing is one instance of a broader resistance to social norms and a tendency toward nonconforming behavior.

A second perspective, drawn from economics, emphasizes the costs and benefits of single parenthood as they might appear to a teenager. What does she stand to lose (or gain) by forming a single-parent family-that is, what opportunity costs would she incur?¹⁵ This perspective implies that seemingly irrational behavior (becoming a mother without first marrying) may nonetheless be reasonable and logical within the teenager's own perceptions. Thus, a pregnant adolescent who shuns abortion or marriage and goes on to bear a child out of wedlock discerns both potential costs and potential benefits and weighs them with reference to how she values the possible alternatives.

If some young women's claims that they would be willing to bear a child outside marriage form part of a broader range of nonconforming or rebellious behavior associated with their struggle to separate

themselves from their parents, then the same individuals should engage in other problem behavior as well. To test this hypothesis, we examined three types of problem behavior as reported by the respondents: disciplinary problems in school, class-cutting and absenteeism. For simplicity, the three have been combined into a simple scale, in which respondents are assigned to one of three possible levels of problem behavior (high, moderate and low).*

As can be seen in Table 2, proportionally more of the respondents ranking higher on this scale were willing to consider nonmarital childbearing. For example, 41 percent of whites with a high problem-behavior score expressed such willingness, compared with only 18 percent of those who scored low; among black respondents, the comparable proportions are 64 percent and 40 percent.

The marked difference between those with high problem-behavior scores and those with low scores persists when background differences are controlled for by means of the parenthood-risk scale, as can be seen in Figure 3. (Because sample sizes were small at the extremes, we have combined the six levels of the parenthood-risk scale into only two levels-high and low.) Among whites on the low half of the risk scale, 38 percent who scored high on problem behavior were willing to consider nonmarital childbearing, compared with 19 percent who scored low; among blacks, the comparable proportions are 58 percent and 41 percent; and among Hispanics they are 40 percent and 23 percent. A similar pattern can be seen among high-risk women.

Thus, those individuals who reported cutting classes, being frequently absent from school and having disciplinary problems were more likely to claim a willingness to become single mothers, and their backgrounds alone do not account for much of this association. However, interpreting these findings is difficult: It may be that individuals manifesting the problem-

Table 2. Percentage of female high school sophomores who were willing to consider nonmarital childbearing, by their ranking on a problem- behavior scale, according to race or ethnicity

Ranking	Race/ethnicity			
	Black (N=1,759)	Hispanic (N=2,242)	White (N=9,060)	
High	63.9	42.6	41.3	
Moderate	48.5	31.4	24.4	
Low	40.3	24.0	17.5	

^{*}For the problem-behavior scale, we defined three dummy variables that indicated specific self-reported behavior problems: whether the respondent had disciplinary problems in school during the last year; whether she cut classes "every once in a while"; and whether she was frequently absent from school for reasons other than illness. Few respondents reported all three types of behavior; accordingly, we separated respondents into groups reporting two or more types (high), exactly one type (moderate) or none (low).

behavior pattern resist social rules about nonmarital childbearing, or they may simply give nonconforming responses to survey questions as part of that pattern.

Either way, though, as was seen in Figure 2, the response does in fact predict subsequent behavior. Thus, our findings affirm, at least theoretically, the relevance of this psychologically based theory and support its inclusion within any general interpretation of early premarital childbearing. Practically, it links the would-be single teenage mother to a readily measurable problembehavior pattern familiar to psychologists.

If problem-behavior theory accounts for the reported willingness of some respondents to have a nonmarital birth, then economic theory furnishes a complementary perspective, positing that a teenager's "irrational" willingness to consider nonmarital childbearing might make perfectly good sense when framed in terms of anticipated costs and benefits. Whatever the possible benefits, the losses surely include delaying or even giving up on continued schooling. A corollary of this view is that individuals who stand to lose the most as single mothers should be the ones least inclined to consider doing so.

