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**DATING AND DELINQUENCY: AN EXAMINATION OF LINKS BETWEEN  
EARLY HETEROSEXUAL INTEREST AND INVOLVEMENT AND LATER  
DELINQUENT BEHAVIOR**

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## ABSTRACT

Adolescence is marked by an increased interest in the opposite sex, but linkages between heterosexual experiences and delinquent behavior have not often been investigated. The current study explores the degree to which variations in adolescents' dating and sexual experiences influence later delinquent behavior. In this analysis, we rely on two waves of structured interviews with 1,021 adolescents, and explore the influence of: a) levels of dating effort b) permissive sexual attitudes, and c) the number of sexual partners on later self-reported delinquency. All of these indices of heterosexual interest and involvement are significantly related to later delinquency, even after initial levels of delinquent behavior, friends' delinquency, and other traditional predictors were introduced. Heterosexual interest and involvement also predicted later associations with delinquent friends and romantic partners, as well as self-identifying as a "partier." These analyses were also extended to subscales of delinquency (i.e., party deviance and criminal involvement), which revealed links to party-oriented behaviors like substance use as well as to more serious forms of delinquency. In addition, girls' relative to boys' self-reported delinquency appears to be more strongly related to the frequency of new sexual partnerships, as are reports for friends' and romantic partners' delinquency. Dating effort is also shown to have a stronger positive influence on females' later delinquent friendships as compared to males. These findings suggest the potential for some uniquely gendered social dynamics.

While researchers have long recognized that dating and sexuality are significantly correlated with delinquency (e.g., Hirschi 1969, Jessor and Jessor 1977), few studies have explored the degree to which heterosexual involvement during the adolescent period itself may exert an influence on life course patterns of criminal behavior. Typically researchers have theorized that these risk-taking behaviors are part of a general constellation or "syndrome" of problem outcomes (e.g., Jessor and Jessor, 1977, Gottfredson and Hirschi, 1990). Criminologists have more often focused on heterosexual relationships later in the life course, arguing that marriage bonds act as a significant deterrent to crime (Laub and Sampson 2003; Laub, Nagin, and Sampson, 1998; Horney & Osgood, 1995); yet studies of the adolescent period typically focus on parents and peers as the most important social network influences (e.g., Browning, Levanthal, and Brooks-Gunn, 2005; Warr, 2002).

Our analysis draws on an agentic version of differential association theory (see Emirbayer and Goodwin 1994, Giordano, Schroeder, and Cernkovich 2007; Giordano, Cernkovich, and Rudolph, 2002; Matsueda, 1997, 1992) to argue that extensive heterosexual interest and involvement fosters greater access to social settings that increase definitions "favorable to the violation of law." Contexts such as bars, night clubs and parties provide additional opportunities for delinquency and substance use as well as heterosexual socializing. These social network contacts also have identity implications (Matsueda and Heimer, 1997; Matseuda, 1992; Giordano et al., 2007, 2002). Over time, individuals with greater interest, involvement, and success in the heterosexual world may develop self-views and network ties that solidify delinquent attitudes and behavioral repertoires.

In the current study, we explore the influence of individual variation in heterosexual interest and involvement on later self-reported (a) delinquent behavior, (b) the delinquency of friends and romantic partners, and (c) the development of a hedonistic (i.e., ‘partier’) social identity. We employ a multi-dimensional approach to measuring adolescent heterosexual interest and involvement by documenting the influence of sexual behavior as well as broad range of attitudes toward dating and socializing with the opposite sex. Our analyses investigate whether these heterosexual influences appear uniquely gendered, based on prior work that has emphasized the role of boyfriends (Haynie, 2005, 2003; Magnusson 1992) and other cross-sex contacts (Caspi et al., 1993, Steffensmeier and Allen, 1996) for understanding female adolescent delinquency. We also investigate whether heterosexual interest and involvement plays a greater role in minor delinquency or party-oriented behaviors, such as substance use, as suggested by past work (e.g. Hagan, 1991).

