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## Adolescents' Involvement in Non-Romantic Sexual Activity

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## ABSTRACT

The majority of teens are having sex, however, we know little about the patterns of non-romantic sexual activity and the factors associated with non-romantic sexual experiences. In fact, prior work indicates that contraceptive use depends on the relationship context of sexual intercourse. Yet, research on the characteristics of teens who engage in non-romantic sex is limited. We use the National Longitudinal Study of Adolescent Health to prospectively analyze adolescents' reports of non-romantic sexual intercourse, and whether key protective and risk factors as well as normative orientations distinguish the context within which sexual activity occurs. We find that the majority of sexually active teens have had some sexual experience outside of a romantic relationship. We conclude that teenagers' sexual experiences are not consistent or static over time, because two-thirds of sexually active teenagers have had sex in *both* romantic and non-romantic contexts. Our multivariate analyses indicate that traditional risk/protective factors and the normative orientations of mothers and teens themselves have significant effects on teenage non-romantic sexual activity. We argue that it is important to consider the full repertoire of adolescents' experiences by examining the types of sexual partners over time.

## **Adolescents' Involvement in Non-Romantic Sexual Activity**

The majority of teenagers report having sex during their high school years (Alan Guttmacher Institute 1994; Warren et al. 1998), and as a result researchers are calling for more detailed conceptualizations of adolescent sexual activity. From a policy standpoint it may be useful to move beyond the issue of whether teens are having sex and focus on more refined understandings of sexual decision-making, including the roles of factors such as the number of sexual partners or intentions to have sex (e.g., Miller, Forehand, and Kotchick 1997; Santelli, Robin, Brener, and Lowry 2001; Whitaker, Miller, and Clark 2000). One advantage of these conceptualizations is that pregnancy and HIV prevention programs could be targeted to those adolescents who are likely to be susceptible to unplanned pregnancies and sexually transmitted infections.

In this vein of reconceptualizing adolescent sexual activity, we note that the contexts in which sexual activity occurs have largely been ignored. Research that focuses on the meanings of sexual partners indicates that adolescents distinguish between relationship sex and casual sex. Ellen et al. (1996) find that adolescents classify sexual partners into two statistically distinct groups: (1) steady partners, and (2) casual partners, friends, or 'one-night stands.' These findings support the distinction between romantic and non-romantic sexual partners. Yet, 'non-romantic sex' is a little researched dimension of adolescent life (Ellen, Cahn, Eyre, and Boyer 1996). Considering non-romantic sex is important because this context may present greater risks for teens regarding unplanned pregnancy and exposure to sexually transmitted infections (e.g., Ford, Sohn and Lepowski 2000; Manning et al. 2000; Norris, Ford, Shyr and Schork 1996; .Ott, Adler, Millstein, Tschann and Ellen 2002). Non-romantic sex may be a potential

springboard for longer-term problems associated with relationship patterns that lack commitment.

In this paper, we view adolescents' dating, romantic, and sexual relationships as fluid or processual in nature. We move away from static notions of sexual activity that simply note whether an adolescent is a virgin or non-virgin, or the date of most recent sexual intercourse. We do this by considering the relationship context of sexual activity, and changes in context over two time periods, one year apart. For some adolescents non-romantic sex may become a long-term way of relating to the opposite sex. For others, the context of sexual activity may change; an adolescent might have non-romantic sex at one point in time, but have sex within the parameters of a dating relationship at another time. To date, little attention has been paid to non-romantic sex and few researchers have employed national longitudinal data to understand the relationship context of adolescent sexual intercourse. We address two questions: (1) what is the prevalence of non-romantic sex; and (2) what factors predict this type of sexual involvement?

We draw on two theoretical frameworks to understand involvement in non-romantic sex. First, we apply a traditional risk/protective factors model to non-romantic sexual activity. An underlying assumption of this approach is that non-romantic sex is a deviant or problem behavior. However, we also explore the utility of a social learning perspective. This theoretical tradition emphasizes that variations in the normative climate within which sexual behaviors unfold may encourage or discourage non-romantic sexual behavior. We examine individual, family, and peer attitudes as these influence the odds that an adolescent will become involved in non-romantic sex. Given that sexual activity is gendered, and differs by developmental period, we examine similarities and differences for boys and girls, and by age. We analyze,

prospectively, adolescents' reports of sexual intercourse, and whether key protective and risk factors as well as normative orientations distinguish the context within which sexual activity occurs. Our analyses rely on data from the National Longitudinal Study of Adolescent Health (Add Health), a large-scale national probability survey.

## **BACKGROUND**

### ***Dating and Sexual Activity***

Prior work shows that for most adolescents, first sexual experience is associated with dating (e.g., Miller and Moore 1990; Miller, Norton, Curtis, Hill, Schvaneveldt, and Young 1997; Thornton 1990) because dating provides a potential partner for sexual activity. It appears that only a small percentage of adolescents report having sex before dating (Longmore, Manning, and Giordano 2001). Nevertheless, some adolescents have sex outside of a dating relationship, and this may occur at first sexual initiation. Thus, one “sensitizing concept” (Blumer 1969) or core element missing from the bulk of research on adolescents' first sexual experience is the relationship context in which sex occurs.

A body of work does examine the context of sexual decision-making. Most of these studies focus on casual sex among college students (e.g., Herold et al. 1998; Paul et al. 2000; Maticka-Tyndale et al. 1998) or other adults (e.g., Cubbins and Tanfer 2000; Hennink et al. 2000). Given the nature of adolescence, we expect that adolescent decision-making might differ from those of adults. Furthermore, most of the studies of adults rely on cross-sectional, small-scale data collection efforts (e.g., Levinson, Jaccard, and Beamer 1993; Maticka-Tyndale et al. 1998; Paul et al. 2000) that make it difficult to generalize findings and apply a conceptual framework appropriate for adolescents. However, these studies do clearly document men have more supportive expectations and attitudes surrounding casual sex and are more likely to

engage in casual sex than women (e.g., Chara and Kuennen 1994 ; Cubbins and Tanfer 2000; Herold and Mewhinney 1993; Herold et al. 1998; Oliver and Hyde 1993).

With the exception of the research on adolescent girls' sexual abuse and exploitation (e.g., Nagy, Adcock, and Nagy 1994; Small and Kerns 1993; Stevens-Simon and Reichart 1994; Upchurch 2001), few studies examine *adolescents'* non-romantic sexual experiences. There is evidence, however, that significant numbers of adolescents engage in non-romantic sex.

Analyses of the 1995 National Survey of Family Growth indicate that almost one-quarter (23 percent) of adolescent girls reported their first sexual experience with someone whom they just met, with individuals with whom they were "just friends" or had gone out with "once in a while" (Elo et al. 1999; Manning, Longmore and Giordano 2000). Elo et al. (1999) emphasize that girls who report first sexual intercourse at younger ages are more likely to have had sex outside of a dating relationship. These findings do not include attention to male behavior patterns and focus only on first sexual experiences. Thus, prior work presents a limited view of the relationship context of teenagers' sexual experiences.

