

**Neighborhood Context and Romantic Relationships:
Competing Models of Adolescent Relationships in Disadvantaged Communities**

David J. Harding
Sociology and Population Studies Center, University of Michigan

Rebecca A. Karb
Sociology and Social Work, University of Michigan

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Abstract: Qualitative research on sexual and romantic relationships among adolescents from poor neighborhoods presents two conflicting accounts of typical adolescent relationships and how they lead to teenage pregnancy. Anderson's "Mating Game" model (presented most recently in *Code of the Street* [Anderson 1999]) describes adolescent romantic and sexual behavior as a game between boys and girls. Edin and Kefalas' work (2005), which we term the "poverty of relationships" model, emphasizes the meaning of parenthood for young men and women in poor neighborhoods. This paper identifies key points of disagreement in these two models, and uses data from the National Longitudinal Study of Adolescent Health to adjudicate between them. Analyses find some support for aspects of both models but suggest that, on balance, the poverty of relationships model provides the more accurate account. More broadly, our results suggest the importance of romantic relationships for understanding neighborhood differences in early childbearing.

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A longstanding area of research at the intersection of demography, stratification, and urban sociology is the impact of neighborhood context on fertility related behaviors of adolescents and young adults (e.g. Wilson 1987, Anderson 1990). Numerous studies find effects of poor or otherwise disadvantaged neighborhoods on outcomes such as teenage pregnancy and early childbearing (Hogan and Kitigawa 1985, Brewster, Billy, and Grady 1993, Brewster 1994, Crane 1991, Brooks-Gunn et al. 1993, South and Crowder 1999, South and Baumer 2000, Harding 2003), and now researchers are shifting their focus toward understanding the mechanisms by which neighborhood context effects individuals, the social, cultural, and economic processes that differ across neighborhoods and account for neighborhood differences in outcomes (e.g. Morenoff 2003, Harding 2007, Browning et al 2005). Because there are few “hard” structural constraints on romantic and sexual behavior, as there are in other domains such as employment and education, fertility-related behaviors provide an important domain for investigating the social and cultural processes that might account for neighborhood effects.

One approach to understanding the mechanisms of neighborhood effects on teenage pregnancy and early childbearing is to investigate neighborhood differences in the proximate causes of childbearing. For example, adolescents in poor neighborhoods tend to have younger ages of sexual initiation (Brewster 1994, Browning et al. 2005), use contraceptives less, and are less likely to abort a pregnancy than their counterparts in more advantaged neighborhoods. By definition, sexual behavior occurs within a relationship of some sort, and research has linked relationship characteristics to sexual and contraceptive behaviors (Manning, Longmore, and Giordano 2000, Manlove, Ryan, and Franzetta 2003, Wilson and Koo 2006, Manlove and Terry-Humen 2007). Yet the

quantitative literature on neighborhood effects on fertility related behaviors has largely ignored this important precursor of (and context for) adolescent sexual and reproductive behavior.

However, qualitative researchers have documented the dynamics of sexual and romantic relationships among adolescents and young adults in poor neighborhoods, though these accounts are contradictory on many issues. Anderson (1990, 1991, 1999) describes adolescent romantic and sexual behavior as a game between boys and girls. The boys, craving proof of masculinity and status among their male peers, seek “sexual conquest” with multiple sexual partners and without commitment or responsibility. The girls dream of the “fairy-tale” middle class lifestyle, seek a committed relationship, and use sex to snare a man. In contrast, Edin and Kefalas (2005) describe how many teenage pregnancies occur within longer-term relationships. Boys are as interested in parenthood as girls (if not more so), and a baby is seen as a way to strengthen an existing relationship. Though both researchers provide thick descriptions of adolescent relationships and early childbearing in poor neighborhoods, neither includes a comparison to more advantaged neighborhoods.

Drawing on nationally representative survey data from the National Longitudinal Survey of Adolescent Health, this paper begins to adjudicate between many of the points of disagreement in these accounts of adolescent relationships and early childbearing in disadvantaged neighborhoods. In doing so, we also compare adolescents in poor neighborhoods to their counterparts in more advantaged neighborhoods. Where neighborhood differences appear to exist, we estimate regression models to determine whether such differences can be attributed to differences in individuals and families

across neighborhoods rather than to neighborhood-level processes. Based on analyses conducted thus far, we find more support for the Edin and Kefalas model than the Anderson model. More broadly, our results suggest the importance of romantic relationships for understanding neighborhood differences in early childbearing.

We begin by discussing prior research and theory on neighborhood differences in early childbearing and review the key disagreements between contradictory accounts from ethnographic research. We then describe the data and methods we use to adjudicate between these accounts. One strength of these data is the ability to study the sexual and contraceptive behavior of not only females but also males, who are often not included in studies of early childbearing. After presenting our results, we discuss implications for the mechanisms underlying neighborhood effects on early childbearing.

Neighborhood Effects on Early Childbearing

While the effect of neighborhood context on teenage pregnancy is well-documented (e.g. Hogan and Kitigawa 1985, Brewster, Billy, and Grady 1993, Brewster 1994, Crane 1991, Brooks-Gunn et al. 1993, South and Crowder 1999, South and Baumer 2000, Harding 2003), we have only begun to understand the social processes that underlie these effects. Various community characteristics are related to adolescent sexual behavior, including social disorganization, poverty, religiosity, family planning service availability, and female labor force participation (Billy et al. 1994). The impact of parental involvement varies by neighborhood, with parental control more important in neighborhoods with low social cohesion (Harris and Ryan 2002). When they become pregnant, adolescents from poor neighborhoods are less likely to have an abortion.

Though adolescents in disadvantaged neighborhoods initiate sex earlier, have sex more often and with more partners, and use contraception less frequently (Hogan and Kitigawa 1985, Billy, Brewster and Grady 1994, Mosher and McNally 1991, Browning et al. 2005). Baumer and South (2001) find that peers, attitudes toward premarital childbearing, educational aspirations and school attachment, and parent supervision combined explain only a small fraction of the neighborhood effect. Unfortunately, the vast majority of research on adolescent sexual and contraceptive behavior and teenage pregnancy focuses on female rather than male behavior and decision-making (Luker 1996; one exception is Anderson 1990, 1999).

Two complementary theories have been offered to understand the impact of neighborhood context on individuals: social isolation theory and social disorganization theory. Social disorganization theory argues that neighborhood disadvantage leads to difficulties establishing and maintaining order. The classic Chicago School approach points to three structural characteristics that promote social order in neighborhoods: higher economic status, greater ethnic homogeneity, and greater population stability. In contrast, lack of resources, heterogeneity, and population turnover lead to fewer social ties and therefore diminish the capacity of a community to regulate the behavior of its members (Park and Burgess 1925, Shaw 1929, Shaw and McKay 1942). While the original work in this domain focused on crime and juvenile delinquency, researches have begun to use it to understand neighborhood differences in other outcomes, as neighborhoods with low levels of social organization may also have difficulty regulating adolescent behavior other than crime and delinquency. For example, Browning et al (2005) find that adolescent girls with low levels of parental monitoring experience sexual

initiation at an earlier age when they live in neighborhoods with low level of social organization.

