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The Association Between Prepregnancy Parental Support and Control and Adolescent Girls' Pregnancy Resolution Decisions

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Abstract

Purpose—To examine the influence of prepregnancy parental support and control on adolescent girls' pregnancy resolution decisions.

Methods—Data from the National Longitudinal Study of Adolescent Health were analyzed. Girls whose first pregnancy reported in wave IV occurred after wave I and before age 20 were included (n = 1,107). Participants self-reported pregnancy disposition (abortion, ectopic or tubal pregnancy, miscarriage, stillbirth, live birth) for each pregnancy; responses were dichotomized as abortion versus other. Girls' perceptions of parental support and control were measured at wave I. Controls were included for wave I age, age at pregnancy, year at the end of pregnancy, race/ethnicity, and parent characteristics (i.e., education, religious affiliation, age at first marriage, and educational expectations). Weighted multivariable logistic regression models were performed.

Results—Approximately 18% of girls reporting a teen pregnancy reported having an abortion. In crude analyses, parental support was marginally negatively related to abortion (odds ratio [OR] =. 83, p =.06) and parental control was significantly negatively related to abortion (OR = .78, p = . 02). In multivariable analyses, higher parental control was significantly negatively related to abortion versus other pregnancy outcomes (adjusted OR .80, 95% confidence interval .66–.98). Perceived parental support was unassociated with pregnancy resolution decisions. The only other factor associated with abortion decisions was parent education: odds of choosing abortion versus other pregnancy outcomes were significantly higher for adolescent girls whose parents had a bachelor's degree or greater versus those with lower educational attainment.

Conclusions—Pregnant adolescents with less educated parents or parents exercising greater control were less likely to have an abortion.

Keywords

Adolescent pregnancy; Abortion; Parent support; Parent control

In 2008, 733,000 pregnancies occurred among young women ages 15–19 in the United States, with approximately 7% of women in this age group experiencing pregnancy [1]. This was the lowest teenage pregnancy rate in more than 30 years, representing a 42% decline from the peak teenage pregnancy rate in 1990 [1]. Of those who became pregnant in 2008, an estimated 31% chose to end the pregnancy with an abortion [1]. Among teenagers, both the abortion rate (i.e., the number of abortions performed per 1,000 women) and abortion

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ratio (i.e., the proportion of teenage pregnancies ending in abortion) have declined substantially since their peaks in the late 1980s. Among women ages 15–19, the abortion rate declined from 43.5 in 1988 to 17.8 in 2008, whereas the abortion ratio declined by one third between 1986 to 2008 [1]. This suggests that the decline in teen abortion rates is due both to declines in pregnancy rates and in the proportion of pregnant teens who choose to have an abortion. Despite these declines, wide differences between racial/ethnic groups remain in pregnancy rates, abortion rates, and the percentage of pregnant young women who choose to end their pregnancy with abortion. In 2008, the percentage of pregnant young women age 15–19 who chose abortion were 40.7% among non-Hispanic blacks, 29.3% among non-Hispanic whites, and 22.9% among Hispanics [1].

A number of personal characteristics of young pregnant women are linked with their likelihood of choosing abortion versus live birth. For example, affiliation with a conservative Protestant denomination has been negatively associated with abortion among unwed teens [2], although general religiosity has not been associated with abortion decisions [2,3]. The teenager's academic ambition and propensity for risk-taking also have been positively associated with the decision to abort versus carry a pregnancy to term [2,4].

Given the embeddedness of adolescents in families, parental influences on teen pregnancy resolution choices also are likely to be important. A number of family-of-origin demographic characteristics are associated with pregnancy resolution decisions. Having a mother who herself was a teenage parent has been negatively associated with teens choosing abortion versus carrying a pregnancy to term [5]. However, living in a single-mother family has only been associated with increased likelihood of live birth versus abortion for white female adolescents [6]. In contrast, having parents with high educational attainment is associated with an increased likelihood of abortion across racial and ethnic groups [6,7].

Less research has been conducted exploring whether prepregnancy family relationship qualities influence young women's likelihood of seeking abortion versus carrying a pregnancy to term. Prepregnancy parental relationships likely affect an adolescent's expectation of instrumental and social support from her family if she carries a pregnancy to term. Parenting styles, characterized along two dimensions—demandingness/control and responsiveness/warmth—have been found to be influential in many other adolescent behaviors [8]. Notably, past studies have found that parent emotional support is negatively associated with a number of sexual risk behaviors, including early sexual initiation, number of sexual partners, and condom nonuse [9,10]. Although higher levels of parental psychological control (i.e., controlling through instilling anxiety, guilt, or withdrawing love) have been related to greater sexual risk-taking among female adolescents [11], behavioral control (e.g., behavioral limit-setting, monitoring of friends and activities) has been negatively associated with risky sexual behavior [9].