To test this hypothesis, we use several proxy measures of potential opportunity costs available from the High School and Beyond data. These measures, which reflect what a young woman would forgo educationally were she to become a single mother, pertain to her stated educational plans—whether or not she expects to go to

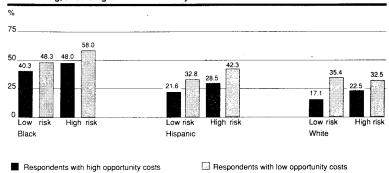
Table 3. Percentage of female high school sophomores willing to consider nonmarital childbearing, by ranking of opportunity costs associated with a pregnancy, according to race or ethnicity

Opportunity costs	Race/ethnicity			
	Black (N=1,759)	Hispanic (N=2,242)	White (N=9,060)	
Low	53.9	37.7	33.6	
Moderate	50.5	34.0	23.3	
High	43.6	23.6	18.1	

Table 4. Percentage of female high school sophomores willing to consider nonmarital childbearing, by frequency of instances of depression in previous month, according to race or ethnicity

Frequency	Race/ethnicity			
	Black (N=1,759)	Hispanic (N=2,242)	White (N=9,060)	
> 1	35.6	35.1	30.3	
1	48.1	29.6	21.1	
None	39.6	18.6	16.7	

Figure 4. Percentage of female high school sophomores willing to consider nonmarital childbearing, by implied opportunity costs of doing so and by background risk of nonmarital childbearing, according to race or ethnicity



college, and what level of education she expects to attain. Opportunity costs would be higher for, say, someone who aspires to be a college graduate than for someone who plans only to finish high school. The two variables formed a single, three-level opportunity-costs scale.*

Teenagers differ in their individual goals: Some expect to complete college, others do not want to bother finishing high school. Once we account for these differences, a recognizable pattern appears that is familiar to economists: The young women who have the most to lose by becoming single mothers are the least likely to say that they would consider having a nonmarital birth (see Table 3). Among whites, for example, 34 percent of those ranking lowest on the opportunity-costs scale claimed a willingness for nonmarital childbearing, compared with only 18 percent of those ranking highest. A similar pattern can be seen among blacks (54 percent compared with 44 percent) and Hispanics (38 percent compared with 24 percent).

When background differences are controlled for by means of the parenthood-risk scale, the pattern persists (see Figure 4). Among high-risk black respondents, for example, only 48 percent of those with high opportunity costs were willing to consider nonmarital childbearing, compared with 58 percent of those whose opportunity costs were low. This differential was greatest for low-risk whites—17 percent compared with 35 percent. Although the differentials were in most cases relatively small, their consistency across all groups in Figure 4 is noteworthy.

As a further, although oblique, test of the opportunity-costs perspective, we examined a measure of depression gathered in High School and Beyond through the respondents' reports. They were asked,

"During the past month, have you felt so sad, or had so many problems, that you wondered if anything was worthwhile?" Respondents could chose "yes, more than once," "yes, once," or "no." (Although selfreportst of depression cannot substitute for ratings or diagnoses by trained clinicians, their research utility is established in the psychological and psychiatric literature.16) Individuals who cited several instances of depression in the previous month may tend to perceive opportunities—and hence opportunity costs-differently from the others. To those who show evidence of depression, opportunity costs may flatten out into indifference about their own future.

Among Hispanics and non-Hispanic whites, respondents who reported being depressed were more likely to claim that they would consider nonmarital childbearing than were their nondepressed peers (see Table 4). For example, young white respondents who had felt depressed more than once in the preceding month were almost twice as likely to have been willing to consider single parenthood as were young women who reported no such instances of depression (30 percent compared with 17 percent). Among blacks, however, the pattern was mixed: Those who reported several instances of depression were

^{*}The opportunity-costs scale was composed of an indicator of whether the respondent expected to pursue two or more years of college education and an indicator of whether the respondent planned "to go to college at some time in the future." The scale is simply the sum of these, which ranges from zero (low opportunity-costs) to two (high opportunity-costs)

tSelf-reports are imperfectly correlated with clinically diagnosed depression, but that only reduces the statistical power of the measure we use here. The key point is that the measure of depression has face validity; it is difficult to imagine that this item would yield false positives.

slightly less likely to say they would consider nonmarital childbearing than were the other young black women, whereas those who had felt this way once in the previous month were the most likely to consider nonmarital childbearing.

Conclusions

The responses of a nationally representative sample of high school sophomore women to the question "Would you consider having a child if you weren't married?" are indicative, we believe, of how completely (or incompletely) each has internalized normative restraints on nonmarital childbearing. According to our analysis, those restraints do curtail subsequent single childbearing: Among young women whose background put them at a comparable level of risk of nonmarital childbearing, those who claimed that they would consider becoming a single mother were more likely to have had a nonmarital birth than were those who would not consider doing so.