While social disorganization theory emphasizes neighborhood differences in adult control of adolescent sexual behavior, social isolation theory posits cultural consequences of neighborhood disadvantage, or differences in the desirability of those behaviors. Social isolation theory argues that lack of participation in the mainstream labor market isolates residents of poor inner-city communities from middle class or mainstream social groups, organizations, and institutions (Wilson 1987, 1996). Social interaction in isolated neighborhoods leads to the development of cultural repertoires that differ from the mainstream. Socially and culturally isolated from wider society and without resources or opportunities for social mobility or economic survival, residents of concentrated poverty neighborhoods develop cultural adaptations to serve local needs and in response to blocked opportunities (Liebow 1967, Hannerz 1969, Anderson 1978, Duneier 1992, Bourgois 1995).

These cultural adaptations may include different models for romantic and sexual relationships. Harding (2007) shows that there is greater cultural heterogeneity of relationships scripts and frames regarding teenage pregnancy in more disadvantaged neighborhoods. By definition, sexual and contraceptive behavior occurs in the context of a romantic or sexual relationship (broadly defined), yet adolescent relationships have rarely been incorporated into quantitative research on neighborhood differences in early childbearing. When relationships are considered, attention is generally limited to the characteristics of partners, age differences between partners, or other forms of partner mismatch (Landry and Forrest 1995, Miller, Clark , and Moore 1997, Elo, King, and

Fustenberg 1999, Zavodny 2001, Ford, Sohn, and Lepkowski 2001, Kaestle, Morisky, and Wiley 2002). Yet even in these studies the role of neighborhood context in structuring relationships is not considered. Nonetheless, multiple models of adolescent romantic relationships have been developed in the ethnographic literature.

Competing Models of Adolescent Relationships

Qualitative research on sexual and romantic relationships among adolescents from poor neighborhoods presents two conflicting accounts of typical adolescent relationships and how they lead to teenage pregnancy. Anderson's "Mating Game" model (presented most recently in *Code of the Street* [Anderson 1999]) describes adolescent romantic and sexual behavior as a game between boys and girls. The boys, craving proof of masculinity and status among their male peers, seek "sexual conquest" with multiple sexual partners and without commitment or responsibility. Boys use promises of a relationship and economic support to control a woman emotionally and sexually. They view contraception as the woman's responsibility, and marriage is a "trap" that drains a man's resources and restricts his freedom. The girls dream of the "fairy-tale" middle class lifestyle, seek a committed relationship, and use sex to snare a man. When these relationships fail to materialize or fade away, girls are willing to settle for the adulation that comes from having a good-looking baby from a good-looking boy and the adult status that motherhood brings. Often ignorant of reproductive biology and contraception, they quickly end up pregnant. Anderson emphasizes the importance of two-parent families in protecting girls from the advances of boys.

Though Anderson's description of adolescent sexual relationships in ghetto neighborhoods is the dominant account among both social scientists and the public at large, it has not gone unchallenged. There is evidence that most teen pregnancies are unintended, even if the children themselves are not unwanted (Alan Guttmacher Institute 1994), and there is considerable debate over the degree to which teenage pregnancy reflects a relatively rational decision-making process given other alternative life courses, especially among poor African-American women (see Geronimus and Korenman 1990, Geronimus 1991, Furstenberg 1991, 1992). Furstenberg (1992) argues that most teen mothers "drift" into pregnancy. Peer pressures lead to early initiation into sex, which is seen as fun and a source of status. Many adolescents are not adept at using birth control, oppose abortion, and do not consider the consequences of having a child. Meanwhile, cultural norms no longer insist on marriage before childbearing, nor do they heavily stigmatize teen pregnancy. In some communities, fathering or giving birth to a child becomes a "rite of passage" into adulthood (Burton, Obeidallah, and Allison 1996).

Edin and Kefalas (2005) present an alternative account of romantic and sexual relationships among poor adolescents, which we term the "poverty of relationships" model. This model emphasizes the meaning of parenthood for young men and women in poor neighborhoods. A baby provides purpose, validation, and companionship, particularly for the young mother. Faced with few other viable options for status and fulfillment, parenthood is the one role in which success seems likely (compared to other roles such as student or worker). Faced with dim educational, employment, and marriage prospects, young women see few disadvantages to early childbearing. Marriage is a distant dream that requires economic advancement into the middle class, and so

childbearing out of wedlock is preferable to the risk of waiting for a marriage that may never happen and never becoming a mother. According to this account, many teenage pregnancies occur within longer-term relationships, boys are as interested in parenthood as girls (if not more so), and a baby is seen as a way to strengthen an existing relationship, one that may someday result in a marriage. As a relationship progresses and trust builds, contraceptive use becomes inconsistent. Yet once the pregnancy occurs and the baby arrives, few young men have the educational background or material resources to fulfill the new father role, and relationships often unravel as expectations change.

These two accounts have several points of agreement: poor neighborhoods are social environments with high levels of gender distrust, there is a high value placed on motherhood among the poor, young women in particular derive a strong sense of meaning and purpose from parenthood, social support for young mothers is readily available, and poor educational and labor market prospects structure decisions about relationships, childbearing, and marriage. Yet the two accounts also present very different descriptions of how adolescent relationships in poor neighborhoods tend to unfold. For Anderson, relationships are short-lived and lacking in trust or emotional closeness, and contraception is misunderstood and rare. Boys view contraception as girls' responsibility. Adolescents bounce from relationship to relationship. For Edin and Kefalas, many relationships are longer, trusting, and more meaningful, and couples start out using contraception consistently but later become lackadaisical. In Anderson's account, boys want to avoid being trapped by a pregnancy. In Edin and Kefalas' account, boys often pressure their girlfriends to have a baby and start a family at a young age. These differences are summarized in Table 1.

Any effort to understand early childbearing in poor neighborhoods requires an accurate description of the events that lead to sexual activity without effective contraception, so the presence of these contradictory accounts is particularly troubling. In addition, this line of previous research contains no comparison with adolescents from more advantaged family and neighborhood backgrounds, for whom teenage pregnancy rates are considerably lower. Implicit in these descriptions is the assumption that adolescent relationships and sexual and romantic behaviors unfold very differently among more advantaged teens, but without a comparison it is impossible to know for certain which characteristics of romantic relationships matter for teenage pregnancy. This paper will begin to adjudicate between these two contradictory accounts and examine whether the differences across levels of neighborhood disadvantage they imply are present in nationally representative data. We now turn to a description of these data.