Only one study has examined the association between prepregnancy parental relationships and adolescents' pregnancy resolution decisions. This analysis used data from the National Longitudinal Study of Adolescent Health. Authors found that among the family variables they studied, not wanting to leave home was the only variable significantly (negatively) related to likelihood of abortion [4]. Other family-level factors such as having a warm and loving mother or father; having a family that pays attention to the adolescent; and having a family that understands the adolescent were unassociated with abortion outcomes. However, this analysis only included pregnancies that occurred over a 1 year period between waves I and II, which yielded a small overall sample size (n = 130).

The purpose of the present study is to examine the role of prepregnancy parental relationship quality—specifically emotional bonding and parental control—on the likelihood that a

pregnant teenager will choose abortion versus carrying a pregnancy to term. This decision is an important one, because becoming a teenage mother can affect a young woman's educational trajectory as well as other socioeconomic and health outcomes of both the mother and child [12]. However, the choice of whether or not to abort a pregnancy is highly personal, and the "right" choice will depend on the young women's own personal values as well as economic and social resources. Providers that counsel young pregnant women about their choices will be in a better position to do so when understanding factors that may influence young women's decision-making processes. We use data from a nationally representative survey of school-attending youth who have completed their teenage years and thus have complete data on teenage pregnancies. Data were collected prospectively that will allow us to assess parental relationships before the teen pregnancy.

Methods

Data

Data from waves I and IV of the National Longitudinal Study of Adolescent Health (Add Health) contractual dataset were used [13]. Add Health is a prospective cohort study of a nationally representative sample of youth enrolled in grades 7–12 in the 1994–95 school year (wave I) [14]. Follow-up interviews were conducted in 1996 (wave II), 2001 (wave III), and 2008–09 (wave IV). A multistage probability clustered sampling design was used to obtain its wave I sample. The first stage was a stratified, random sample of all public and private high schools in the United States. A feeder school was also recruited from each participating community. In-school surveys were attempted with all students attending participating schools; a total of 90,118 were completed. In the second wave I sampling stage, a sample of adolescents was drawn for in-depth in-home interviews, consisting of a random core sample plus selected special oversamples; a total of 20,745 interviews were conducted at this stage. At wave IV, all respondents to the wave I in-home interview were eligible for re-interview. A total of 15,701 interviews were conducted at wave IV (80.3% response rate). Sampling weights adjusted for both unequal probabilities of selection into the original sample and for loss to follow-up. The present study was deemed exempt by the institutional review board at Tulane University.

We applied a number of sample inclusion criteria (Figure 1). First, we limited to females who participated in wave IV, because that was the wave when all respondents had completed their teenage years and had complete teen pregnancy data (n = 8,352). Second, we limited to female participants with valid sampling weights in order to make generalizations to the U.S. population (n = 7,870). Third, we limited to females whose first pregnancies occurred after wave I (n = 4,677) during adolescence (n = 1,482) to ensure the temporal ordering of predictors and outcomes. Fourth, we limited to adolescents who had a parent complete a parent interview, so we could use parent-reported measures of certain characteristics (n = 1,225). Finally, we limited to females with complete information on covariates (n = 1,107).

Measures

Outcome—At wave IV, girls were asked about previous pregnancies and their outcomes. If they had gotten pregnant, they were asked "How did this pregnancy end?"—with options of abortion, ectopic/tubal, miscarriage, stillbirth, and live birth. For bivariate and multivariable analyses, we dichotomized responses to reflect abortion versus other outcomes.

Predictors—Our main predictors were measures of parental support and control at wave I, which were based on previous Add Health analyses [15,16]. To measure parental support,

we summed adolescents' responses to five Likert items (1 = strongly disagree to 5 = strongly agree) on both maternal and paternal closeness, personal warmth, caring, relationship satisfaction, and satisfaction with parent-child communication (α = .88). These scores were transformed to z-scores for bivariate and multivariable analysis so odds ratios could be interpreted as changes in odds of abortion versus other pregnancy outcomes per one standard deviation change in parental support. To measure parental control, we reverse coded and summed responses to seven dichotomous items asking adolescents whether their parents let them make their own decisions regarding the time they must be home on weekend nights, friendships, clothing, amount and type of television shows watched, bedtime, and food choices (α = .62). Because one may expect that parental control will lessen with age, we calculated z-scores within wave I age segments (12–14, 15–16, 17–19), so scores could be interpreted relative to similar-aged peers. (These age segments were chosen based on analysis showing control scores were statistically similar within these age groups.)