Moreover, studies that examine the relationship context of first sexual experience may not be indicative of later sexual experiences. It is unclear whether the 'non-relationship' sexual experience is a one-time occurrence, or if it is indicative of a pattern of sexual behavior that has long term consequences for adolescents' physical health and socio-emotional development with respect to commitment and intimacy. We argue that one sexual act does not necessarily represent the full repertoire of adolescent sexual behavior. Some sexually active adolescents may consistently have sex only with dating partners or always outside of dating relationships, while others may have a less consistent pattern. For example, young people may move from sex within a dating context to sex with someone they just met. Understanding adolescents'

sexual lives requires taking into account the fluid nature of relationships and acknowledging the full array of their sexual experiences.

With respect to understanding adolescence as a prelude to adulthood, there are at least two reasons for examining non-romantic sexual experiences. First, the short duration and lack of commitment present in sexual relationships that occur outside of the traditional dating environment are associated with greater, long-term health risks. Individuals who engage in non-romantic sexual activity early on may be developing patterns of sexual interaction that will lead to negative health outcomes including unplanned pregnancy and sexually transmitted infections. These patterns may include increased exposure to multiple partners. Much research has described this risk of exposure to sexually transmitted infections including HIV infection (e.g., Miller et al. 1999; Overby and Kegeles 1994). Additionally, since dating is associated with more effective contraceptive use, it is possible that non-romantic sex is associated with higher risk for sexually-related health problems related to ineffective or non-use of contraceptives (e.g., Ford et al. 2001; Manning et al. 2000; Norris et al. 1996; Ott et al. 2002;). For example, Manning et al. (2000) examining contraceptive use among adolescent girls, found that girls who had first sexual intercourse with a non-dating partner were less likely to use contraceptive methods than their counterparts who had first sex with a dating partner. Similarly, Ford, Sohn and Lepowski (2001) find that teens make decisions about contraceptive methods based on the nature of the relationship with their sexual partners. Teens who have sex with romantic partners are more likely to use condoms and other contraceptive methods than teens who have sex with non-romantic partners.

Second, a pattern of non-romantic sex may suggest that an adolescent is developing a dyadic attachment style that lacks intimacy and commitment. Furman and Simon (1999)

emphasize that “increased familiarity in the domain of romantic relationships should facilitate more effective application of emerging abstract skills.” Cognitive advances that are key to ‘growing up’ are contingent on learning to understand partners’ motivations and behavior. This more sophisticated reasoning may be facilitated by the development of romantic relationships during adolescence, rather than through a series of more fleeting liaisons.

### *Conceptual Framework*

To understand the factors that predict movement into non-romantic sexual activity, our measures will depend on the conceptual framework we adopt. If we conceptualize involvement in non-romantic sex as a form of problem behavior or deviance, variables typically included in studies of other risky behaviors should predict this type of sexual involvement. This approach draws on both attachment and social control theories that emphasize the importance of risk and protective factors including demographic background, individual resources, parental socialization techniques, peer attachment, and school and neighborhood factors. We refer to this as the traditional risk/protective factors approach to understanding non-romantic sexual activity. Second, decisions about sexual partners may be steeped in the normative climate of adolescents' lives. Drawing on theories of social learning and reasoned action we apply a social norms perspective to understanding teens' sexual behavior. We refer to this as the normative orientations approach. Third, we point to the importance of adolescent's position in the social structure.

### *Traditional Risk/Protective Factors*

Contemporary scholarship on risk and protective factors emphasizes that adolescents’ sexual behavior is not isolated from the social environment in which adolescents live. In other words, it is key to move beyond merely examining the influence of the family on adolescent

sexual activity. This approach emphasizes that adolescence is a stage in the life course when youth are exposed to an expanding and wider circle of influences including: peers (e.g., Giordano 1995; Giordano, Cernkovich, Groat, Pugh, and Swinford 1998), schools (e.g., Perry, Kelder, and Komro 1993) and neighborhoods (e.g., Hagan and Foster 2001). Both singularly and in various combinations, these domains present opportunities for the development and elaboration of protective and risk factors associated with adolescent sexual activity (Crockett and Petersen 1993; Jessor 1998). This suggests that adolescent sexual activity, both inside and outside dating and romantic relationships, is connected (in both positive and negative ways) with other social environments. We review individual, parental, peer, school, and neighborhood influences that reflect these various environments.

*Individual Resources.* The adolescent brings to each experience individual resources that act as risk and protective factors operating within the context of larger familial influences. These include self-esteem and intelligence. Based on prior research and reviews of the literature on the initiation of sexual activity, we expect that lower levels of self-esteem (Longmore et al. 1999) and less intelligence (Luthar, Cicchetti, and Becker 2000) would be associated with a higher likelihood of non-romantic sex at the wave 2 interview period, regardless of whether the adolescent had non-romantic sex at wave 1.

*Parenting.* Prior research has shown that parental socializing techniques that emphasize emotional support, firm but non-coercive control, and monitoring are associated with greater social competence among adolescents (Buehler and Gerard 2002), as well as later timing of adolescents' sexual debut (Longmore et al. 2001). We argue that these same effective parenting techniques are likely to be related to lower odds of non-romantic sex. Even though adolescents are drawing away from their families, the level of parental warmth and caring has

positive effects on well being and sexual behaviors (e.g. Jaccard, Dittus and Gordon 1996; Jaccard and Dittus 2000). We expect that teens with less close relationships to their parents will be more likely to engage in sexual activity outside of the dating context.

*Peer Attachment.* Researchers argue that among adolescents the intensity of peer attachment has implications for their psychological well-being as well as health promotion and health-risk behaviors (e.g., Crockett and Peterson 1993; Hartup 1996; Youniss and Smollar 1985). There are some debates about the pathways through which friendship quality influences adolescent well-being (e.g., Berndt 2002; Giordano et al. 1998). Yet, peer intimacy is associated with higher levels of competence (Burhmester 1996), depression (Hecht, Inderbitzen and Bukowski 1998), and school adjustment (Berndt and Keefe 1995). Thus, from a traditional protective and risk factor perspective, we expect that lower levels of attachment to or caring about peers would be associated with a greater likelihood of involvement in non-romantic sex.

*Social Contexts.* Scholars also emphasize how social contexts act as risk and protective factors, beyond those associated with individual resources, parenting techniques, and peer attachment. Bronfenbrenner and colleagues (e.g., Bronfenbrenner 1986; Bronfenbrenner and Crouter 1983) emphasize the interconnection between the person and the environment and the notion that individual resources as well as parental influences that either foster or hinder risk cannot be understood separate from immediate and more distal social contexts. A conception of this kind includes a vast array of social circumstances including school and neighborhood factors (Brewster 1994; Brewster, Billy, and Grady 1994; Gerard and Buehler 2002; Hagan and Foster 2002; Harris, Duncan, and Boisjoly 2002; Ku, Sonenstein, and Pleck 1993). Stronger social bonds, such as doing well in school (i.e., school attachment) and feeling safe in one's

neighborhood (i.e., neighborhood attachment) should be negatively related to the odds of engaging in non-romantic sex.