Data

We use data from the National Longitudinal Survey of Adolescent Health (Addhealth; Harris et al. 2003). Addhealth Waves I through III provide a nationally representative sample of over 14,000 adolescents followed through the transition to adulthood, from ages 12-17 (1994-1995) to ages 18-24 (2001-2001). The Addhealth survey initially sampled a set of high schools and their feeder schools, resulting in about 150 middle schools, high schools, and junior high schools clustered one or two to a community. The first wave of data collection was in 1994-1995, the second wave in 1996, and the third wave in 2001-2002. Students were in grades 7 to 12 in wave one. The first wave of data includes a school administrator questionnaire about school

characteristics and policies, an in-school questionnaire completed by almost every eligible student in the sample schools, and longer in-home student and parent interviews with a subsample of about 20,000 students. Wave two followed the in-home students and includes another in-home interview with the student and another school administrator questionnaire. Wave three includes only an in-home student questionnaire. Structural neighborhood characteristics from the 1990 census are available for in-home respondents in waves 1 and 2.

This study draws on extensive background, relationship, sexual behavior, and contraceptive data from all three Addhealth waves. The first two waves provide measures of family and individual background characteristics, community social and economic characteristics from the Census, school characteristics, attitudes, and parenting behaviors. Addhealth is particularly suited to this project because it contains extensive information on romantic and sexual relationships. Waves I and II each provide information on up to three romantic and three non-romantic sexual relationships for each adolescent. In Wave 1, 13,837 of the 20,745 respondents reported at least one relationship. Together, these respondents reported a total of 24,476 relationships. In Wave 2, 10,321 of 14,738 respondents reported at least one relationship. Together, these respondents reported a total of 17,185 relationships.

Wave III contains detailed retrospective relationship and pregnancy histories that provide information for both males and females on number of sexual relationships, multiple concurrent partners, relationship duration, frequency of sexual activity, contraceptive use at first and most recent sex, and pregnancy outcomes. These histories, as yet relatively untapped by researchers, allow a detailed look at the nature of adolescent

sexual relationships. In total, wave 3 respondents provided information on 42,334 relationships. As we are interested in adolescent relationships, we selected only those relationships that began before the respondent was age 20, resulting in 23,366 relationships identified by 10,462 respondents.¹ An initial screening section of the survey identified relationships as belonging to three non-mutually exclusive types: “sexual,” “important,” or “couple.” Sexual relationships are those involving any sexual activity (vaginal, oral, or anal). For each subject, two important relationships were identified. If the respondent had more than two relationships, the two important relationships were identified based on a complex set of ordered priorities constructed from the following criteria: current at time of interview, married, cohabitation, duration, and pregnancy history. Couple relationships are a subsample of current heterosexual relationships in which the partner was over 18 and the relationship had lasted at least three months. From among all such relationships, a sample of respondents (and partners) was gathered that was one-third married, one-third cohabiting, and one-third dating. Relationships that did not fall into one of these three types were not asked about further. Different questions were asked about relationships depending on which type(s) they fell into. This research design makes the process of selection of relationships into the data very complex. As this paper is exploratory, we used all relationships possible in each analysis below. In other words, based on availability of variables of interest, different cases were used for different analyses

Key Variables

¹ We also excluded 6,480 relationships that were missing data on the age when the relationship began.

Structural Neighborhood Disadvantage: Neighborhoods are measured as 1990 census tracts and represent the neighborhoods where respondents were living at the time of the wave 1 in-home interview. The neighborhood disadvantage scale is the mean of the following standardized items: the census tract's family poverty rate, percent single mother households, male unemployment rate, percent of those over 25 who are college graduates, percent of workers in managerial or professional occupations, and percent affluent families (those with incomes above \$75,000 per year), with the last three reversed in polarity. An individual's census tract is that of his or her residence at the wave one in-home interview, which was conducted in spring or summer of 1995. The average inter-item correlation for this scale is 0.50 and Cronbach's alpha is 0.89.

The Structural Neighborhood Disadvantage Scale (hereafter, Neighborhood Disadvantage) measures the economic and social characteristics of the families that make up the neighborhood and which are thought to lead to negative outcomes for youth. Five of these variables (poverty, single mother households, percent youth, male unemployment, and percent black) indicate the presence of disadvantaged families. The remaining three (college graduates, managerial and professional workers, affluent families) indicate the absence of middle class families since their polarity is reversed. While some researchers (e.g. Brooks-Gunn et al 1993) have argued that the absence of middle class families is more important than the presence of disadvantaged families, there are high inter-item correlations across all eight variables in these data. This suggests that these two sets of measures capture the same underlying neighborhood SES concept but simply focus on the presence of families at opposite ends of the SES distribution as indicators of a neighborhood's position in that distribution.

Knowledge Quiz: Respondents age 15 and over were given a 10 question quiz on reproductive biology and contraception as part of the survey in both Wave 1 and Wave 2. This variable is the percent of questions answered that were answered correctly. We use this variable as a measure of understanding of contraception.

Relationship Closeness: In both Waves 1 and 2, respondents were given cards listing 17 events that occur in relationships. For up to three relationships, they were asked to indicate which events actually occurred in the relationship. We take 11 of these cards as indicators of a romantic rather than just a sexual relationship: “We went out together in a group,” “I met my partner’s parents,” “I told other people we were a couple,” “I saw less of my friends so I could spend more time with my partner,” “We went out together alone,” “We held hands,” “I gave my partner a present,” “My partner gave me a present,” “I told my partner that I loved him or her,” “My partner told me that she or he loved me,” and “We thought of ourselves as a couple.” For each relationship, we created a closeness measure that is the sum of the number of these events that happened in the relationship.²

Talk about contraception: Another card included the event, “We talked about contraception of sexually transmitted diseases.” We use the inclusion of this card as a measure of joint responsibility for contraception in a relationship. We include only relationships in which sexual activity occurred for analysis of this outcome.

Relationship length: For relationships described in all three waves, survey questions were asked about start and stop dates and start age of relationships. We use these questions to measure relationship length in months. Length of currently ongoing relationships is calculated using the survey date.

² In future work, we plan to assess the sensitivity of the results to the inclusion of particular items in the scale.

Contraceptive Use and Consistency: In the wave 3 relationships, respondents were asked a series of questions about contraceptive use if they reported having sex with their partner. For respondents who had sex once with their partner (one sexual event), they were asked if they used any form of contraception during that event. If a respondent reported more than one sexual event with a partner, respondents were asked whether they used contraception at first sex and at most recent sex.