Controls—A number of demographic controls were included. Adolescent race/ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, other) was included because of the differences across racial/ethnic groups in abortion likelihood. Age at baseline (wave I) was used to control for possible cohort effects, whereas age at pregnancy was meant to control for changing likelihood of abortion by age. Year at the end of pregnancy was included to capture possible temporal changes in the likelihood of an adolescent choosing abortion. Parental education at wave I was included as a marker of socioeconomic status, measured as the higher of either co-residential mother or father: less than high school diploma, high school diploma/General Equivalency Degree (GED), some postsecondary, or bachelor's degree or higher. Further, based on prior research on predictors of pregnancy resolution decisions, we included measures of the parent's self-reported religious affiliation at wave I (Baptist, Catholic, none, or other) and age at marriage as a proxy for early child-bearing (never married, before age 19, at or after age 19). Parental educational expectation at wave I was based on a question asking "How disappointed would you be if [NAME] did not graduate from college?" We reverse-coded the response options, which were 1 = very disappointed, 2 = somewhat disappointed, and 3 = not disappointed. We did not include measures of adolescents' risk-taking and educational aspirations because these behaviors may lie on the causal pathway between parenting relationship qualities and pregnancy resolution decisions. Controlling for factors that lie on the causal pathway between the main exposure(s) of interest and the outcome generates biased effect estimates [17–19].

Analyses

All analyses were conducted in SAS (SAS Institute, Cary, North Carolina) using survey procedures, which apply population weights and adjust standard errors for nonindependence between respondents due to school-based sampling. We began with descriptive statistics (means and percentages) for all analysis variables, then conducted bivariate analyses (chi-square and logistic regression) to test the crude relationships between analysis variables and pregnancy outcomes. Finally, we implemented multivariable logistic regression models to examine the relationship between parent support, parent control, and pregnancy outcomes after controlling for other individual and family characteristics and year of the end of pregnancy. All theoretically relevant variables were maintained between bivariate and multivariable analyses.

Results

The characteristics of the study population are presented in Table 1. Characteristics of young women who did versus did not become pregnant as adolescents are included for comparison.

Approximately 18% of young women's pregnancies ended with an abortion, 69% ended with a live birth, and 14% ended in a miscarriage or stillbirth. The majority (59%) of young women who became pregnant as adolescents reported non-Hispanic white race/ethnicity, whereas more than one fifth reported being non-Hispanic black. The average age at wave I among young women who became pregnant was 15.33 years, whereas the average age at pregnancy was 17.84 years. Nearly one in five young women who became pregnant had parents with less than a high school education. The majority of adolescents with pregnancies had parents who identified as Baptist or Catholic, and more than one third had parents who married before age 19. Adolescents' perceived parental educational expectations and support were both relatively high, whereas perceived control was relatively low (2.25 of 3, 41.9 of 50, 2 of 7, respectively). Compared with girls who did not become pregnant as adolescents, those who did become pregnant were significantly more likely to report non-Hispanic black race/ethnicity, have a parent who identified as Baptist, to have a never-married or early-married parent, to have a parent with less than a high school education, and to report lower parental support.

Several study variables were associated with pregnancy disposition in crude analyses (Table 2). Having a highest parent education of less than a bachelor's degree was significantly negatively associated with having an abortion versus continuing with the pregnancy. Having a parent who identified as being Baptist or having no religion versus being Catholic was marginally negatively associated with abortion versus other pregnancy outcomes. Further, adolescents whose parents either had an early marriage or who were never married had significantly reduced odds of abortion versus other pregnancy outcomes. Parental support was marginally negatively associated (odds ratio [OR] .83, 95% confidence interval [CI] .69–1.01), whereas higher parental control relative to similar-aged peers was significantly negatively associated (OR .78, 95% CI .64–.96) with abortion versus other pregnancy outcomes.

Results of multivariable models examining odds of abortion versus other pregnancy outcomes are presented in Table 3. Having a highest parent education of less than a bachelor's degree was significantly negatively associated with having an abortion versus other pregnancy outcomes. Having parental control that was higher than similar-aged peers remained significantly negatively associated with young women's odds of choosing an abortion versus other pregnancy outcomes (adjusted OR [AOR] .80, 95% CI .66–.98), whereas parental support was no longer associated with pregnancy disposition. To further probe whether specific aspects of parental control were driving this relationship with pregnancy disposition, we examined bivariate relationships between each of the items in the parental control index and pregnancy disposition (Table 4). Only one item—parental control regarding people the adolescent hangs out with—was marginally (negatively) related to likelihood of abortion versus other pregnancy outcomes (OR .56, .30–1.03).