### *Normative Orientations*

An alternative to the traditional risk and protective factors approach to adolescent problem behavior derives from social learning theories, and emphasizes that behavior is influenced by the normative climate in which it occurs. Through a continuous process of communication, individuals learn definitions of certain behaviors as either appropriate or inappropriate. The family is an important source of continuing influence in this regard, but peers also contribute significantly and independently to the adolescent's normative climate. In addition, agency theorists such as Emirbayer and Goodwin (1994) offer an important theoretical correction to traditional conceptualizations of social networks and their effects -- specifically the "passive vessel" conception of human behavior that often flows from them. While decisions draw heavily on social network inputs, the individual also has an important role. This is particularly the case when the referent is sexual decision-making, because sexual intercourse typically occurs outside the immediate purview of the adolescent's family or peers. We refer to this as the normative orientations approach to understanding adolescents' non-romantic sexual activity. In fact, Kirby (2001) reviews the vast adolescent risk-taking literature and advocates for a social norms framework to study adolescent sexual behavior.

*Parents' and Peers' Normative Orientations.* The traditional risk and protective factors approach advocates for the importance of the various domains outlined above (e.g., individual resources, parental expressions of warmth, peer attachment, etc.). However, a social learning framework requires that we acknowledge that these social ties provide not only warmth or support (or lack of), but that messages are shared about attitudes and norms. We suggest that

normative orientations are multi-fold with respect to sexual activity. Adolescents' perceptions of peers' and parents' views of sexual activity may play a particularly important role in determining the relationship context of sexual activity. Thus, not only do relationships with significant others matter, but parents' and peers' norms and beliefs also matter. Empirical work supports this approach. For example, adolescent's perceptions of maternal approval of sexual activity is associated with the odds of engaging in sexual activity (Dittus and Jaccard 2000; Jaccard, Dittus and Gordon 1996). Our emphasis on perceptions is supported by recent findings that teen's perceptions of maternal attitudes have a greater influence on teenager's sexual behavior than their mother's actual views about sex (Dittus and Jaccard 2000; Jaccard, Dittus and Gordon 1998). Also researchers have assessed peer influences by examining respondents' reports of the sexual behavior of friends or by obtaining direct data on friends' sexual activity (e.g., Billy and Udry 1985; Brazzell and Acock 1988; East, Felice, and Morgan 1993). We tap into parents' and peers' normative orientations by using questions about adolescents' perceptions of parents' and peers' beliefs about sexual activity. We expect that positive peer and parental normative orientations regarding the adolescent's sexual activity will be associated with higher odds of non-romantic sex.

*Adolescent's Normative Orientation.* As suggested above the individual draws on his or her social world as a guide to behavior, but these views are not fully determined by the definitions or meanings provided by others. Perhaps the most proximate predictor of an adolescent's behavior is his or her own beliefs or attitudes about a behavior (Fishbein and Ajzen 1975). Teenagers' expectations and views about the benefits of sexual activity may play a particularly important role in determining whether they have sex with non-romantic partners.

An adolescent's positive normative orientation regarding sexual activity is expected to be positively associated with the odds of engaging in non-romantic sex.

### *Sociodemographic Background*

The traditional risk and protective factors approach and the normative approach include sociodemographic factors that affect subsequent behavior. These variables represent the 'structuring' (Cullen 1984) elements of adolescents' lives that determine the environment in which they are making decisions. Scholars note that age, gender, race, religion/religiosity, family structure, family size, household income, dating status, and parents' education affect adolescent sexual behavior (e.g., Brewster, Cooksey, Guilkey, and Rindfuss 1998; Darroch and Singh 1999; Gleib 1999; Moore et al. 1995). What is not known, however, is whether these same correlates of adolescent sexual activity distinguish sexual activity inside versus outside the confines of a traditional dating relationship.

### *Current Investigation*

Research on the romantic nature of adolescent sexual experiences is quite limited and narrow. Yet decisions about whom to have sex with are quite consequential for adolescents' lives. We build on prior work in four key ways. Our initial goal is to establish baseline levels of non-romantic sexual intercourse. We consider not only static dimensions of sexual activity via cross-sectional data, but also changes in the context of sexual experiences using longitudinal data. These findings will provide a fundamental understanding of adolescent sexual experiences, and will allow us to answer our first research question regarding the prevalence of non-romantic sex. We move beyond prior work by examining change in the relationship context of sexual activity among adolescent boys and girls. Our national estimates of adolescent non-romantic

sexual behavior will provide groundwork for further research on adolescent health, risk-taking, and sexuality.

Second, we apply two theoretical approaches to our analysis of teenage non-romantic sexual behavior. We evaluate how factors associated with a traditional risk and protective factors framework influence the relationship context of sexual activity. Next, we examine how parental, peer, and individual normative orientations towards sex influence the relationship context of sexual activity. These findings will help place non-romantic sexual activity in the risk-taking as well as the normative orientations literatures, and to address our second question regarding the predictors of non-romantic sex.

Third, we employ national, longitudinal data to address our questions. Prior work on the context of adolescent sexual activity often is limited to cross-sectional or retrospective data, but we avoid some potential causality problems by using prospective data. Consequently, unlike many studies examining individual level factors, we can state a priori, a causal order between the sociodemographic background, individual risk and protective factors, normative orientations and sexual activity. We evaluate how features of adolescents' lives measured at time 1 influence the relationship context of sexual activity within a 12-month time frame.

Fourth, we assess the impact of individual level predictors in boys' as well as girls' decisions to have sexual intercourse within a particular relationship context. Gender differences in sexual attitudes and behavior, particularly surrounding casual sexual encounters, have been noted (e.g. Chara and Kuennen 1994; Cubbins and Tanfer 2000; Ellen et al. 1996; Herold and Mewhinney 1993; Herold et al. 1998; Oliver and Hyde 1993). We compare similarities and differences in the effects of the variables for boys and girls, and by age.

We examine the following domains as predictors of sexual activity: sociodemographic background, individual resources, parenting techniques, peer attachment, school attachment, neighborhood context, and normative orientations of parents, peers, and the adolescent. We initially examine how sociodemographic background factors are related to the relationship context of sexual activity. We anticipate that lower socioeconomic status is associated with greater odds of nonromantic sex. Second, we develop a model that explores the utility of traditional risk/protective variables as predictors of non-romantic sexual activity. We expect the following relationships: (1) lower self-esteem and intelligence will be associated with higher odds of non-romantic sex; (2) less parental support and monitoring will be related to higher odds of non-romantic sex; (3) lower levels of peer attachment will be related to higher odds of non-romantic sex; and (4) less school and neighborhood attachment will be related to higher odds of non-romantic sex. Finally we consider variations in normative climates (family, peer, individual) that may support or inhibit the expression of sexual behavior within and beyond the confines of dating relationships. We hypothesize that positive parent, peer, and individual normative orientations toward sexual activity will be associated with higher odds of non-romantic sex.

## **DATA AND METHODS**

### ***Data***

We use the National Longitudinal Study of Adolescent Health (Add Health) to address our research questions. The Add Health is based on interviews with students in grades 7 through 12 and their parents in 1995. The first wave of the main in-home sample consists of 18,924 students. Once design effects are accounted for, these data are representative of adolescents in the United States (see Bearman, Jones, and Udry 1997).