## **BACKGROUND**

Most adolescents discover dating and delinquency at a similar time in the lifecourse—a time that corresponds to the onset of puberty and the emergence of heterosexual identities (Anderson, 1999; Matsueda, 1992; Haynie, Giordano, Manning and Longmore, 2005; Haynie, 2003; Giordano, Manning and Longmore, 2006; Giordano, 1995; Rebellon and Manasse, 2004). Yet most investigations of the causes of delinquency have continued to theorize about and explore the influence of family dynamics, and the role of same-sex peers. Researchers have pointed out that family disruption and neighborhood disadvantage may influence delinquency through a breakdown of informal social controls (e.g., Sampson and Groves, 1989, Sampson et al, 1997, 1999), failed

commitments to school (e.g., Agnew, 2001; Brooks-Gunn et al, 1993; Cernkovich and Giordano, 1992) and poor parental bonds (Cernkovich and Giordano, 1987; Demuth and Brown, 2004; Longmore, Manning, and Giordano, 2001; Manning, Longmore, and Giordano 2005). Peer delinquency also plays a prominent role in the literature. Research has repeatedly documented that exposure to delinquent peer networks positively influences crime and risk-taking behavior (Haynie, 2001, 2002; Haynie et al., 2005; Matsueda and Anderson, 1998; War, 2002, 1993; Wright et al., 1999(a)). Within the context of the more general literature on the adolescent period, however, a flurry of recent studies has drawn increased attention to romantic relationships (e.g., Carver, Joyner, and Urdy, 2003; Collens and Laursen, 2003; Crosnoe, 2000; Giordano et al., 2006; Halpern et al., 2006) as an important preoccupation and source of variation in the character of the adolescent experience.

Although early on researchers conceptualized dating and delinquency as co-occurring problems or as part of a package of risky behaviors (e.g., Hirschi 1969, Jessor and Jessor, 1977), Haynie et al. (2005) recently demonstrated that the level of delinquency of the romantic partner is significantly related to the adolescent's own delinquency, even after traditional family and peer predictors of 'risk' had been taken into account. Rebellon (2006) also recently argued that delinquency can usefully be conceptualized as a set of behaviors that draw the attention of peers, including that of romantic partners (Rebellon and Manasse, 2004). Still others argue that physical maturation and the hormonal changes that occur during adolescence correlate with shifts in peer networks and risk-taking behaviors like delinquency and sexual exploration (Caspi et al., 1993; Moffitt, 1993; Felson and Haynie, 2002; Haynie, 2003).

We extend this line of inquiry by considering heterosexual interest and involvement as potentially significant influences on both the character of routine activities (Osgood et al., 1996) and the nature of adolescents' social ties and experiences (Giordano, 1995). Yet our theoretical perspective emphasizes that individuals are not simply passive recipients of a specific nexus of social contacts (Emirbayer and Goodwin 1994). Some adolescents may choose to take very active roles in forming romantic and sexual partnerships, while others may remain more trepidatious (Gillmore et al., 2002). It is possible that a strong desire to engage in heterosexual relationships leads to delinquent behavior by immersing youth in a party-subculture (Hagan, 1991) that not only provides definitions favorable for risk-taking, but also facilitates the emergence of an identity that supports these behaviors (Matseuda 1992; Giordano et al., 2002; Giordano et al., 2007). The more ambitious youth would likely enjoy greater success in the sexual arena and thus have more access to and indeed seek out similarly situated/inclined others both as friends, acquaintances and romantic partners.