The willingness to consider single motherhood (expressed by half of the blacks who gave a response and one-quarter of the whites in the overall High School and Beyond study) can be traced to three sources. First, for a small, well-defined segment who rank high in problem behavior (19 percent of our sample), this willingness is part of a recognizable pattern of nonconforming behavior. In addition, it is associated with the educational opportunity costs of becoming a single mother. Finally, among whites and Hispanics, it is linked to self-reported depression (which may be a proxy for low self-resteem).

These findings underscore the relevance of both psychological and economic perspectives for fathoming the social restraints on nonmarital childbearing. At the stage of

adolescence examined here, a young woman's receptivity to single parenthood may well be manifested in different ways in different individuals—as rebelliousness in some, as a kind of calculated (or miscalculated) thinking in others, or as another's apparently bleak outlook for her prospects. From a practical standpoint, our results pinpoint three promising factors for constructing profiles to spot prospective single mothers.

References

- 1. U.S. Bureau of the Census, Current Population Reports, Series P–20, No. 418, 1987, Table E.
- 2 R. T. Michael and N. B. Tuma, "Entry into Marriage and Parenthood by Young Men and Women: The Influence of Family Background," *Demography*, 22:515, 1985; and K. A. Moore, M. C. Simms and C. L. Betsey, *Choice and Circumstance: Racial Differences in Adolescent Sexuality and Fertility*, Transaction Books, New Brunswick, 1994.
- 3. Natality Statistics Branch, National Center for Health Statistics, unpublished data for 1985.
- 4. M. Zelnik, J. F. Kantner and K. Ford, Sex and Pregnancy in Adolescence, Sage Press, Beverly Hills, 1981.
- 5. K. A. Moore, M. C. Simms and C. L. Betsey, 1986, op. cit. (see reference 2).
- 6. M. Zelnik, J. F. Kantner and K. Ford, 1981, op. cit. (see reference 4).
- 7. K. A. Moore, M. C. Simms and C. L. Betsey, 1986, op. cit. (see reference 2).
- 8. National Opinion Research Center, High School and Beyond, 1980 Sophomore Cohort, Third Follow-Up (1986), Volume 1, Data File User's Manual, Center for Education Statistics, U.S. Department of Education, Washington, D.C., 1987.
- 9. P. B. Eveleth, "Timing of Menarche: Secular Trends and Population Differences," in J. P. Lancaster and B. A. Hamburg, eds., School-Age Pregnancy and Parenthood: Biosocial Dimensions, Aldine de Gruyter, New York,

- 10. S. L. Hofferth, J. R. Kahn and W. Baldwin, "Premarital Sexual Activity Among U.S. Teenage Women Over the Last Three Decades," Family Planning Perspectives, 19:46, 1987.
- **11.** U.S. Bureau of the Census, 1987, op. cit. (see reference 1), Table C.
- 12. S. L. Hofferth, "Factors Affecting Initiation of Sexual Intercourse," in S. L. Hofferth and C. D. Hayes, eds., Risking the Future, Vol. II: Working Papers and Statistical Appendixes, National Academy Press, Washington, D.C., 1987.
- **13.** A. F. Abrahamse, P. A. Morrison and L. J. Waite, *Beyond Stereotypes: Who Becomes a Single Teenage Mother?* The Rand Corporation, Santa Monica, Calif., 1988.
- 14. S. L. Jessor and R. Jessor, "Transition from Virginity to Nonvirginity Among Youth: A Social Psychological Study Over Time," Developmental Psychology, 11:473, 1975; R. Jessor and S. L. Jessor, Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth, Academic Press, New York, 1977; and R. Jessor et al., "Time of First Intercourse: A Prospective Study," Journal of Personality and Social Psychology, 44:608, 1983.
- 15. G. S. Becker, A Treatise on the Family, Harvard University Press, Cambridge, Mass., 1981.
- 16. L. P. Rehm and M. W. O'Hara, "Item Characteristics of the Hamilton Rating Scale for Depression," Journal of Psychiatric Research, 19:31, 1985; and D.R. Robbins et al., "Use of the Hamilton Rating Scale for Depression and the Carroll Self-Rating Scale in Adolescents," Psychiatry Research, 14:123, 1985.

RAND'S POPULATION RESEARCH CENTER

The Population Research Center was established in 1979 to advance the basic research aims of its sponsoring agency, the National Institute of Child Health and Human Development. The Center strengthens and focuses academic population studies within RAND's broader problem-solving environment.

RAND/N-2707-HHS/NICHD