Individual/Family Controls: To minimize selection bias due to differences between individuals across neighborhoods, individual and family control variables are required. Measured at wave one, these controls include race and ethnicity indicators, age, gender, adolescent immigrant status, single parent household, step-parent or other household, mother's age at birth, low birth weight, and for the primary parent (mother or female caregiver if available, father or male caregiver if not) immigrant status, education, professional/managerial occupation, disability, and welfare receipt. These variables are described in more detail in Appendix A.

Results

In this section we describe descriptive results and multi-level regression models for neighborhood differences in five of the seven domains listed in Table 1: knowledge of contraception, contraception as a joint decision, relationship length, consistency of contraceptive use, and relationship closeness. In future drafts of this paper, we plan to incorporate additional results for concurrent partners vs. monogamous relationships and desirability of pregnancy.³ We view both the descriptive results and the regression

³ These results also do not adjust for the Addhealth complex sampling design, as there are no weights for a significant proportion of cases. This will also be added in future drafts.

models as potentially informative in adjudicating between the “Mating Game” and “Poverty of Relationships” models, as descriptive differences across neighborhoods need not be causally produced by neighborhood context under either model. Regression models that control for individual and family characteristics do, however, provide some evidence on whether neighborhood differences in the descriptive results can be attributed to compositional effects (i.e. individual/family characteristics).⁴

Knowledge of Contraception

Table 2 shows the proportion of questions from the contraceptive knowledge quiz answered correctly in waves 1 and 2, by quintiles of neighborhood disadvantage (quintile five is the most disadvantaged). Estimates are divided by gender, race, and age (age in both panels is measured at wave 1). Results are consistent across waves. In both waves, there are statistically significant differences in contraceptive knowledge across neighborhood categories. This is the case among both males and female, among whites and Latinos (but not blacks), and among all age groups (except 14-15 year olds in wave 1). However, though these differences are statistically significant, their magnitudes are relatively small, amounting to only a few percentage points on each year’s quiz. These small magnitudes lead us to conclude that the evidence on contraceptive knowledge is not consistent with Anderson’s “mating game” model, which hypothesizes neighborhood differences in knowledge of contraception

Table 3 shows multi-level regression models of these same variables, by wave and controlling for individual and family characteristics. In both waves, the neighborhood

⁴ Regression models exclude cases with missing data on control variables (listwise deletion). In future drafts, we plan to use multiple imputation to deal with missing data.

differences remain statistically significant but substantively small. Other significant predictors of contraceptive knowledge are black, age, gender, parent education, welfare receipt, and whether the respondent has ever had sex.

Talk about Contraception

Table 4 shows the proportion of relationships in which the respondent reported talking to his or her partner about contraception, including only those relationships in which sexual activity took place. In wave 1, neighborhood differences are statistically significant only among females and among whites, while in wave 2, neighborhood differences are significant among all subgroups except blacks. (We are puzzled by the differences across waves in proportions, even ignoring neighborhood distinctions, and will investigate this further.) In wave 2, boys in particular report low levels of talking about contraception, although the neighborhood gradient is similar for boys and girls. We interpret these results as more consistent with Anderson's "Mating Game" model, which emphasizes contraception as a female responsibility rather than a joint decision. The gender difference may also be the product of well-known age disparities within couples, with girls tending to be younger than their romantic partners. Table 5 shows multi-level logit regression models predicting whether contraception was discussed in a sexual relationship. Relationships are nested within individuals who are nested within neighborhoods. Only one of the neighborhood coefficients is statistically significant in these models, which may be due to the smaller sample sizes (due to missing data on control variables) or the correction for neighborhood clustering.

Relationship Length

Table 6 shows average relationship length by neighborhood disadvantage for the relationship data available in all three waves. The unit of analysis in this table is the relationship rather than the individual. Wave three relationships include only those that begin before age 20. In all three waves there is evidence of fairly large differences in mean relationship length by neighborhood. Adolescents in more disadvantaged neighborhoods tend to have *longer* relationships. These findings are inconsistent with the bleak view of adolescent romantic relationships presented in Anderson's "mating game" model, and more consistent with the "poverty of relationships" model, in which adolescents growing up in poverty take romantic relationships seriously, in part because other relationships are unfulfilling. Table 7 shows multi-level regression models of relationship length by survey wave. Even when controlling for individual and family characteristics, these neighborhood differences in relationship length remain large and statistically significant. Other than the neighborhood characteristics, the only other variables that consistently predict relationship length are age, gender, and parent education, with older adolescents, females, and those with less educated parents reporting longer relationships. The gender difference is again likely the result of partner age differences.

Contraceptive Use

In the "mating game" model, adolescents in disadvantaged neighborhoods rarely use contraception, while in the "poverty of relationships" model, contraceptive use is common early in relationships (and in short-lived relationships), but tends to become

inconsistent over time. Table 8 examines contraceptive use in the wave 3 relationship data, again using the relationship as the unit of analysis and limiting relationships to those occurring during adolescence. In relationships with only one sexual event, contraceptive use is actually highest in the most advantaged and the most disadvantaged neighborhoods, but these differences are not statistically significant. This is confirmed in the regression model presented in Table 10, which finds no significant differences across neighborhoods. Among relationships with multiple sexual events, we have data on only the first and most recent sexual event. At both events, contraceptive use is less likely among adolescents in the most disadvantaged neighborhoods. These differences appear to be large and statistically significant. Comparing first and most recent sexual events, the drop-off in contraceptive use appears to be largest among those in the most disadvantaged neighborhoods.

Table 9 focuses on relationships with multiple sexual events to examine patterns of consistency of contraceptive use over time by neighborhood. Adolescents in the most advantage neighborhoods are the most likely to be consistent users of contraceptives, reporting contraceptive use at both first and most recent sex. They are also least likely to be consistent non-users of contraception (the rightmost column). There appear to be no neighborhood differences in the likelihood of using contraceptives at the most recent sex but not the first, but adolescents in more disadvantaged neighborhoods are most likely to be inconsistent users of contraception, using it at first sex but not most recent sex. Table 11 shows estimates from a multi-level multinomial logit model of consistency of contraception. The base category is contraceptive use at both first and most recent sex, so coefficients in each column should be interpreted relative to that outcome. The

descriptive results are largely reproduced in this model, with adolescents in the most disadvantaged neighborhoods more likely to use contraceptives at neither time and to use contraceptives inconsistently.