#### *Uniquely Gendered Processes?*

While sexual behavior has clearly been identified as a correlate of delinquency for both male and female adolescents, juvenile justice personnel and society at large have frequently focused more on the sexuality and/or promiscuity of girls (Chesney-Lind and Sheldon 2004; Schlossman and Cairns, 1993). Early research and juvenile justice personnel alike frequently sexualized girls' offenses—as Chesney-Lind and Sheldon described it—by focusing as much or more on their sexual conduct as upon more gender neutral violations of the law. This policing of girls' sexuality undoubtedly reflects the survival of the double standard, but also, important for our purposes here, the notion that

opposite sex contacts heighten risk for girls' delinquency involvement (Thomas, 1967). Although we have previously offered critiques of the "bad boyfriend" explanation for female crime/delinquency (see e.g., Giordano, Cernkovich & Holland 2003), particularly as a stand-alone theory,<sup>1</sup> the literature does provide several reasons to expect gendered effects with regard to the influence of boyfriends and girlfriends.

First, the overall base rates of girls' involvement in delinquency are reliably lower than those of their male counterparts, regardless of historical or geographic context. On average, girls who associate primarily with other girls may be less likely to gain exposure to delinquent attitudes and models, and to pursue routine activities that heighten their risk (see e.g., Giordano 1978). McCarthy, Felmlee, and Hagan (2004) recently documented that among homeless street youth, those who counted more female friends were significantly less delinquent than teens characterized by a higher ratio of male companions. Research on crime later in the life course has suggested that the generally positive effects of marriage on recidivism observed for men (e.g., Horney & Osgood, 1995; Laub and Sampson 2003) has not always been found for women offenders (Giordano, Cernkovich, and Rudolph 2003; Leverentz 2006). This may be due to inequitable relationship contributions in delinquency between males and females (Nagin and Paternoster, 1994), or shifts away from delinquent peer groups in which males are previously more involved (Warr, 1998). Simons et al. (2002) also documented that romantic partners' level of delinquent activity influenced female but not male participation in crime and delinquency over the life course.

Another line of inquiry concerning research on pubertal timing has documented that male involvement escalates the level of delinquency among girls. Haynie (2003),

for example, finds that early puberty was associated with heightened risk for delinquency primarily because of an increased tendency to date older males (see also Caspi, Lynam, Moffitt and Silva, 1993; Stattin and Magnusson, 1990). Haynie (2003) also finds that girls' romantic involvement has a positive statistical influence over a broad spectrum of delinquent behavior, ranging from substance use to more serious criminal behavior. Moreover, in a later set of analyses that focused more exclusively on romantic relationships, Haynie et al. (2005) documented a gendered influence of the romantic partner's delinquency for minor but not serious delinquency: boyfriends' delinquency influenced girls' self-reports of minor delinquency more than girlfriends' levels influenced boys' delinquency. In their analysis, no gendered effect of partner's delinquency was found for more serious delinquency.

With the exception of the Haynie et al. (2005) findings regarding serious delinquency, the above literature provides a basis for positing gendered effects of heterosexual involvement on delinquency. Indeed, some research focused on the adolescent period has suggested that adolescent boys care little about girls' opinions or about their interactions with them (e.g., MacLeod, 1987). This notion fits well with the emphasis in the delinquency literature on male peers, the idea of a strong esprit de corps within the gang, or the view of delinquency/aggression as a way for males to gain status in the eyes of same-gender audiences. Our more general findings, based on prior analyses of the Toledo Adolescent Relationship data, however, suggest that boys appear to be much more interested in romance and heterosexual relationships than popular accounts would lead us to expect (Giordano et al., 2006). In addition, we found that boys vary considerably in their feelings of awkwardness or confidence in this new social arena.

Unlike some other sources of identity such as high academic achievement (e.g. Halpern et al., 2006), enmeshment in heterosexual involvement is not incompatible with delinquent conduct. As Rebellon and Manassee (2004) have recently suggested, in some contexts involvement in delinquency may further enhance a young man's position in the heterosexual arena, as well as in the eyes of male peers. Further, Sanchez-Jankowski (1991) noted that the male youth he studied often pointed out that their gang affiliations were an asset in attracting the interest of young women. This suggests the utility of examining how heterosexual interest and involvement influences the delinquent behavior of male as well as female adolescents.