We conducted a number of post-hoc analyses to test the robustness of our findings (tables available from authors on request). To test the sensitivity of the results to the specification of the outcome variable, we limited the sample to young women who experienced either an abortion or live birth (n = 954). In these analyses, parental control remained significantly negatively associated with odds of abortion versus live birth (AOR .78, 95% CI .62–.97); parental support again was unassociated with pregnancy resolution decisions. To address concerns about possible sample selection biases due to drop out of teen parents prior to wave I, we further restricted our sample to young women who became pregnant as teenagers and who were aged 15 or younger at wave I (n = 559). Parental control remained significantly negatively associated with abortion versus other pregnancy outcomes (AOR .74, 95% CI .55–.99). We also tested whether the relationship between parental control and pregnancy disposition varied by age at pregnancy (<18 vs. ≥18), race, time between wave I and

pregnancy, and by level of parental support; none of these interactions was statistically significant (all $p \geq .20$).

Discussion

Adolescent young women who become pregnant in the United States face a choice regarding whether to terminate their pregnancy or carry it to term. However, little is known about the factors that influence pregnancy resolution decisions among teenagers. Given the documented importance of parenting relationships in other domains of adolescent behavior, it seems likely that such relationships would be influential in pregnancy resolution decisions as well. Our goal was to test the association between parental support, parental control, and adolescents' pregnancy resolution decisions.

We found that parental control was negatively associated with a teen's likelihood of choosing an abortion versus carrying a pregnancy to term in adjusted analyses. Interestingly, we found that none of the individual indicators of parental control were significantly associated with teens' pregnancy resolution decisions, although one indicator (monitoring who the adolescent hangs out with) was marginally negatively associated with abortion versus carrying a pregnancy to term. This suggests that rather than one particular type of control influencing pregnancy resolution decisions, it is the summative experience of control across multiple domains that influences these decisions. These findings suggest that those parents who exercise greater control are also ones encouraging their teen daughters to keep a pregnancy rather than terminate it. There are a number of possible reasons for this relationship. It is possible that greater parental control is more common among parents with more conservative religious beliefs. This would be consistent with past studies that have found that affiliation with a conservative Protestant denomination was associated with reduced abortion likelihood [2]. Although in supplementary analyses we did not find that parental control differed significantly according to parental self-reported religious affiliation, given our relatively broad affiliation categories (because of data sparseness when more specific affiliation categories were used), we cannot rule out this possibility. We did find in supplementary analyses that parental control was highest among teens in families with the lowest level of parental education. Low parental education could act as a marker for the parent's own early childbearing experiences [20], or for living in a lower socioeconomic context where teenage childbearing is more common and thus normative [7]. It is possible that teens living in such contexts perceive a greater likelihood of instrumental support once their child is born, or that teenage motherhood is a way to gain status when other educational or career opportunities are more remote [6]. Future studies that include more detailed measures of family dynamics as they relate to teen pregnancy as well as instrumental and social support for teen parenthood may be better able to elucidate these mechanisms.

We also found that prepregnancy parental support was unassociated with adolescents' odds of choosing an abortion versus carrying a pregnancy to term, after controlling for other demographic factors and parental control. This finding is consistent with the previous Add Health study, which found no association between parental warmth and abortion decisions [4]. It is possible that pregnancy-specific parental support is distinct from and more important than general parental support. Future studies that can measure such perceptions after teen pregnancy is detected would shed light on these influences.

Having highly educated parents (i.e., bachelor's degree or more) was significantly positively associated with an increased likelihood of having an abortion versus continuing the pregnancy. This is consistent with past studies, which also suggest higher parent education associated with increased odds of abortion versus carrying a pregnancy to term among pregnant teens [6,7]. Parents with higher education may be more inclined to view teenage

pregnancy as a threat to their daughter's educational and career success and thus may be more supportive of abortion as a pregnancy resolution option. Although crude analyses also suggested early parental marital timing was associated with reduced likelihood of abortion versus other pregnancy outcomes, this was not replicated in multivariable analyses. This change in models primarily resulted from the correlation between parental educational attainment and early marriage—that is, the parents of teens who married early were also the parents with the lowest educational attainment.