The Add Health data are appropriate to address our research questions for several reasons. First, prior work has focused largely on small-scale, regional data collection efforts or retrospective data and generally has not relied on nationally representative data. Second, these data include comprehensive measures of adolescent dating, non-romantic relationships, and involvement in sexual activity. This allows us to move beyond prior studies by examining the type of relationship that precedes sexual activity. Moreover, most previous work is limited to only boys or girls; in contrast the Add Health data include measures for boys and girls which allow us to evaluate whether predictors vary by gender. Fourth, the longitudinal design allows analysis of the independent variables measured at wave 1 on behavioral outcomes that occurred between the interview waves.

Our analytic sample is based on adolescents who were interviewed at both waves of the Add Health and possess appropriate weights that account for the cluster sample design effects (N=13,570). We then limit our analyses to adolescents who were 15 or older at the first interview (N=9,365). This limitation is necessary because questions about normative orientations toward sexual activity are asked only of teens who are ages 15 or older. Our estimates of non-romantic sex may be conservative because we exclude very young teenagers. We then eliminate respondents who are missing data on our dependent variable or key independent indicators (e.g., normative orientations, and individual factors). Our resulting sample is 7,470 adolescents. To account for the complex sampling strategy of the Add Health, multivariate analyses are estimated using the STATA statistical package (Chantalla and Tabor 1999).

We note that information about romantic and non-romantic sexual experiences was collected in the adolescents' homes or other private locations using audio-assisted self-interview

technology. Adolescents' use of headsets and laptop computers to respond to potentially sensitive questions increases confidentiality of the answers and reduces interviewer bias.

### ***Measures***

*Dependent variable.* The relationship context of sexual activity occurring between interview waves is measured using responses to several questions about the number of non-romantic sexual partners between interview waves, sexual activity that occurred within a dating relationship, and dates of sexual intercourse. We initially determined whether respondents had sexual intercourse between interview waves. Respondents who reported having sexual relationships between the interview waves were asked, "Since month of last interview, with how many people, in total, including romantic relationship partners, have you ever had a sexual relationship?" Adolescents then were asked to answer the same question with reference to people who were not romantic partners. Further information about the relationship context of sexual activity between the waves was based on responses to questions about activities within romantic relationships. Respondents who had been in romantic relationships between interview waves were asked whether they had sexual intercourse with their boyfriend or girlfriend. These respondents were coded as having a romantic sexual partner. We create a variable with four mutually exclusive categories: (1) no sexual activity; (2) only non-romantic sexual activity; (3) only romantic sexual activity and (4) both romantic and non-romantic sexual activity. For multivariate analyses we collapse our categories into those respondents with (1) some non-romantic sexual activity (categories 2 and 4 above); and (2) either no sexual experience or only relationship sexual activity (categories 1 and 3 above).

*Independent variables.* Our conceptual framework includes the following domains: sociodemographic indicators, individual resources, parental behaviors, peer attachment, school attachment, neighborhood attachment, and normative orientations toward sex. We present the variables in Table 1. Below we report percentages and mean values for the entire sample (column 1 of Table 1); however, the percentages and mean values for the sexually active sample are also provided in Table 1.

[Table 1 About Here]

*Sociodemographic indicators.* We include gender, age, race, family structure, parental education, family income, number of siblings in the household and importance of religion measured at wave 1 as indicators of sociodemographic background that ‘structure’ (Cullen 1983) subsequent life experiences. *Gender* is a dichotomous variable with boys coded as ‘1’ and girls as ‘0.’ Just over half of the sample is female (54 percent) and 46 percent are male. We calculate the adolescent’s *age* from the reported birth date and the interview date, and code it as a continuous variable. The average age is 16. *Race/ethnicity* is self-reported and coded as: White non-Hispanic (64.5 percent), African-American non-Hispanic (18.5 percent), Hispanic (10.8 percent), and other (6.3 percent). The “other” category includes groups that are too small to distinguish in analyses. *Family structure* is a four category variable that indicates whether the teen lives in a two biological parent family (47.5 percent), single parent family (33.2 percent), stepparent family (13.0 percent), or some other family type (6.3 percent). We measure economic well-being using *logged household income*. A shortcoming of the Add Health data is that a considerable share (21 percent) of the sample have missing data on income. We code these cases to the mean household income and include a dummy variable to mark these cases so that we can test the effect of substituting the mean for those missing on income. *Mother’s*

*education* is coded as: less than 12 years (18.6 percent), 12 years (20.3 percent), 13-15 years (21.1 percent), and 16 or more years of education (21.4 percent). We initially drew the information about mother's education from the adolescents' responses, but for respondents with missing data we substitute the mother's report of her educational level. For the remaining 137 cases we use the adolescent's report of father's education (41 cases with an average of 12 years of education) and apply the modal category to the remaining 96 respondents. *Number of siblings* refers to the number of any type of sibling (e.g., half, step, foster, biological, or adopted) living in the same household as the adolescent at wave 1 (mean = 1.4 siblings). *Religiosity* is measured by responses to a question about the importance of religion. The responses range from 1 to 4 with 1 indicating religion is not at all important and 4 indicating religion is very important to the adolescent's life (mean = 2.5).

*Prior Sexual Experience.* The relationship context of sexual behavior prior to wave 1 is included as a variable in analyses. The following three categories are included: no sexual experience, some non-relationship sexual experience, and only relationship sexual activity. This variable is created in a similar manner to the dependent variable described above. Most of the respondents in the sample were virgins at wave 1 (58.1 percent), one-quarter had some non-romantic sexual experience, and 15.7 percent had only romantic sexual experience.

*Individual resources.* *Self-esteem* is composed of six items about self-perceptions of worth. Adolescents are asked the extent to which they agreed with the following items: (1) "You have a lot of good qualities;" (2) "You have a lot to be proud of;" (3) "You like yourself just the way you are;" (4) "You feel like you are doing everything just about right;" (5) "You feel socially accepted;" and (6) "You feel loved and wanted." A five-point response format ranging from (1) strongly disagree to (5) strongly agree follows each item. Following

procedures used by Longmore and DeMaris (1997) in constructing similar social psychological scales, we construct a self-esteem score for every adolescent who reported valid responses for at least 75 percent of the items (4 of 6 items). We calculate the scale score as the mean of the items, multiplied by six, and scores range from 6 to 30, and the mean is 24.5. The Cronbach's alpha is .63.

The second individual resource is an abbreviated version of the *Peabody Picture Vocabulary Test (PPVT)*. This has been used as a measure of teenage verbal ability in other studies (e.g., Rowe, Jacobson, and Van den Oord 1999). We use the age standardized scores with a mean of 100 and a standard deviation of 15 (mean = 101.2).

*Parenting Behaviors.* Parental caring and warmth, and parental monitoring are our measures of parenting behaviors. *Parental caring and warmth* is measured with a summed eight item scale that assesses the adolescent's perception of closeness to mother, mother caring, parental caring, understanding, attention, communication, warmth, and relationship quality. The responses are coded on a five point scale with higher values indicating greater attachment. Respondents who answer 75 percent of the items are included in the analyses. We calculate the scale score as the mean of the items, multiplied by four, and scores range from 10 to 40, and the mean is 34.0. The Cronbach's alpha for the scale is .86.