#### *A Symbolic Interactionist Theoretical Perspective*

A significant limitation of prior work on dating and delinquency is the frequent reliance on cross-sectional designs, a strategy that provides a single snapshot of the teen's current relationships. Thus, statistical associations between (for example) a focal partner and a respondent's own self-reported delinquency (as found in Haynie et al., 2005) could stem from elements of selection (the tendency to seek out partners similar to oneself), rather than from any influence process (see Hirschi 1969). This also fits well with the idea that dating and premarital sex are simply correlates of delinquency involvement (i.e., the "syndrome" of problem behaviors notion). Taking a longitudinal viewpoint on these dynamic processes is also important because research shows that, on average, adolescent romantic relationships are not particularly long-lasting (Joyner and Udry, 2003). Thus, it is important to more effectively capture adolescents' overall patterns of heterosexual interest and involvement as they traverse this phase of the life course.

Our view is that trait-like explanations that posit strong selection effects fail to take into account that variations in heterosexual interest and involvement may actually be consequential for understanding variations in delinquent behavior. The latter notion is more consistent with a social learning framework, but standard social learning approaches also fail to provide a comprehensive perspective on these complex social dynamics. Stable-trait or individual difference explanations are limiting because they do not recognize the key role of social networks in the etiology of delinquency and crime. However, the ‘passive vessel’ or blank slate assumptions of social learning theories do not accord with the realities of human agency/choice-making as integral to human action. Thus, as Emirbayer and Goodwin (1994) point out, individuals have a role in choosing the very social network experiences that will, nevertheless, turn out to exert a significant influence on them. The choice to affiliate with a much older male, for example, is a reflection of a teenage girl’s developing identity, even as this may structure social experiences and provide entrée to a world that potentially heightens risk for delinquent behavior.

A symbolic interactionist theoretical perspective highlights that adolescents develop perspectives on the world and upon the self that serve to structure social situations and experiences. As such, these experiences may subsequently expand or limit delinquent modes of conduct, because they are related to social contexts favorable to violations of the law (i.e., parties, bars, and other casual social settings). Thus, adolescents who indicate that they are relatively more interested in the heterosexual realm, or put forth greater effort toward socializing with the opposite sex, may be more ‘forward’ in their orientation (e.g., talk about girls/boys often, indicate that they are

comfortable asking someone out, flirting, pursuing someone till they've "got them") and may become significantly more delinquent over the longer term than those who resonate less with these strategies. This perspective reflects a mutually influential relationship between initial self-views, social experiences (expanded opportunities for 'partying,' fighting—essentially a routine activities explanation), and the character of resulting social network contacts.

### **CURRENT INVESTIGATION**

The primary objective of our study is to provide a global assessment of whether heterosexual interest and involvement influence later delinquent behavior once traditional predictors for crime and delinquency have been taken into account. The current study contributes beyond prior work in four ways. First, we rely on multiple dimensions of heterosexual interest and involvement, rather than a generic construct such as dating/not dating. We focus on the attitudes surrounding sex and dating, as well as actual sexual experiences. This multidimensional approach recognizes that heterosexual interest and involvement encompasses relationship oriented activities as well as (potentially, but not inevitably) sexual behaviors. The TARS interviews include straightforward questions that index the adolescent's attitudes about sex (liberal/conservative) and actual sexual behaviors (number of sexual partners), but is relatively unique in also asking questions about levels of dating interest, or amount of effort expended in support of that interest. We believe that examining dating effort is especially important because it may capture, in a more holistic way, lifestyle and emerging identity dimensions that have been ignored in prior research.

Another key feature of this study is the longitudinal design. We gauge effects of variations in levels of dating effort, sexual attitudes and the number of sexual partners the adolescent reports at the initial interview on a general index of delinquent behavior in a later interview. We hypothesize that higher levels of dating effort and more permissive sexual attitudes and behaviors will be positively associated with delinquency, even after traditional delinquency predictors and the youth's own initial delinquency level have been taken into account. Following the emphases of prior research, we explore the idea that involvement in heterosexual socializing is likely to influence female more than male adolescents.