Even though the present study has many strengths, such as the use of a large, nationally representative dataset that includes teens of diverse racial and ethnic backgrounds, results should be interpreted in light of the study's limitations. First, abortion is underreported in the current dataset (17.5% vs. 33.1%–34.5% nationally between 1995 and 2002), and it is possible that there are differences between women who report versus deny having an abortion. In our previous study, we found that the rate of teen pregnancy in Add Health was lower than the national average [21]; it is thus likely that teens who had abortions do not even report becoming pregnant. This has the possibility of biasing our study results, although the direction of bias is difficult to predict. Second, as noted previously, there was a time gap between when teens reported perceptions of parental support and parental control and when pregnancies occurred. Although prospective assessment allows us to ensure temporal ordering, whereby perceptions of parenting are measured before teen pregnancy, the gap between these measures and teen pregnancy raises the possibility that perceptions of parenting changed in the interim, especially after pregnancy was detected. Although supplementary analyses did not suggest that associations between parenting variables and pregnancy resolution decisions varied according to length of time between the interview and pregnancy, future studies that measure perceived parental support and control after pregnancy disclosure should be conducted to confirm our findings. Third, we reduced sample size by requiring complete covariate data, which could bias our study results. However, analyses comparing included versus excluded adolescents indicated no significant difference in pregnancy resolution outcomes ($p = .36$), baseline age ($p = .65$), age at pregnancy ($p = .19$), parental education ($p = .17$), parental support ($p = .12$), or parental control ($p = .97$). There remains the possibility though that included adolescents vary from excluded ones based on other unobserved factors.

The decision to abort a pregnancy versus carry the pregnancy to term is a difficult decision for many young women who become pregnant as teenagers. Such decisions have the potential to impact educational trajectories and life chances. Pregnancy resolution decisions take place within the adolescent's family context, which appears to influence the course chosen by pregnant adolescents. In particular, adolescents with parents with lower education and who exercise greater control have a decreased likelihood of choosing abortion. Providers who are counseling adolescents about their pregnancy options may better support adolescents' decision-making process by understanding the social context within which these decisions are made.

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References

1. Kost, K.; Henshaw, S. US teenage pregnancies, births and abortions, 2008: National trends by age, race and ethnicity. New York: Guttmacher Institute; 2012.
2. Adamczyk A. The effects of religious contextual norms, structural constraints, and personal religiosity on abortion decisions. Soc Sci Res. 2008; 37:657–72. [PubMed: 19069064]
3. Adamczyk A, Felson J. Fetal positions: Unraveling the influence of religion on premarital pregnancy resolution. Soc Sci Q. 2008; 89:17–38.
4. Coleman PK. Resolution of unwanted pregnancy during adolescence through abortion versus childbirth: Individual and family predictors and psychological consequences. J Youth Adolesc. 2006; 35:903–11.
5. Evans A. The influence of significant others on Australian teenagers' decisions about pregnancy resolution. Fam Plann Perspect. 2001; 33:224–30. [PubMed: 11589544]
6. Cooksey E. Factors in the resolution of adolescent premarital pregnancies. Demography. 1990; 27:207–18. [PubMed: 2332086]
7. Sourth SJ, Baumer EP. Community effects on the resolution of adolescent premarital pregnancy. J Fam Issues. 2001; 22:1025–43.
8. Baumrind D. The influence of parenting style on adolescent competence and substance use. J Early Adolesc. 1991; 11:56–95.
9. Madkour AS, Farhat T, Halpern CT, Gabhainn SN, Godeau E. Parents' support and knowledge of their daughters' lives, and females' early sexual initiation in nine European countries. Perspect Sex Reprod Health. 2012; 44:167–75. [PubMed: 22958661]
10. Huebner AJ, Howell LW. Examining the relationship between adolescent sexual Risk-taking and perceptions of monitoring, communication, and parenting styles. J Adolesc Health. 2003; 33:71–8. [PubMed: 12890597]
11. Rodgers KB. Parenting processes related to sexual risk-taking behaviors of adolescent males and females. J Marriage Fam. 1999; 61:99–109.
12. Hoffman SD. Teenage childbearing is not so bad after all…or is it? A review of the new literature. Fam Plann Perspect. 1998; 30:236–43. [PubMed: 9782047]
13. Harris, KM. The National Longitudinal Study of Adolescent Health (Add Health), waves I & II, 1994–1996; wave III, 2001–2002; wave IV, 2007–2009 [machine-readable data file and documentation]. Chapel Hill, NC: Carolina Population Center, University of North Carolina at Chapel Hill; 2009.
14. Harris, KH. Design features of Add Health. Chapel Hill, NC: Carolina Population Center, University of North Carolina at Chapel Hill; 2011.
15. Driscoll AK, Russell ST, Crockett LJ. Parenting styles and youth well-being across immigrant generations. J Fam Issues. 2008; 29:185.
16. Maccoby, E.; Martin, J. Socialization in the context of the family: Parent–child interaction. In: Mussen, P.; Hetherington, E., editors. Handbook Of Child Psychology, vol. IV: Socialization, Personality, and Social Development. 4. New York: Wiley; 1983. p. 1-101.
17. Rothman, KJ.; Greenland, S.; Lash, TL. Validity in epidemiologic studies. In: Rothman, KJ.; Greenland, S.; Lash, TL., editors. Modern Epidemiology. 9. Philadelphia, PA: Lipincott, Williams & Wilkins; 2008. p. 128-47.
18. Glymour, MM.; Greenland, S. Causal diagrams. In: Rothman, KJ.; Greenland, S.; Lash, TL., editors. Modern Epidemiology. 9. Philadelphia, PA: Lipincott, Williams & Wilkins; 2008. p. 183-209.
19. Schisterman EF, Cole SR, Plattc RW. Overadjustment bias and unnecessary adjustment in epidemiologic studies. Epidemiology. 2009; 20:488–95. [PubMed: 19525685]
20. Kahn JR, Anderson KE. Intergenerational patterns of teenage fertility. Demography. 1992; 29:39–57. [PubMed: 1547902]
21. Harville EW, Madkour AS, Xie Y. Predictors of birth weight and gestational age among adolescents. Am J Epidemiol. 2012; 176(Suppl 7):S150–63. [PubMed: 23035139]