We view the evidence on contraceptive use to be more consistent with the “Poverty of Relationships” model. As both models would predict (and as is well known in the literature), there are large neighborhood differences in contraceptive use. Inconsistent with the mating game model, however, contraceptive use in single sexual event relationships is relatively high, especially compared to more long-term relationships, and there are no neighborhood differences in contraceptive use in relationships with only one sexual event. The drop-off in contraceptive use expected by the poverty of relationships model seems to be present among some relationships and more common in more disadvantaged neighborhoods.

Relationship Closeness

Table 12 shows the mean relationship closeness scale measures by neighborhood disadvantage for wave 1 and wave 2 relationships. In wave 1, there appear to be no systematic differences in relationship closeness across neighborhoods, but in wave 2, there are statistically significant neighborhood differences for all subgroups except blacks, with adolescents in more disadvantaged neighborhoods reporting less close relationships. Table 13 shows multi-level regression models of relationship closeness by wave. In these models, the neighborhood differences are no longer statistically significant and presumably explained by differences in individual and family characteristics.⁵ Across

⁵ In future drafts, we will also control for relationship length, as longer relationships present greater opportunity for the events used to construct the closeness scale to occur. .

waves, Blacks report lower values on the relationship closeness scale, as do younger adolescents. Given the differences between survey waves in the descriptive results, we view these results as largely uninformative for adjudicating between the “Mating Game” and “Poverty of Relationships” models.⁶

Discussion

This paper has examined neighborhood differences in romantic and sexual behavior among adolescents in an attempt to adjudicate between two contradictory models of adolescent relationships and pregnancy. Our analyses of nationally representative survey data from Addhealth show support for Edin and Kefala’s poverty of relationships model in the domains of knowledge of contraception, relationship length, and contraceptive consistency and contraceptive use in single sexual event relationships, and somewhat weak evidence for Anderson’s “mating game” model with regard to talking about contraception within relationships. In future analyses with the Addhealth data, we plan to further expand our data analyses to include separate models by gender, cross-level (neighborhood characteristic by individual characteristic) interactions, relationship concurrency, and the desirability of a teenage pregnancy. We also plan to consider other ways of conceptualizing neighborhood differences in relationships beyond the central tendency, such as the variance or the presence of significant numbers of relationships with particular characteristics.

More generally, these results suggest the importance of relationships for understanding neighborhood differences in teenage sexual behavior and childbearing.

⁶ In future work, we hope to more fully understand the differences in the relationship event data across waves.

First, lack of neighborhood differences in knowledge of contraception points toward the importance of decision-making rather than ignorance in differences in contraceptive behavior, and such decision-making must by definition involve both partners in some way. Second, the large neighborhood differences in length of relationships suggests that the time that an adolescent is “at-risk” of teenage pregnancy may be longer in more disadvantaged neighborhoods simply because they are more likely to be in a relationship at any point in time. Third, variation in contraceptive use over the course of a relationship also suggests the importance of relationships for structuring decisions about contraceptive use.

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Table 1: Comparison of Models of Adolescent Relationships in Disadvantaged Neighborhoods

<i>"Mating Game"</i> (Anderson)	<i>"Poverty of Relationships"</i> (Edin and Kefalas)
A. Poor understanding of reproductive biology and contraception	A. Average understanding of contraception
B. Contraception as female responsibility	B. Contraception as joint decision
C. Short relationships	C. Mix of short and long relationships
D. Multiple concurrent partners	D. Predominantly serial monogamous partners
E. Little contraceptive use	E. Contraceptive use at beginning of relationship, but inconsistent use in longer relationships
F. Distrust and lack of relationship closeness	F. Trust and closeness develop over time
G. Boys fear being trapped by pregnancy/children	G. Boys desire pregnancy/children

Table 2: Knowledge of Contraception, by Neighborhood Disadvantage

Proportion Correct on Wave 1 Knowledge of Contraception Quiz									
Neighborhood Disadvantage Quintiles	Total (n=14619)	Males (n=7393)	Females (n=7226)	Whites (n=7182)	Blacks (n=2914)	Latinos (n=2709)	15-16 (n=7342)	17-18 (n=6808)	19-21 (n=469)
1	0.65	0.64	0.66	0.65	0.63	0.64	0.62	0.68	0.61
2	0.64	0.63	0.65	0.65	0.64	0.62	0.62	0.66*	0.63
3	0.64	0.63	0.65	0.64	0.62	0.62	0.63	0.66*	0.66
4	0.61*	0.60*	0.62*	0.62*	0.63	0.59*	0.60*	0.62*	0.58
5	0.61*	0.61*	0.62*	0.63	0.60*	0.61	0.59*	0.63*	0.63

Proportion Correct on Wave 2 Knowledge of Contraception Quiz									
Neighborhood Disadvantage Quintiles	Total (n=11914)	Males (n=5900)	Females (n=6014)	Whites (n=5986)	Blacks (n=2412)	Latinos (n=2106)	15-16 (n=2162)	17-18 (n=6181)	19-21 (n=3562)
1	0.66	0.65	0.66	0.66	0.66	0.66	0.61	0.66	0.68
2	0.65	0.64	0.65	0.65	0.64	0.63*	0.60	0.65	0.66*
3	0.64*	0.63*	0.65*	0.65	0.62*	0.61*	0.59	0.65	0.66*
4	0.61*	0.60*	0.63*	0.62*	0.62*	0.61*	0.57*	0.62*	0.63*
5	0.62*	0.62*	0.62*	0.63*	0.62*	0.61*	0.59	0.62*	0.64*

* Statistically different from quintile 1

Table 3: Knowledge of Contraception Multi-level Regressions (Knowledge Quiz Score as Outcome)

	Wave 1 (n = 9206)	Wave 2 (n = 8082)
Constant	0.3197* (0.0304)	0.3593* (0.0299)
Black	-0.0134* (0.0061)	-0.0175* (0.0063)
Latino	-0.0054 (0.0068)	0.0064 (0.0070)
Other Race	0.0051 (0.0088)	0.0081 (0.0091)
Female	0.0158* (0.0017)	0.0149* (0.0016)
Immigrant	0.0238* (0.0037)	0.0167* (0.0038)
Age	-0.0465* (0.0097)	-0.0271* (0.0105)
Household Size	-0.0009 (0.0014)	-0.0040* (0.0014)
Single Parent HH	0.0039 (0.0051)	-0.0010 (0.0052)
Other Household Type	0.0107* (0.0053)	0.0092 (0.0054)
Parent Immigrant	0.0139 (0.0075)	-0.0063 (0.0079)
Parent Education – HS Degree	0.0140* (0.0060)	0.0261* (0.0062)
Parent Education – Some College	0.0272* (0.0062)	0.0415* (0.0064)
Parent Education – College	0.0308* (0.0072)	0.0506* (0.0075)
Parent Professional Occ	0.0116* (0.0045)	0.0081 (0.0046)
Parent Disabled	-0.0112 (0.0089)	-0.0010 (0.0092)
Welfare Receipt	-0.0203* (0.0068)	-0.0191* (0.0069)
Mother Age at Birth 21-25	0.0065 (0.0054)	-0.0027 (0.0057)
Mother Age at Birth 26-35	0.0121* (0.0056)	-0.0061 (0.0058)
Mother Age at Birth 36+	0.0073 (0.0104)	-0.0011 (0.0106)
Low Birth Weight	-0.0074 (0.0062)	-0.0129* (0.0062)
Ever Had Sex	0.0523* (0.0039)	0.0526* (0.0041)
<u>Neighborhood Disadvantage</u>		
Quintile 2	-0.0042 (0.0076)	-0.0083 (0.0078)
Quintile 3	-0.0093 (0.0075)	-0.0136 (0.0077)
Quintile 4	-0.0168* (0.0080)	-0.0233* (0.0083)
Quintile 5	-0.0085 (0.0094)	-0.0192* (0.0097)
<u>Variance Decomposition</u>		
Individual	0.0303	0.0282
Neighborhood	0.0011	0.0011