A third way in which the present analyses contribute beyond prior work is that we explore the influence of heterosexual interest and involvement on multiple outcomes. Although the primary dependent variable is a general measure of self-reported delinquent behavior, we also investigate the influence of these early attitudes and behaviors on later network affiliations (the delinquency of peers and romantic partners) as well as the development of a 'partier' identity. These network characteristics and identity hooks such as 'partier' are important to examine, as they have the potential to solidify the maturing adolescent's status as a delinquent.

Finally, we examine the influence of early heterosexual interest and involvement on two delinquency subscales. Because the use of alcohol and drugs are particularly common during early adulthood (Thornberry and Krohn, 2000) any observed relationship between heterosexual experiences and later delinquency could be restricted to substance use. Hagan's (1991) findings also suggest that the party and delinquent subcultures are distinct social groups, with the latter committing the majority of the personal and

property offenses and the former restricted to mostly status offenses and substance abuse. We examine the influence of dating/sexual experiences on later self-reported party deviance (i.e., substance use/intoxication) as well as criminal involvement (i.e., behaviors typically considered non-victimless and/or adjudicated as felonies). These are potentially informative supplementary analyses in that it could be argued that heterosexual involvement might influence less serious acts of deviance, but might have a more tenuous relationship with criminal involvement. These analyses also allow us to consider whether effects are similar across gender for explaining minor and serious forms of delinquency involvement. This follows from the Haynie et al. (2005) finding that romantic partner delinquency was a stronger predictor of girls' than boys' involvement in minor delinquency, but the effects of the partners' delinquency was not gendered for serious delinquency.

Our analyses control for variables that have been associated with delinquent behavior (as well as sexual attitudes/behaviors) in prior work in order to determine whether heterosexual experiences exert a unique influence, or are simply associated with these other more heavily investigated predictors. Attachments to parents and school, parental monitoring, family structure, neighborhood factors and parental socioeconomic status are included in longitudinal analyses described below, along with controls for the adolescent's socio-demographic characteristics (age, race, gender).

## **DATA and METHODS**

Our research uses survey data from the Toledo Adolescent Relationship Study (TARS). The TARS data set is a longitudinal survey collected over three waves (a fourth wave is currently being collected). Waves 1 through 3 were collected in the years 2001,

2002, and 2004, respectively. The TARS data are appropriate for the current study because they provide detailed information about the respondents' dating and sexual attitudes and behaviors, as well as a broad range of other attitudinal and behavioral measures. Other data sets such as the National Longitudinal Study of Adolescent Health (Add Health) include attention to dating and sexuality, but measurement is restricted to behavioral indicators rather than subjective aspects of these experiences. In the current study, subjective heterosexual experiences are measured by dating effort and permissive sexual attitudes. Data were collected from a stratified random sample of over 1,316 adolescents drawn from the enrollment records for the 2000 academic year of all youth in the 7<sup>th</sup>, 9<sup>th</sup>, and 11<sup>th</sup> grades in Lucas County, Ohio. The sampling frame encompassed 62 schools across seven school districts. Students did not have to attend school to be included in the study. The TARS data include over-samples of African American and Hispanic adolescents. Based on Census data, the socio-demographic characteristics of Lucas County closely parallel those of the nation in terms of race (13% in Toledo and 12% in the U.S. are African American); education (80% in Toledo and 84% in the U.S. are high school graduates); median income (\$50,046 in Toledo and \$50,287 in the U.S.); and marital status (73.5% in Toledo and 75.9% in the U.S. are married couple families). Structured interviews were conducted for all three waves, using laptop computers and software that contained the survey items. Interviews began by asking the adolescent respondents about school, work, friends, and parents. This information was entered into the laptops by the interviewers. The adolescent respondents were then instructed to use the laptops for the survey items that pertained to attitudes about self, dating, romantic partners, sexual history, and high-risk behaviors. Parent reports are used in this paper for

the measures of social ecology and socioeconomic status. The second and third waves were conducted in the same manner.