We measure *parental monitoring* using a six item scale. Respondents are asked whether: (1) parents let them make their own decisions about the time they must be home on weekend nights; (2) the people they hang around with; (3) what they wear; (4) how much TV they watch; (5) what time they go to bed on week nights; (6) and what they eat. Items are coded such that 0 = no and 1 = yes, and then summed. Scores range from 0 to 7, and the mean is 5.6. The Cronbach's alpha is .61.

*Peer attachment.* We use the single item: "How much do you feel that your friends care about you?" to assess *peer attachment*. Responses range from 1 - not at all, to 5 - very much, and the mean is 4.3.

*School attachment.* Respondents' *school attachment* is measured with four items. The statements ask the extent to which respondents agree that since the start of the school year, the respondent has: (1) "had problems getting along with teachers;" (2) "paying attention in school;" (3) "getting homework done;" and (4) "getting along with other students." Items are coded such that 0 = never, 1 = just a few times, 2 = about once a week, 3 = almost every day, and 4 = everyday. We calculate the scale score as the mean of the items multiplied by four, and scores range from 0 to 16 and the mean is 4.8. The Cronbach's alpha is .69.

*Neighborhood Attachment.* A single question assessing neighborhood safety is our measure of *neighborhood attachment*. Respondents are asked: "Do you usually feel safe in your neighborhood?" Response categories are yes and no, and 90.7 percent of the respondents report feeling safe in their neighborhood.

*Normative orientations.* The final set of indicators measure normative orientations toward sexual intercourse. We include three levels of normative orientation: individual, mother, and peer. The *individual normative orientation* toward sexual intercourse is based on the degree to which respondents agree with four statements: (1) "If you had sexual intercourse, it would give you a great deal of physical pleasure;" (2) "it would relax you;" (3) "it would make you more attractive to women/men;" and (4) "you would feel less lonely." Responses are coded such that a 5 indicates strong approval and a 1 indicates strong disapproval. Respondents who did not reply to at least two questions were excluded from analyses. We calculate the scale score

as the mean of the items multiplied by four, and scores range from 4 to 20, and the mean is 11.7. The Cronbach's alpha is .74.

*Mother's normative orientation* toward sexuality is based on responses to three statements. Teens are asked: (1) "If you had sexual intercourse, it would upset your mother;" (2) your mother would (strongly disapprove to strongly approve) of you "having sex at this time in your life;" and (3) your mother would (strongly disapprove to strongly approve) of you "having sexual intercourse with someone who was special to you and whom you knew well - like a steady." We calculate the scale score as the mean of the items multiplied by three, and responses range from 1 to 15, and the mean is 6.9. Respondents who answered none or only one question were deleted from the sample. The Cronbach's alpha is .84.

To measure *peer normative orientation* respondents are asked to report, on a five point scale, how strongly they agreed or disagreed with the following statement: "If you had sexual intercourse, your friends would respect you more." We reverse coded this variable so that higher values indicate that teens believe that their friends would respect them more if they had sex. Scores range from 1 to 5, and the mean is 4.3.

### ***Analytic Strategy***

To assess the prevalence of non-romantic sex, we classify adolescents' sexual experiences as: no sexual intercourse between the interview waves, only non-romantic sexual intercourse, only romantic sexual intercourse, and both non-romantic and romantic sexual intercourse between interview waves. In the logistic regression models, we predict who has sex with a non-romantic partner between the interview waves using the various independent variables measured at wave 1, relative to those who did not have sex and those who had sex only with romantic partner. Next, we estimate the likelihood that *sexually active* adolescents have had non-romantic

rather than romantic sexual partner(s) between the interview waves; thus these analyses do not include adolescents who have yet to have sex. This restriction allows us to focus on decisions about type of sexual partner. We have considered alternative specifications of the model, such as multinomial modeling. However, our approach best captures the fundamental research question about which factors are associated with the odds that teens' engage in nonromantic sexual activity.

Our multivariate analytic strategy involves estimating a series of models. We first estimate a zero-order or bivariate model that includes each of the independent variables or group of independent variables. We then estimate multivariate models starting with the inclusion of sociodemographic indicators that reflect how structural factors influence sexual decisions. Our second model adds the traditional predictors of risk behavior that reflect individual risk and protective factors. The third model includes the individual, peer, and family normative orientations toward sexual activity. We also test for interactions among gender, age and the independent variables.

## **RESULTS**

### ***Relationship Context of Sexual Activity***

Table 2 describes the relationship context of adolescents' sexual activity. We address our first research question regarding the prevalence of non-romantic sex, as well as stability and change in type of sexual partners.

[Table 2 About Here]

*Sexual Intercourse Between Interview Waves.* The first column of Table 2 shows that three-fifths (60.5 percent) of teens (age 15 and older) did not have intercourse between interview waves and that two-fifths of teens (age 15 and older) had sexual intercourse between the

interview waves. Approaching one-tenth (9.4 percent) of teens had sex with only nonromantic partners and one-quarter (24.7 percent) had sex with only romantic partners. A small percentage of teens (5.5 percent) had sex with both romantic and nonromantic partners. Once we combine categories, we find that one in seven (14.9 percent [9.4 percent +5.5 percent]) of teenagers have reported having sex between the interview waves in a non-romantic context, and three-tenths (30.2 percent [24.7 percent +5.5 percent]) had sex in a relationship context. These results suggest that a substantial minority of teens have engaged in sexual activity with non-romantic partners.

We next examine only sexually active teenagers between the interview waves (second column of Table 2). Nearly one quarter (23.8 percent) had sex with only non-romantic partners, three-fifths (62.5 percent) had sex with only romantic partners and 14 percent had sex with both a romantic and non-romantic partner. Taken together, over one-third (37.7 percent [23.8 percent + 14 percent]) of sexually active teens have had sexual intercourse with someone they were not dating. Thus, we believe it is important to expand our understanding of adolescent sexual activity to include the nature of the sexual partnerships.

*Sexual Experience - Combining Waves 1 and 2.* We next consider adolescent sexual experience across a two year window based on responses to sexual experience one year prior to wave one and the year between interview waves. Once we account for both wave 1 and wave 2 reports of sexual experience, we find that half of teens had no sexual experience. Very few (3.5 percent) teens report having had only non-romantic sexual partners and 14 percent had only romantic partners. It was much more common (31.4 percent) for teens to have sex with both romantic and non-romantic partners. In fact, over one-third (34.9 percent [3.5 percent + 31.4

percent]) had some non-romantic sexual experience and 45 percent (14.0 percent + 31.4 percent]) had some romantic sexual experience.

Among sexually active adolescents (second panel, second column Table 2), 7.2 percent had sex *only* with non-romantic partners, and over-one quarter (28.6 percent) had exclusively romantic partner sexual experiences. Almost two-thirds (64.2 percent) of sexually active teens had both romantic and non-romantic sexual experiences. Nearly three-quarters (7.2 percent + 64.2 percent) had some non-romantic experience. Thus, the majority of teens who have had sex experience have had some non-romantic sexual activity.

We believe that by examining a two-year time span we provide an important corrective to prior work that simply examines non-romantic sexual debut (e.g., Elo et al. 1999). Dramatically different conclusions about the sexual lives of teens can be made depending on whether one focuses on the fact that nearly half of teens had no sex or that 35 percent of teens had casual sex. This demonstrates the variability in the sexual behavior of teenagers. Unlike traditional views of adolescence, we find that teens' sexual repertoires frequently include *both* romantic and non-romantic experiences.