IMPLICATIONS AND CONTRIBUTION

Adolescents experiencing relatively high parental control and who have less educated parents are less likely than others to choose abortion if they become pregnant. This study contributes to knowledge of family dynamics that impact teen pregnancy resolution decisions.

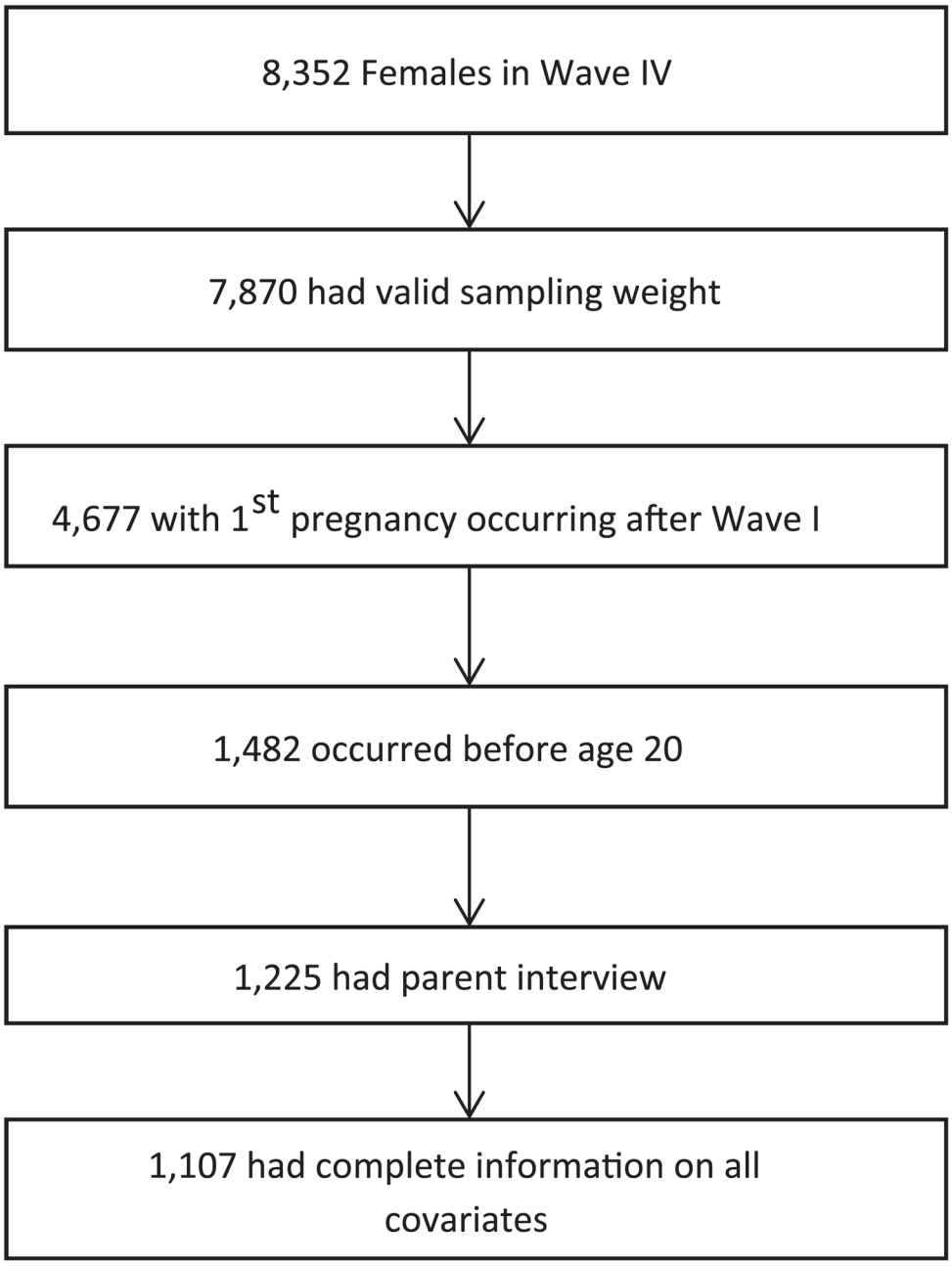

Figure 1.
Analysis sample.

Table 1

Pregnancy outcome among women whose first pregnancy occurred after Wave I at the Add Health Study, 1996–2007

	Women whose first pregnancy occurred after wave 1 and during adolescence (n = 1,107)	Women without any pregnancy at adolescence (n = 4,728)	*p* Value
Pregnancy outcome		—	—
Abortion	221 (17.53)		
Live birth	733 (68.87)		
Miscarriage/stillbirth	153 (13.59)		
Race			<.0001
Non-Hispanic white	522 (58.51)	2797 (72.26)	
Non-Hispanic black	347 (22.18)	914 (12.34)	
Hispanic	180 (14.37)	696 (10.78)	
Other	58 (4.94)	321 (4.63)	
Baseline age	15.33 (.13)	15.81 (.12)	<.001
Age at pregnancy	17.84 (.06)	—	—
Year of the end of pregnancy		—	—
1995	75 (7.21)		
1996	182 (13.8)		
1997	251 (19.25)		
1998	235 (21.8)		
1999	154 (15.69)		
2000	123 (12.9)		
2001	67 (7.45)		
2002	20 (1.90)		
Parental education			<.0001
Less than HS	211 (18.22)	532 (10.45)	
HS diploma/GED	400 (38.77)	1,298 (29.67)	
Some postsecondary	255 (23.53)	1,037 (22.23)	
≥College	241 (19.48)	1,861 (37.65)	
Parents' educational expectation	2.25 (.03)	2.26 (.03)	.66
Parental religion			<.0001
None	72 (7.73)	298 (6.79)	
Other	436 (40.17)	1,992 (44.19)	
Baptist	347 (30.08)	1,059 (21.08)	
Catholic	252 (22.02)	1,379 (27.94)	
Parents' age at first marriage			<.0001
Never married	96 (7.80)	197 (3.48)	
Early marriage <19	383 (36.24)	1,147 (25.67)	
Late marriage ≥19	628 (55.95)	3,384 (70.85)	
Parental support (nonstandardized)	41.91 (.33)	43.3 (.17)	<.001
Parental control (nonstandardized)	2.00 (.08)	1.87 (.06)	.12

HS = high school.