Table 4: Proportion of Relationships in Which Respondent Reporting Talking to Partner About Contraception or STDs
Wave 1- Talk about contraception (If Relationship Included Sex)

Neighborhood Disadvantage Quintiles	Total (n=8726)	Males (n=4293)	Females (n=4433)	Whites (n=4152)	Blacks (n=2212)	Latinos (n=1486)
1	0.79	0.76	0.82	0.79	0.83	0.80
2	0.77	0.76	0.78	0.77	0.80	0.75
3	0.76	0.75	0.77*	0.76	0.78	0.72
4	0.78	0.76	0.79	0.77	0.80	0.75
5	0.77	0.79	0.76*	0.72*	0.78	0.80

Wave 2- Talk about contraception (If Relationship Included Sex)

Neighborhood Disadvantage Quintiles	Total (n=6134)	Males (n=2817)	Females (n=3317)	Whites (n=3025)	Blacks (n=1429)	Latinos (n=1078)
1	0.64	0.57	0.71	0.64	0.53	0.68
2	0.57*	0.48*	0.64*	0.58*	0.58	0.57*
3	0.56*	0.50*	0.61*	0.58*	0.54	0.51*
4	0.52*	0.43*	0.61*	0.55*	0.50	0.47*
5	0.51*	0.43*	0.60*	0.54*	0.51	0.56*

* Statistically different from quintile 1

Table 5: Multi-level Logit Models Predicting Talking about Contraception in Relationship

	Wave 1 (n = 5439 rel's)	Wave 2 (n = 4142 rel's)
Constant	2.0236* (0.2079)	-0.0570 (0.1846)
Black	0.0355 (0.1131)	-0.1291 (0.1061)
Latino	0.1356 (0.1592)	-0.0388 (0.1138)
Other Race	0.0175 (0.1749)	-0.0392 (0.1521)
Age	0.0273 (0.0303)	0.0867 (0.0294)
Female	-0.2274* (0.0821)	0.7018* (0.0725)
Immigrant	-0.2815 (0.2662)	0.0286 (0.2106)
Household Size	0.0115 (0.0316)	-0.0306 (0.0245)
Single Parent HH	-0.0329 (0.1157)	0.0802 (0.0871)
Other Household Type	-0.0766 (0.1157)	-0.0111 (0.0934)
Parent Immigrant	0.0770 (0.1904)	0.0644 (0.1459)
Parent Education – HS Degree	-0.1542 (0.1301)	-0.0117 (0.1092)
Parent Education – Some College	-0.1157 (0.1413)	0.2044* (0.1092)
Parent Education – College	-0.2580 (0.1657)	0.1321 (0.1384)
Parent Professional Occ	0.0455 (0.1029)	0.1064 (0.0804)
Parent Disabled	0.0068 (0.1841)	0.1630 (0.1654)
Welfare Receipt	0.0491 (0.1399)	-0.2791 (0.1069)
Mother Age at Birth 21-25	0.0872 (0.1140)	0.0918 (0.1114)
Mother Age at Birth 26-35	-0.0729 (0.1203)	0.1531 (0.1049)
Mother Age at Birth 36+	-0.3861 (0.2542)	-0.1270 (0.2214)
Low Birth Weight	0.1913 (0.1507)	-0.2672* (0.1099)
<u>Neighborhood Disadvantage</u>		
Quintile 2	0.0784 (0.1484)	-0.2063 (0.1419)
Quintile 3	0.2322 (0.1407)	-0.1023 (0.1348)
Quintile 4	0.2420 (0.1621)	-0.2918* (0.1403)
Quintile 5	0.3177 (0.1818)	-0.1281 (0.1547)
<u>Variance Decomposition</u>		
Individual	0.8964 (n = 3723)	0.5564 (n = 3353)
Neighborhood	0.0271 (n = 1005)	0.0808 (n = 929)

Table 6: Average Length of Relationship (in Months)

Neighborhood Disadvantage Quintile	Wave 1				Wave 2				Wave 3			
	Total (n=20781)	White (n=10818)	Black (n=4298)	Latino (n=3516)	Total (n=12360)	White (n=6686)	Black (n=2418)	Latino (n=1988)	Total (n=21306)	White (n=12152)	Black (n=4086)	Latino (n=2938)
1	7.7	7.6	8.6	7.9	7.1	6.9	6.4	8.6	18.8	18.1	17.6	22.1
2	8.3*	7.8	9.0	9.3*	8.0*	7.1	9.4*	9.7	20.8*	19.1	23.7*	23.8
3	8.6*	8.4*	9.5	9.4*	8.2*	8.1*	8.7*	9.0	21.1*	20.6*	22.1*	24.3
4	9.7*	8.8*	10.8*	10.0*	9.3*	9.0*	9.2*	9.9	24.1*	22.5*	23.7*	29.6*
5	10.5*	8.8*	11.2*	10.0*	10.8*	9.6*	11.4*	10.5	24.8*	23.3*	24.6*	30.8*

* Statistically different from quintile 1

Table 7: Multi-level Models of Relationship Length (in months)