Next, we provide a more detailed analysis that focuses on teens who initiated their *first* sexual activity between interview waves. Note that this analysis represents the experiences of teens age 15 and older and the mean age at first intercourse is slightly less than age 15. We find that 73.6 percent of teens had their first experience with romantic partners. However, one-quarter had their first sexual experience with a non-romantic sexual partner (table not shown). We note that this finding is consistent with that reported by Elo et al. (1999) in their analysis of sexual initiation among adolescent girls.

Further analyses consider change and stability in the relationship context of sexual activity. Among teenagers who report only non-romantic sexual partners at wave 1, over one-third (37.1 percent) had sex with a non-romantic partner between interview waves. In contrast, among teens who report only having sex with romantic partners at wave 1, 20.9 percent had sex with a non-romantic partner between interview waves. Thus, although most teenagers initially have sex with romantic or dating partners, one in five, within a twelve month time frame, have sex with a non-romantic sexual partner. This further supports our view that the full repertoire of sexual experiences needs to be assessed, as opposed to simply focusing on first or most recent sexual experience.

[Table 2 about here]

### ***Multivariate Models***

The multivariate models include the various factors that we expect to affect adolescents' involvement in non-romantic sexual intercourse. These models address our question regarding the characteristics that determine the relationship context of adolescent sexual activity. Table 3 presents the effects of the covariates on the odds that an adolescent reported having non-romantic sexual intercourse between interview waves. Three models are included in Table 3. The first model includes the basic sociodemographic variables. The second model adds the traditional risk and protective factors. The last model includes the individual, mother and peer normative orientations toward sexual intercourse.

[Table 3 about here]

*Sociodemographic Predictors of Non-Romantic Sexual Activity.* Boys are more likely than girls to have sex with a non-romantic partner between interview waves. We note, however, that gender is no longer statistically significant when we include the normative orientations in

the model (model 3, discussed below). We do not observe racial differences in the odds of non-romantic sex. Generally, blacks have higher odds of non-romantic sex, but this effect is only marginally significant in the second model and becomes insignificant in the final model. Our multivariate models do not show statistically significant differences in the odds of non-romantic sex according to age, family structure, income, or number of siblings. However, these factors influence non-romantic sexual activity in bivariate models. The effects of these factors are largely explained by the inclusion of the wave 1 indicator of prior sexual experience.

What, then, are the significant demographic predictors? First, teens with highly educated mothers have higher odds of non-romantic sex than teens whose mothers have only 12 years of education. However, this effect is not strong and is not statistically significant in the bivariate model. Thus, it appears that suppression is operating and the significant effect of mother's college education is due to the inclusion of the variable measuring prior sexual experience (results not shown). Teens with highly educated mothers are less likely to have had sex at the first interview wave. Second, adolescents who report that religion is an important part of their life have lower odds of sex with a non-romantic partner.

We find that teenagers' prior sexual experience is a key variable predicting sexual behavior between interview waves.<sup>1</sup> Teens who report prior sexual activity in a non-romantic or romantic context have higher odds of having non-romantic sexual intercourse between interview waves than teens who were virgins at wave 1. Additional analyses indicate that teens with some prior non-romantic sexual experience have higher odds of having non-romantic sex between waves than teenagers who had sex with only romantic partners (table not shown).

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<sup>1</sup> We find that when we exclude prior sexual experience from the model, age, family structure, race, and number of siblings are all significantly related to non-romantic sexual activity. Thus, some of the effects of the sociodemographic covariates are explained by teen's prior sexual experience.

*Traditional Risk and Protective Factors.* The second model includes the traditional predictors of high risk behavior. Few of these predictors are related in the multivariate model, but most are associated in expected directions with non-romantic sex in bivariate models.<sup>2</sup> We find that the individual protective factors, self-esteem and intelligence, are not significantly related to the odds of non-romantic sexual activity in this model. Our indicators of parental caring and parental monitoring are not related to the odds of non-romantic sexual activity. In the multivariate model, peer caring is not associated with the odds of having a non-romantic sexual partner between the interview waves. However, teenagers who report more trouble in school (i.e. negative school attachment) have higher odds of non-romantic sexual intercourse. Neighborhood attachment is not related to the likelihood of non-romantic sex in the multivariate model.

*Normative Orientations Toward Sexual Activity.* The last model presented in Table 3 includes assessments of individual, parental, and peer normative orientations towards sex. We find that some normative orientations are significantly related to the relationship context of sexual intercourse in our multivariate model and all are significantly related in the expected directions in the bivariate models.

Overall, the normative orientations do not explain the effects of the traditional predictors of risky behavior. One important exception is the effect of gender. As mentioned above, once we include normative orientations in the model boys and girls have similar odds of engaging in sex with a non-romantic partner. Further analyses reveal that the adolescent's perception of the desirability of engaging in sex explains the effect of gender. The correlation

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<sup>2</sup> Bivariate or zero-order models include only the single explanatory variable. These findings are not shown.

between gender and such perceptions of sex is high (0.42), with males reporting more positive attitudes toward sex.

Our results suggest that adolescents who report more positive orientations toward sex have higher odds of engaging in non-romantic sexual activity. In addition, teens with mothers who are more accepting of sexual activity have a statistically significant greater likelihood of having non-romantic sexual intercourse

*Do Effects Vary by Gender or Age?* We evaluate whether the effects of the variables in model 3 differ according to gender or developmental stage (age) (table not shown). We find gender differences in the effects of school attachment, peer attachment and mother's normative orientation. School attachment has a greater negative influence on the odds that girls have non-romantic sex than boys. The effect of peer attachment is significantly more positive for boys than girls. Interestingly, there are no gender differences in the effects of peers' normative orientation. In contrast, the effect of mothers' views of sexual activity is stronger for boys than girls. None of the predictors significantly interact with age, suggesting that the effects of these variables are similar for teens across stages of development.

*Non-Romantic Sex Among the Sexually Active.* The above analyses predicted the odds of having non-romantic sex. However, we report in Table 1 that over half of the teenagers in this sample do not engage in any sexual intercourse between interview waves. Thus, we may be confounding the effects of some variables because we combine teens who have not had sexual experience and those who have had sexual experience with romantic partners. To better reflect the decision-making process and provide a more detailed understanding of decisions about the relationship context of sexual intercourse, we next limit our analyses to teens who were sexually active between the interview waves.

In Table 4 we repeat the analytic strategy followed in Table 3. We first present the sociodemographic predictors of the context of sexual activity, then we present the risk and

protective factors, and lastly we present the models that include normative orientations. Among sexually active teens, boys are more likely to have had non-romantic sexual partners than girls. In this more restricted analysis, Black teens have higher odds of engaging in sex with non-romantic than romantic partners. Hispanic and white teenagers have similar odds of having sex with non-romantic and romantic partners. Older teens have a lower likelihood of having non-romantic rather than romantic sexual activity. Thus, it seems older teens are able to find romantic partners who will engage in sexual intercourse. Teens with more highly educated mothers have higher odds of non-romantic sexual activity; however, this variable becomes statistically significant only once prior sexual experience is included in the model. Among teens who had sex between the interview waves, family structure, the importance of religion, parental income, and the number of siblings are not significantly related to the relationship context of sexual intercourse between interview waves.