Table 2

Bivariate analysis between parenting variables and pregnancy outcomes in Add Health, 1996–2007 (N = 1,107)

	Abortion (n = 221)	Miscarriage/stillbirth/ livebirth (n = 886)	Odds ratio (95% CI)	*p* Value
Race (n [%])				.33
Non-Hispanic white	95 (17.10)	427 (82.90)	Ref.	
Non-Hispanic black	71 (15.50)	276 (84.50)	.89 (.50–1.58)	
Hispanic	38 (18.41)	142 (81.59)	1.09 (.65–1.85)	
Other	17 (29.21)	41 (70.79)	2.00 (.83–4.81)	
Baseline age (mean [SE])	15.16 (.19)	15.37 (.13)	.92 (.79–1.06)	.23
Age at pregnancy (mean [SE])	17.75 (.12)	17.86 (.06)	.93 (.78–1.10)	.39
Year of the end of pregnancy (n [%])				.68
1995	11 (12.50)	64 (87.50)	.61 (.12–3.28)	
1996	45 (22.74)	137 (77.26)	1.27 (.29–5.61)	
1997	48 (15.95)	203 (84.05)	.82 (.19–3.6)	
1998	43 (14.09)	192 (85.91)	.71 (.15–3.33)	
1999	34 (22.10)	120 (77.90)	1.22 (.27–5.46)	
2000	25 (17.02)	98 (82.98)	.88 (.17–4.48)	
2001	10 (17.84)	57 (82.16)	.93 (.15–6.01)	
2002	5 (18.88)	15 (81.12)	Ref.	
Parental education (n [%])				<.0001
Less than HS	28 (12.38)	183 (87.62)	.27 (.15–.51)	
HS diploma/GED	52 (11.59)	348 (88.41)	.25 (.15–.43)	
Some postsecondary	65 (17.64)	190 (82.36)	.42 (.25–.69)	
≥College	76 (34.05)	165 (65.95)	Ref.	
Parents' educational expectation (mean [SE])	2.3 (.07)	2.24 (.04)	1.13 (.84–1.52)	.42
Parental religion (n [%])				.07
None	13 (8.47)	59 (91.53)	.32 (.1–1.01)	
Other	87 (19.59)	349 (80.41)	.85 (.48–1.51)	
Baptist	59 (13.65)	288 (86.35)	.55 (.31–1.00)	
Catholic	62 (22.27)	190 (77.73)	Ref.	
Parents' age at first marriage (n [%])				.01
Never married	19 (11.01)	77 (88.99)	.46 (.21–1.00)	
Early marriage <19	55 (13.2)	328 (86.8)	.56 (.35–.90)	
Late marriage ≥19	147 (21.25)	481 (78.75)	Ref.	
Parental support standardized (mean [SE])	−.14 (.10)	.05 (.05)	.83 (.69–1.01)	.06
Parental control standardized within each age segment (mean [SE])	−.19 (.07)	.02 (.05)	.78 (.64–.96)	.02

