Original Study

Parent-child Relationships, Parental Attitudes towards Sex, and Birth Outcomes among Adolescents

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A B S T R A C T

Study Objective: To examine how parent-child relationships, parental control, and parental attitudes towards sex were related to pregnancy outcomes among adolescent mothers.
Design: Prospective cohort study. Parental report of relationship satisfaction, disapproval of adolescent having sex, discussion around sexual health, and sexual communication attitudes, and adolescent report of relationship satisfaction, parental control, and parental disapproval of sex were examined as predictors of self-reported birth outcomes. Weighted multivariable linear regression models were run incorporating interactions by race.
Setting: United States.
Participants: 632 females who participated in Waves I and IV of the National Longitudinal Study of Adolescent Health (Add Health), a nationally-representative sample of students enrolled in grades 7-12 in 1994-95 and followed up in 2007-2008.
Main Outcome Measures: Birthweight and gestational age.
Results: For Black adolescents, better parent-child relationship was associated with higher birthweight (0.14 kg, $P < .05$) and gestational age (0.75 weeks, $P < .01$), while higher parental disapproval of having sex (adjusted beta 0.15 kg, $P < .05$) were associated with higher birthweight. For non-Black adolescents, a moderate amount of discussion of birth control was associated with higher birthweight (0.19 kg, $P < .01$ and lower child-perceived parental disapproval of having sex was associated with higher birthweight (0.08 kg, $P < .05$) and gestational age (0.37 weeks, $P < .05$). Higher parental control was associated with a reduced likelihood of smoking during pregnancy and a greater likelihood of early prenatal care.
Conclusion: Parent-child relationships and attitudes about sex affect outcomes of pregnant adolescents.
Key Words: Adolescents, Birthweight, Gestational age, Race, Communication

Introduction

Giving birth during adolescence (before age 20) is associated with a number of pregnancy complications, including infant mortality,[1] preterm birth, and low birthweight.[2] Little is known about predictors of birth outcomes within the group of adolescents who do get pregnant, beyond some basic predictors such as age, body mass index (BMI), nulliparity, and smoking.[3,4] However, family influences are likely to be important. For the most part, adolescents who get pregnant still live with their parents, and are likely to be dependent on them for financial and health care resources, as well as for emotional support.[5] Although to our knowledge, no research has examined the associations between parent-adolescent dynamics and birth outcomes, some relationships can be hypothesized based on general research in adolescent and reproductive health.

A positive relationship with parents is a potent source of social support, which is associated with better birth outcomes generally.[6] Positive parent-child relationships are protective against risk behaviors in adolescents.[7] Parental closeness has been associated with a reduced likelihood of adolescents' getting pregnant, ever having sex, and having an early sexual debut,[8] as well as reduced initiation of smoking,[9] alcohol use,[10] and substance use.[11] Family conflict and reduced involvement is associated with adolescent problem behaviors, including high-risk sex and substance use.[12]

Parenting practices, particularly parental monitoring, are also associated with adolescent health.[7] Adolescents who report a high degree of parental monitoring are less likely to have an early sexual debut or get a sexually transmitted infection[13] and more likely to use contraception.[8] Permissive (high support/low rules) parenting practices are associated with health risks among adolescents[14] and a permissive parent may not provide the adolescent with a good grasp of the realities of pregnancy and childrearing.[15,16]

Parents' attitudes towards pregnancy and sex could influence the health of the pregnant adolescent via pathways that include access to care, health behaviors, stress, and social support. Open communication around sexual issues may encourage early addressing of potential pregnancy risk factors, such as sexually transmitted infections, bacterial vaginosis, or urinary tract infections[17] and improve preconception health.[18] An adolescent who knows that her parents disapprove of her having sex may be less likely to tell them in a timely fashion that she is pregnant, and thus may receive prenatal care later in the pregnancy.