[Table 4 about here]

Teenagers with prior non-romantic sexual activity are at greater risk of non-romantic sex between interview waves than teens with no prior sexual experience. In contrast, teenagers who have only had sex with romantic partners have similar odds of having non-romantic sex as teens who were virgins at wave 1. Thus, the relationship context of prior sexual activity influences the relationship context of later sex.

The next model in Table 4 adds the individual and social influences to the basic sociodemographic model. Youth with higher self-esteem are significantly less likely to have non-romantic rather than romantic sex. This implies that teens who have non-romantic sexual experience may suffer from negative self assessments. Verbal development as measured by the PPVT is not related to the context of sexual experience in the multivariate or bivariate models.

Similarly, the level of parent's caring and warmth is not related to the relationship context of sexual intercourse in either bivariate or multivariate models. Teens from families with more supervision at wave 1 have higher odds of experiencing non-romantic rather than romantic sex. Peer caring is not related to type of sexual partner in the multivariate model. Teenagers who report lower school attachment have increased odds of non-romantic sexual activity. Neighborhood safety is not significantly related to whether teens have sex within non-romantic or romantic relationships.

The third model in Table 4 adds the measures of normative orientation towards sex. Among sexually active teens, normative orientations do not explain the effect of parental monitoring or self-esteem. Yet, the effect of school problems shifts from marginal significance ( $p < .090$ ) to nonsignificance ( $p < .109$ ). Bivariate results indicate that individual and peer normative orientations toward sex are related positively to non-romantic sex. Yet, in the multivariate model, teens' perceptions of their peers' support for sex or their own attitudes are not related to whether they engage in non-romantic rather than romantic sex between the interview waves. The only indicator of normative orientation that appears to be related to whether sexually active adolescents have non-romantic or romantic sexual partners is perceptions of mother's approval of the adolescent's sexual activity. Teens who perceive their mothers as accepting of their sexual activity are more likely to have non-romantic sex.

*The Effects of Gender and Age Among the Sexually Active.* We also test whether the influence of the variables in the models depend on the teen's age or gender (table not shown). We find that prior sexual experience matters more for girls than boys. Again the effect of school attachment is more negative for girls than boys. Also the effect of age is significantly different for boys than girls. Age has a weaker effect on boys' choice of sexual partner (non-

romantic versus romantic) than girls' choice. The influence of the remaining covariates do not differ by age or gender.

## **DISCUSSION**

Our work contributes to a growing body of literature by focusing on the importance of relationships with sexual partner. We argue that it is important to consider the full repertoire of adolescents' experiences by examining the types of sexual partners over time. Approximately one-quarter of teens initiate sex with someone they are not dating (Manning et al. 2000). We find that the majority of sexually active teens have had some sexual experience outside of a romantic relationship. Thus, teens 'move' into sexual experiences with non-romantic partners indicating that teenagers' sexual experiences are not consistent or static over time. A substantial majority (two-thirds) of sexually active teenagers have had sex in both romantic and non-romantic contexts.

Our analyses support the distinction, noted earlier by Ellen et al. (1996) between non-romantic and romantic experiences, because we find differences in the effects of variables on the likelihood that teens choose to have sex with romantic or non-romantic partners. Moreover, we may need to adopt a more refined conceptual framework for analyzing sexual risk that distinguishes between sexually active teens and teens who have not had intercourse (Table 3 contrasted to Table 4). For example, the effects of prior sexual experience depend on whether we are limiting our analyses to sexually active teens or not. The relationship context of prior sexual experience directly influences the likelihood of non-romantic sex. However, further attention to more refined indicators of relationships may lead to important contributions to adolescent sexual risk taking and variations in the context of sexual decision making.

Our results indicate that some of the structural features of adolescents' lives are related to the context of their sexual experience. Religiosity is associated with lower odds of engaging in non-romantic sex, but among teens who have sex we find that religiosity does not differentiate the relationship context of sexual intercourse. We do confirm prior studies that focus on race and gender, African Americans and males are more likely to have non-romantic sex. Moreover, the strongest predictor of non-romantic sexual activity is prior sexual experience. This is consistent with other social psychological studies that find that past behavior is the best predictor of future behavior (Bagozzi 1981; Bentler and Spekart1981).

We find that a traditional risk model does not necessarily apply to the relationship context of sexual activity. The factors that are typically related to adolescent development are not also associated with the context of sexual experience. It is possible that the inclusion of the effects of several domains simultaneously mutes the effects of the specific social influences. In fact, in bivariate models we find that many of the traditional risk and resilience variables are associated with the odds of non-romantic sex in the expected directions. For example, our multivariate models indicate that a lack of school attachment positively influences the odds of non-romantic sexual activity. We also find that among teens who have had sex between interview waves, individual's self-esteem and parental monitoring influence whether teens have sex with non-romantic rather than romantic sexual partners. Thus, our understanding of the influence of individual and social resources on teenage sexuality depends somewhat on whether we are considering sexually active teens or not.

An important contribution of our project is that we move beyond the basic risk and resilience framework to understand adolescent risk-taking. Not only does the nature of relationships and teens' social worlds influence decisions about sexual partners, but teens' actual

and perceived attitudes towards sex influence their decision-making. This is consistent with some prior research on adolescent development and risk-taking (e.g. Akers et al. 1998; Hartup 1996; Kirby 2001) that emphasizes the role of normative orientations. Consistent with prior research, we find that adolescents' sexual activity is influenced not only by their own views of sex but also their perceptions of their mother's views. We find that peer's normative orientation is not related to non-romantic sexual activity, but the measure we employ is quite limited and simplistic. Further attention to the measurement of peer's norms towards sex is needed in future research.

Taken together, these results provide a more realistic portrait of the context of adolescent sexual decision-making. Further work needs to integrate the type of sexual partner(s) into models of sexual risk-taking. Moreover, adolescent's patterns of sexual partnering may have implications for relationships during their adolescent years, as well as longer term consequences for their later life course trajectory as they move into adult relationships.