CI = confidence interval; HS = high school; SE = standard error.

Table 3

Multivariable analysis of parenting variables and pregnancy outcome (abortion vs. miscarriage/stillbirth/live birth) (n = 1,107)

	Odds ratio (95% CI)	*p* Value
Race		.62
Non-Hispanic white	Ref.	
Non-Hispanic black	1.07 (.60–1.90)	
Hispanic	1.10 (.63–1.90)	
Other	1.84 (.75–4.49)	
Baseline age	.76 (.50–1.16)	.20
Age at pregnancy	1.10 (.71–1.71)	.68
Year of the end of pregnancy	.83 (.53–1.31)	.42
Parental education		<.0001
Less than HS	.35 (.19–.66)	
HS diploma/GED	.30 (.18–.51)	
Some postsecondary	.47 (.28–.78)	
≥College	Ref.	
Parents' educational expectation	1.03 (.75–1.40)	.87
Parental religion		.31
None	.37 (.12–1.15)	
Other	.78 (.42–1.46)	
Baptist	.65 (.33–1.28)	
Catholic	Ref.	
Parents' age at first marriage		.20
0 = never married	.54 (.24–1.24)	
1 = early marriage <19	.72 (.43–1.20)	
2 = late marriage ≥19	Ref.	
Parental support standardized	.86 (.69–1.07)	.18
Parental control standardized with each age segment	.80 (.66–.98)	.03

CI = confidence interval; HS = high school.

Table 4

Bivariate analysis between parent control variables and pregnancy outcomes in Add Health, 1996–2007 (N = 1,107)

Do your parents let you make your own decisions about …	Abortion (n = 221)	Miscarriage/ stillbirth/livebirth (n = 886)	Odds ratio (95% CI)	*p* Value
The time you must be home on weekend				.68
Yes (i.e., low parental control)	55 (16.53)	224 (83.47)	Ref.	
No (i.e., high parental control)	166 (17.86)	662 (82.14)	1.10 (.71–1.70)	
The people you hang around with				.06
Yes (i.e., low parental control)	193 (18.96)	704 (81.04)	Ref.	
No (i.e., high parental control)	28 (11.60)	180 (88.40)	.56 (.30–1.03)	
What you wear				.35
Yes (i.e., low parental control)	196 (17.96)	782 (82.04)	Ref.	
No (i.e., high parental control)	25 (14.08)	104 (85.92)	.75 (.41, 1.37)	
How much television you watch				.62
Yes (i.e., low parental control)	183 (17.21)	749 (82.79)	Ref.	
No (i.e., high parental control)	38 (19.12)	137 (80.88)	1.14 (.68–1.90)	
Which television programs you watch				.13
Yes (i.e., low parental control)	174 (18.72)	671 (81.28)	Ref.	
No (i.e., high parental control)	47 (13.91)	214 (86.09)	.70 (.45,1.10)	
What time you go to bed on week nights				.17
Yes (i.e., low parental control)	155 (19.28)	562 (80.72)	Ref.	
No (i.e., high parental control)	66 (14.51)	32 (85.49)	.71 (.44–1.15)	
What you eat				.18
Yes (i.e., low parental control)	186 (18.43)	733 (81.57)	Ref.	
No (i.e., high parental control)	35 (13.08)	153 (86.92)	.67 (.37–1.20)	

CI = confidence interval.