	Wave 1 (n=13603 rel's)	Wave 2 (n=8672 rel's)	Wave 3 (n=15122 rel's)
Black	1.65* (.33)	.66 (.37)	.32 (.73)
Latino	.98* (.33)	.52 (.38)	2.69* (.77)
Other	.45 (.46)	.02 (.55)	-1.60 (1.09)
Female	1.70* (.21)	2.06* (.25)	4.74* (.49)
Immigrant	-.51 (.53)	.28 (.66)	.14 (1.36)
Age	1.14* (.07)	1.52* (.08)	4.44* (.14)
Household Size	.01 (.08)	.11 (.09)	.27 (.18)
Single Parent HH	.32 (.28)	.72* (.33)	-.64 (.66)
Other Household Type	-.02 (.28)	-.21 (.34)	-1.88* (.68)
Parent Education – HS Degree	-.30 (.34)	-.98* (.40)	-1.83* (.82)
Parent Education – Some College	-.43 (.35)	-1.62* (.41)	-3.22* (.83)
Parent Education – College	-1.15* (.40)	-1.87* (.47)	-4.47* (.95)
Mother professional	.30 (.25)	.52 (.29)	.27 (.27)
Mother disabled	-.27 (.49)	-.57 (.60)	-.44 (1.19)
Welfare receipt	.41 (.38)	.16 (.45)	.29 (.93)
Low birth weight	-.50 (.36)	-.18 (.42)	.90 (.85)
Mother Age at Birth 21-25	-.10 (.30)	-.80* (.36)	-1.46* (.73)
Mother Age at Birth 26-35	-.20 (.31)	-.68 (.37)	-1.31 (.74)
Mother Age at Birth 36+	.55 (.60)	-1.54* (.72)	-.51 (1.38)
<u>Neighborhood Disadvantage</u>			
Quintile 2	.12 (.38)	-.01 (.41)	1.03 (.80)
Quintile 3	.50 (.38)	.87* (.40)	1.71* (.78)
Quintile 4	1.20* (.41)	1.16* (.44)	4.45* (.88)
Quintile 5	1.48* (.60)	2.77* (.72)	3.58* (1.38)
<u>Variance Decomposition</u>			
Relationship	9.67 (n= 13603)	9.57 (n= 8672)	20.02 (n=15122)
Individual	5.08 (n= 8282)	4.48 (n= 5894)	13.02 (n = 6843)
Neighborhood	1.11 (n= 1531)	0.40 (n= 1271)	0.03 (n= 1347)

Table 8: Wave 3- Contraceptive Use in Relationships

Neighborhood Disadvantage Quintiles	One Sexual Event (n=3454)	Multiple Sexual Events (n=16046)	
	Used contraception	Used Contraception- First Sex	Used Contraception- Most Recent Sex
1	0.72	0.78	0.74
2	0.67	0.74*	0.69*
3	0.67	0.73*	0.67*
4	0.68	0.72*	0.63*
5	0.70	0.68*	0.62*

* Statistically different from quintile 1

Table 9: Wave 3- Consistency of Contraceptive Use in Relationships with More Than One Sexual Event

Neighborhood Disadvantage Quintiles	Used Contraception First and Most Recent	Used Contraception First but not Most Recent	Used Contraception Most Recent but not First	Did Not Use Contraception Either Time
1	0.68	0.11	0.06	0.15
2	0.61*	0.12*	0.07	0.19*
3	0.60*	0.13*	0.07	0.20*
4	0.57*	0.15*	0.07	0.22*
5	0.55*	0.14*	0.07	0.24*

* Statistically different from quintile 1

Table 10: Multi-Level Logit Model of Contraceptive Use in Wave 3 Relationships with 1 Sexual Event

Constant	0.9343*
	(0.2723)
Black	0.5202*
	(0.1510)
Latino	-0.3213
	(0.1840)
Other Race	-0.1387
	(0.2348)
Age	0.0619
	(0.0340)
Female	0.3733
	(0.1087)
Immigrant	0.4435
	(0.5098)
Household Size	-0.0828*
	(0.0357)
Single Parent HH	-0.2049
	(0.1402)
Other Household Type	-0.2375
	(0.1492)
Parent Immigrant	0.3289
	(0.2185)
Parent Education – HS Degree	0.2667
	(0.1731)
Parent Education – Some College	0.2627
	(0.1668)
Parent Education – College	0.3542
	(0.2023)
Parent Professional Occ	0.0576
	(0.1193)
Parent Disabled	-0.0730
	(0.2951)
Welfare Receipt	-0.1660
	(0.1815)
Mother Age at Birth 21-25	-0.3614*
	(0.1700)
Mother Age at Birth 26-35	-0.4040
	(0.1598)
Mother Age at Birth 36+	-0.4391
	(0.2927)
<u>Neighborhood Disadvantage</u>	
Quintile 2	-0.2995
	(0.1797)
Quintile 3	-0.2922
	(0.1852)
Quintile 4	-0.1755
	(0.1924)
Quintile 5	-0.3932
	(0.2381)
<u>Variance Decomposition</u>	
Individual (n = 1592)	0.9375
Neighborhood (n = 618)	0.0138

n = 2511 relationships

Table 11: Multi-level Multinomial Logit Model of Contraceptive Consistency in Wave 3 Relationships with more than 1 Sexual Event (base category = contraceptive use at both first and most recent sex)

	<i>No contraceptive either time</i>	<i>First but not recent</i>	<i>Recent but not first</i>
Constant	-0.9241* (0.1757)	-1.6439* (0.1629)	-2.3806* (0.2177)
Black	-0.2185* (0.1117)	0.0503 (0.0991)	-0.1003 (0.1293)
Latino	0.3522* (0.1147)	0.2311 (0.1307)	0.1953 (0.1535)
Other Race	0.1742 (0.1397)	-0.0098 (0.1465)	0.1418 (0.1811)
Age	-0.0090 (0.0191)	0.0397* (0.0189)	0.0200 (0.0281)
Female	-0.3163* (0.0665)	0.0095 (0.0659)	-0.2110* (0.0812)
Immigrant	0.0654 (0.2162)	0.2641 (0.2106)	-0.2191 (0.2863)
Household Size	0.0534* (0.0246)	0.0286 (0.0226)	0.0915* (0.0284)
Single Parent HH	0.2117* (0.0956)	0.1089 (0.0875)	0.0519 (0.1168)
Other Household Type	0.2172* (0.0924)	0.1846* (0.0926)	0.2413* (0.1100)
Parent Immigrant	-0.1394 (0.1357)	-0.3754* (0.1635)	0.1582 (0.1593)
Parent Education – HS Degree	-0.4446* (0.1014)	-0.1384 (0.1064)	-0.0680 (0.1361)
Parent Education – Some College	-0.6185* (0.1100)	-0.3440* (0.1122)	-0.1397 (0.1466)
Parent Education – College	-0.7926* (0.1302)	-0.2776* (0.1216)	-0.1474 (0.1781)
Parent Professional Occ	-0.0889 (0.0800)	-0.1767* (0.0783)	-0.1670 (0.1034)
Parent Disabled	0.1160 (0.1499)	0.1442 (0.1461)	0.1266 (0.1901)
Welfare Receipt	0.1596 (0.1188)	0.0193 (0.1138)	0.0377 (0.1762)
Mother Age at Birth 21-25	0.0554 (0.1019)	-0.0029 (0.0887)	0.1013 (0.1170)
Mother Age at Birth 26-35	-0.0719 (0.1026)	-0.0455 (0.0962)	0.2321 (0.1198)
Mother Age at Birth 36+	-0.0910 (0.1874)	0.1163 (0.1789)	0.4738 (0.2150)
Low Birth Weight	0.0156 (0.1092)	0.0036 (0.0503)	0.2069 (0.1345)
<u>Neighborhood Disadvantage</u>			
Quintile 2	0.1732 (0.1298)	0.2990* (0.1241)	0.2848* (0.1420)
Quintile 3	0.1277 (0.1219)	0.2517* (0.1184)	0.0149 (0.1540)
Quintile 4	0.2760* (0.1239)	0.5047* (0.1320)	0.1226 (0.1643)
Quintile 5	0.5012* (0.1732)	0.3067* (0.2990)	0.4318* (0.1894)
<u>Variance Decomposition</u>			
Individual (n=11238)	1.4715	0.5936	0.5675
Neighborhood (n=1283)	0.4112	0.4052	0.5957