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**TABLE 1. Distribution of Independent Variables**

	<u>TOTAL</u> <u>Mean/%</u>	<u>SEXUALLY</u> <u>ACTIVE</u> <u>Mean/%</u>
<b>Sociodemographic</b>		
Gender		
Female	53.7	50.0
Male	46.3	50.1
Race		
White	64.5	65.2
Black	18.5	14.9
Hispanic	10.8	12.2
Other	6.3	7.7
Age	16.2	16.0
Family Structure		
Two Biological	47.5	58.2
Single	33.2	25.8
Step	13.0	11.4
Other	6.3	4.6
Income		
Logged Income	3.5	3.6
Missing Income	20.8	21.0
Education		
Less than 12yrs	18.6	17.5
12yrs	20.3	37.2
13 to 15yrs	21.1	19.5
Greater than 16yrs	21.4	25.8
Number of Siblings	1.4	1.5
Importance of Religion	2.5	2.8
<b>Wave 1 Sexual Experience</b>		
None	58.1	20.7
Some Non-Romantic	26.2	40.0
Only Romantic	15.7	28.3
<b>Individual Factors</b>		
Self-Esteem	24.5	24.3
PPVT	101.2	101.8
<b>Social Context</b>		
Parental Caring	34.0	34.6
Parental Monitoring	5.6	5.4
Peer Caring	4.3	4.3
School Problems	4.8	4.3
Neighborhood Safe	90.7	91.0
<b>Normative Orientations</b>		

<i>Individual</i>	11.7	11.3
<i>Mother</i>	6.9	5.9
<i>Peer</i>	4.3	3.5
N	7470	2821

**TABLE 2. Relationship Context of Sexual Activity**

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**Relationship Context of Sexual Experience Between Waves**

	Total	Sexually Active
None	60.5	--
Only Non-Romantic	9.4	23.8
Only Romantic	24.7	62.5
Both Non-Romantic & Romantic	5.5	14.0
	100.0	100.0
N	7470	2821

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**Relationship Context of Sexual Experience Both Waves**

	Total	Sexually Active
None	51.1	--
Only Non-Romantic	3.5	7.2
Only Romantic	14.0	28.6
Both Non-Romantic & Romantic	31.4	64.2
	100.0	100.0
N	7470	3655

**TABLE 3. Logistic Regression Estimates of the Likelihood of Non-Romantic Sexual Intercourse**

	Sociodemographic		Individual & Social		Normative Orientation	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Gender (Female)						
Male	0.24**	(.09)	0.22*	(.09)	0.05	(.10)
Race (White)						
Black	0.18	(.14)	0.24+	(.14)	0.24	(.14)
Hispanic	-0.18	(.25)	-0.17	(.17)	-0.18	(.17)
Other	-0.09	(.64)	-0.11	(.18)	-0.11	(.18)
Age	-0.03	(.04)	0.01	(.05)	-0.03	(.05)
Family Structure (Two Biological)						
Single	0.22	(.13)	0.21	(.13)	0.16	(.14)
Step	0.20	(.16)	0.20	(.16)	0.15	(.16)
Other	0.04	(.23)	0.05	(.23)	-0.10	(.24)
Income						
Log Family Income	0.01	(.06)	-0.01	(.06)	-0.02	(.06)
Missing Income	0.14	(.12)	0.15	(.12)	0.15	(.12)
Education						
less than 12 years (12 years)	0.07	(.14)	0.08	(.14)	0.05	(.14)
13 to 15 years	0.17	(.11)	0.07	(.11)	0.07	(.11)
16 years or more	0.26+	(.14)	0.25+	(.15)	0.26+	(.15)
Number of Siblings	-0.04	(.04)	-0.04	(.04)	-0.03	(.04)
Importance of Religion	-0.03**	(.01)	-0.03**	(.02)	-0.02*	(.01)
Sexual Experience (None)						
Some Non-Romantic	2.63***	(.13)	2.60***	(.13)	2.46***	(.14)
Only Romantic	1.92***	(.18)	1.92***	(.18)	1.81***	(.18)
Self - Esteem	--	--	- 0.01	(.01)	- 0.01	(.01)
PPVT	--	--	0.004	(.04)	0.004	(.01)

Parental Caring	--	--	0.01	(.01)	0.007	(.01)
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**TABLE 3. Logistic Regression Estimates of the Likelihood of Non-Romantic Sexual Intercourse (continued)**

	Sociodemographic		Individual & Social		Normative Orientation	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Parental Monitoring	--	--	0.03	(.03)	-0.04	(.04)
Peer caring	--	--	0.001	(.07)	0.002	(.07)
Troubles in School	--	--	0.04**	(.01)	0.04*	(.02)
Neighborhood Safe	--	--	-0.03	(.17)	-0.06	(.17)
Normative Orientation						
Individual's Norms	--	--	--	--	0.04+	(.02)
Mother's Norms	--	--	--	--	0.06***	(.02)
Peer's Norms	--	--	--	--	0.02	(.05)
Log Likelihood	-2429.35		-2419.65		-2411.14	
N	7470		7470		7470	

+p<sub>≤</sub>.10, \*p<sub>≤</sub>.05, \*\*p<sub>≤</sub>.01, \*\*\*p<sub>≤</sub>.001

**TABLE 4. Logistic Regression Estimates of the Likelihood of Having Sex with Non-Romantic Rather than Romantic Partners**

	Sociodemographic		Individual & Social		Normative Orientation	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Gender (Female)						
Male	0.58***	(.10)	0.58***	(.11)	0.47***	(.12)
Race (White)						
Black	0.36*	(.16)	0.37*	(.17)	0.38*	(.17)
Hispanic	-0.11	(.19)	-0.20	(.21)	-0.20	(.20)
Other	0.01	(.20)	-0.06	(.20)	-0.07	(.19)
Age	-0.16**	(.05)	-0.13**	(.05)	-0.14**	(.05)
Family Structure (Two Biological)						
Single	0.08	(.15)	0.07	(.14)	0.04	(.14)
Step	0.09	(.18)	0.09	(.18)	0.06	(.18)
Other	-0.11	(.26)	-0.13	(.26)	-0.18	(.26)
Income						
Log Family Income	-0.06	(.07)	-0.06	(.07)	-0.06	(.07)
Missing Income	0.25+	(.14)	0.25+	(.14)	0.25+	(.14)
Education						
less than 12 years (12 years)	0.09	(.17)	0.07	(.17)	0.05	(.17)
13 to 15 years	-0.05	(.12)	-0.02	(.12)	-0.02	(.12)
16 years or more	0.29+	(.16)	0.32*	(.16)	0.32*	(.16)
Number of Siblings	-0.04	(.04)	-0.04	(.05)	-0.03	(.05)
Importance of Religion	-0.02	(.02)	-0.02	(.02)	-0.02	(.02)
Sexual Experience (None)						
Some Non-Romantic	0.88***	(.12)	0.88***	(.13)	0.81***	(.13)
Only Romantic	0.19	(.19)	0.21	(.20)	0.16	(.19)
Self - Esteem	--	--	-0.03*	(.02)	-0.03*	(.02)
PPVT	--	--	-0.001	(.01)	-0.001	(.01)

Parental Caring	--	--	0.02	(.01)	0.02	(.01)
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**TABLE 4. Logistic Regression Estimates of the Likelihood of Having Sex with Non-Romantic Rather than Romantic Partners (continued)**

	Sociodemographic		Individual & Social		Normative Orientation	
	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Parental Monitoring	--	--	-0.06*	(.03)	-0.07*	(.03)
Peer caring	--	--	-0.07	(.08)	-0.07	(.08)
Troubles in School	--	--	0.03+	(.02)	0.03	(.02)
Neighborhood Safe	--	--	-0.19	(.19)	-0.21	(.19)
Normative Orientation						
Individual's Norms	--	--	--	--	0.04	(.03)
Mother's Norms	--	--	--	--	0.03+	(.02)
Peer's Norms	--	--	--	--	-0.01	(.05)
Log Likelihood						
		-1752.82		-1742.60		-1740.81
N		2821		2821		2821

+p<sub>≤</sub>.10, \*p<sub>≤</sub>.05, \*\*p<sub>≤</sub>.01, \*\*\*p<sub>≤</sub>.001