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Embarrassment and not wanting people to know about the pregnancy are associated with later initiation of prenatal care.[19] Other barriers to prenatal care, such as lack of information about where to go and lack of transportation[19,20] are likely to be more easily addressed when an adolescent's parents are involved. Parents and prenatal care providers can provide support for positive health behaviors such as nutrition, sleep habits, vitamin use, and avoiding substance use, and that support can be provided for a longer period of time if the pregnancy is recognized and accepted early on. Alternately, an adolescent who feels her parents disapprove of her having sex or who perceives a stigma[21] may react with anxiety, denial,[22] or panic, not conducive to healthy pregnancy.[23] Parental communication around sexuality may also be a sign of general closeness and positive relationships.[24]

The purpose of the present paper is to examine how parent-child relationships, parenting practices, and parental attitudes towards sex and communication around sex predict birth outcomes among pregnant adolescents. We hypothesized that (1) worse relationships between parent and child would be associated with worse birth outcomes, for example, lower birthweight and gestational age; (2) higher parental control would be associated with better birth outcomes; and (3) more disapproving attitudes towards sex and worse communication would be associated with worse birth outcomes. Birth outcomes in Black women and adolescents are known to be worse than other racial/ethnic groups,[25] and the context of adolescent pregnancy differs by cultural group,[26] so we also examined differences by race.

Materials and Methods

We used data from Waves I and IV of the Add Health contractual dataset. Add Health is a prospective cohort study of a nationally-representative sample of young persons enrolled in grades 7-12 in the 1994-95 school year (Wave I).[27] The study conducted follow-up interviews in 1996 (Wave II), 2001 (Wave III), and 2007-08 (Wave IV). Add Health used a multistage probability clustered sampling design to obtain its original Wave I sample. The first stage of sampling was a stratified, random sample of all public and private high schools in the US. A middle school whose students largely attended the selected high 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 20,745 adolescents was interviewed by in-depth in-home interviews. A parent, preferably the resident mother, of each adolescent respondent interviewed in Wave I was asked to complete an interviewer-assisted questionnaire (n = 17,669, 85% response rate). 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 were adjusted for both unequal probabilities of selection into the original sample and for loss to follow-up.

Our focus was on predictors of adolescent birth outcomes, so several limitations were made to the dataset. First, we limited to females who participated in Wave IV, as that was the only Wave that had complete data on teen births, and with valid sampling weights. Next, we limited to women whose first pregnancies occurred after Wave I to ensure the temporal ordering of predictors and outcomes. Finally, we limited to those who gave birth to a singleton live birth during their adolescence. This left us with an analysis sample of 938 teen singleton live births, 773 of whom had data from the parental interview. Of the 773 interviews, 124 were conducted with someone other than the residential, biological mother. Results omitting these 124 were similar to presented results. Final multivariable models included 632 women with complete data on exposure, outcome, and covariates. There were no statistically significant differences between those with complete data and those with missing data with respect to predictors, covariates, or outcomes.

Measures

Outcomes

At Wave IV females were asked about previous pregnancies and their outcomes. If they indicated they had given birth, they were asked "How much did the baby weigh at birth?", "Was [baby's name] born before or after [his/her] due date?", and then "How many weeks or days early/late was [baby's name] born?" This was subtracted from 40 weeks to calculate gestational age. Birthweight was examined in kilograms and gestational age was examined in weeks.

Predictors

Parental report (wave 1) – Parent-child Relationship

All parental reports are self-report of the person with whom the interview was conducted.

Overall parent-child relationship was measured by asking the parent how much s/he agreed or disagreed with the question "Overall, you are satisfied with your relationship with [adolescent's name]" on a 1 to 5 scale. We reverse coded the responses so that higher score represents greater satisfaction.

Parental report (wave 1) – Parental Attitudes and Communication around Sex

Parental disapproval of child having sex was measured by parent's reporting how much they agree or disagree with the statement "You disapprove of [adolescent's name] having sexual intercourse at this time in [his/her] life",[28] on a 5-point scale from strongly agree (1) to strongly disagree (5).

Sexual communication attitudes were measured by asking the parent how much they agree or disagree with five items, e.g.,"It would embarrass [adolescent's name] to talk to you about sex and birth control".[28] Response format was a 5-point scale of agreement (ranging from strongly agree to strongly disagree). The Cronbach alpha coefficient for these five items was 0.78. Responses to these items were summed (median = 21; higher scores indicating less embarrassment in sex communication).

Discussion of sex costs was measured by asking the parent about the amount of discussion with the adolescent about potential negative consequences of sexual activity, including "the negative or bad things that would happen if [he got someone/she got] pregnant", "the dangers of getting