n=11238 relationships

Table 12: Relationship Closeness

Wave 1- Relationship Closeness Scale						
Neighborhood Disadvantage Quintiles	Total (n=19493)	Males (n=9536)	Females (n=9957)	Whites (n=10203)	Blacks (n=3932)	Latinos (n=3331)
1	8.1	8.2	8.1	8.2	7.6	8.0
2	8.1	8.2	8.1	8.2	8.2*	8.2
3	8.2	8.3	8.2	8.3	7.9	8.2
4	8.1	8.1	8.1	8.3	7.7	8.2
5	8.1	8.1	8.1	8.5	7.9	8.2

Wave 2- Relationship Closeness Scale						
Neighborhood Disadvantage Quintiles	Total (n=13984)	Males (n=6625)	Females (n=7359)	Whites (n=7512)	Blacks (n=2707)	Latinos (n=2341)
1	7.3	7.2	7.5	7.3	6.6	7.7
2	7.3	6.9	7.7	7.4	6.8	7.3
3	7.4	7.1	7.6	7.7*	6.4	6.9*
4	7.1*	6.8*	7.4	7.4	6.4	7.2
5	6.8*	6.5*	7.2*	7.9*	6.5	6.9*

* Statistically different from quintile 1

Table 13: Relationship Closeness Multi-level Regression Models

	Wave 1 (n = 12872 rel's)	Wave 2 (n = 9836 rel's)
Constant	7.7635* (0.1881)	6.5128* (0.2460)
Black	-0.4077* (0.0824)	-1.0447* (0.1168)
Latino	-0.1162 (0.0836)	-0.2138 (0.1178)
Other Race	-0.3656* (0.1195)	-0.2529 (0.1739)
Age 15-16	0.4355* (0.1008)	0.6836* (0.0927)
Age 17-18	0.9655* (0.0974)	1.0066* (0.1055)
Age 19-21	1.3758* (0.1107)	0.6790 (0.4256)
Female	-0.0703 (0.0539)	0.5999* (0.0769)
Immigrant	-0.0657 (0.1344)	-0.2054 (0.1994)
Household Size	-0.0453* (0.0197)	-0.0265 (0.0279)
Single Parent HH	-0.0512 (0.0728)	0.1569 (0.1036)
Other Household Type	0.0989 (0.0744)	0.0026 (0.1058)
Parent Education – HS Degree	0.0284 (0.0877)	0.1683 (0.1260)
Parent Education – Some College	-0.0441 (0.0899)	0.1063 (0.1289)
Parent Education – College	-0.2583* (0.1047)	0.0541 (0.1495)
Parent Professional Occ	0.0415 (0.0654)	0.2623* (0.0932)
Parent Disabled	-0.0146 (0.1297)	0.0958 (0.1902)
Welfare Receipt	0.0401 (0.0986)	-0.2085 (0.1394)
Low Birth Weight	-0.0547 (0.0933)	-0.1012 (0.1298)
Mother Age at Birth 21-25	-0.0205 (0.0783)	0.0288 (0.1126)
Mother Age at Birth 26-35	-0.0092 (0.0799)	0.1253 (0.1152)
Mother Age at Birth 36+	-0.2830 (0.1553)	-0.1624 (0.2220)
<u>Neighborhood Disadvantage</u>		
Quintile 2	0.0055 (0.0930)	0.0117 (0.1286)
Quintile 3	0.0376 (0.0918)	0.1921 (0.1260)
Quintile 4	0.0478 (0.1010)	0.1233 (0.1394)
Quintile 5	0.0642 (0.1186)	0.2653 (0.1679)
<u>Variance Decomposition</u>		
Relationship	5.8324 (n = 12872)	7.5442 (n = 9836)
Individual	1.9382 (n = 8450)	4.1980 (n = 6745)
Neighborhood	0.0264 (n = 1544)	0.0036 (n = 1357)

Appendix A: Descriptions of Individual and Family Control Variables

(All measured at Wave 1)

Individual Characteristics:

Race/Ethnicity: A set of indicator (0/1) variables for the adolescent's race and ethnicity. In Addhealth, the adolescent can self identify as belonging to one or more categories, including White, Black, Native American, Asian, or other Race. The adolescent can also choose to identify as Hispanic/Latino or not. We collapse these categories to non-Hispanic White, on-Hispanic Black, non-Hispanic other race, and Hispanic/Latino. White is the omitted category in models.

Immigrant: An indicator for those born outside the United States.

Low Birth Weight: An indicator for weighing less than 88 ounces (5.5 lbs.) at birth.

Mother's Age at Birth: The age in years of the mother when the adolescent was born. We use four categories: less than 20, 21-25, 26-35, and 36 or older, with the first being the omitted category in models.

Family Characteristics:

Household Size: The number of persons living in the adolescent's household.

Household Type: A set of indicator variables for the family type: Married, Single Parent, and Other (which includes step parent families). Married is the omitted category.

Parent variables are based on the primary residential parent who completed the parent questionnaire, usually the biological mother but sometimes the father or other caretaker.

Parent Immigrant: Primary parent not born in the US.

Parent Education: A set of indicator variables for the primary parent's completed level of education: less than High School, High School Graduate, Some College or Trade School, and College Graduate. Less than high school is the omitted category.

Parent Professional Occupation: Primary parent currently works in a managerial or professional occupation.

Parent Disabled: Primary parent is mentally or physically handicapped.

Parent Welfare Receipt: Primary parent currently receives welfare, either for self or for the adolescent.