In this study we rely on waves 1 and 3 in order to provide a sufficient time interval in which to observe effects of early heterosexual experiences. Wave 3 retained 1,110 valid respondents, or 84% of the 1,316 valid respondents from wave 1. The average age of the respondents is 16.31 years in wave 1 and 18.3 years in wave 3. Our analytic sample is based on respondents who gave valid responses to delinquency and heterosexual items. Our final sample size is 1,021.<sup>2</sup>

### *Measures*

The traditional delinquency predictors, socio-demographic characteristics and the majority of the focal dating and sexuality variables are assessed at wave 1, along with initial self-reported delinquency. Self-reported delinquency at wave 3 is the primary dependent variable, but we also investigate friends' and romantic partners' delinquency as well as partner identification based on reports at the time of the wave 3 interview.<sup>3</sup> Logged versions of the outcomes general delinquency, friend delinquency, and romantic partner delinquency are used in the multivariate analyses.<sup>4</sup> For the delinquency subscales, party deviance is logged and criminal involvement is left untransformed but a Tobit model is employed in the multivariate analysis to account for the right-skew in the data points.<sup>5</sup> Although the majority of the dating/sexual variables are assessed at wave 1, it should be noted that "New Sexual Partnerships," is a change score reflecting the difference in the number of life-time sexual partners at wave 1, and the number reported at wave 3.<sup>6</sup> In the parent survey, 71 responses are missing for questions on annual

income, years of education, and neighborhood evaluations. Mean imputation was used for the 71 missing response values from the parent survey.

## **DEPENDENT VARIABLES**

### **Delinquency, Social Relationships, and Identity**

The *General Delinquency Index* is measured with a 10-item scale that asks respondents how often they participated in the following behaviors in the past 12 months: “Drink alcohol,” “Drunk in Public,” “Used drugs to get high not because you were sick,” “Steal something worth 5 dollars or less,” “Steal something worth more than 50 dollars,” “Damaged or destroyed property on purpose,” “Carried a hidden weapon other than a plain pocket knife,” “Attack someone with the idea of seriously hurting him/her,” “Sold drugs,” “Break into a vehicle or building (or tried to break in) to steal something or just look around.” Responses range from (0) “Never” to (8) “More than once a day.” A scale was created by taking the total sum of scores across the 10 items (alpha = .81 in wave 1, .73 in wave 3).

Supplementary analyses examine subscales of the self-reported general delinquency index. Factor analysis was used to partition the delinquency items into two categories (see Table 4). *Party Deviance* contains 3 items: “Drink alcohol,” “Drunk in Public,” and “Used drugs to get high not because you were sick.” (alpha = .73). *Criminal Involvement* contains 7 items: “Steal something worth 5 dollars or less,” “Steal something worth more than 50 dollars,” “Damaged or destroyed property on purpose,” “Carried a hidden weapon other than a plain pocket knife,” “Attack someone with the idea of seriously hurting him/her,” “Sold drugs,” “Break into a vehicle or building (or tried to break in) to steal something or just look around?” (alpha = .74).<sup>7</sup>

*Romantic Partner Delinquency* (alpha = .76 in wave 3) and *Friend Delinquency* (alpha = .84 in wave 1, .84 in wave 3) use the same items and scoring method as above where the referent is current/most recent romantic partner and current friends, respectively.

*Partier Identity* is measured with 1 item that asks respondent the degree to which others would describe him/her as a “partier.” As such, this taps the reflected appraisals of others, which is strongly linked to but not identical to the adolescent’s own self-appraisal (Matsueda, 1992). Responses range from (1) strongly disagree to (5) strongly agree, recoded (1) if agree or strongly agree, (0) if otherwise.

## **INDEPENDENT VARIABLES**

### **Heterosexual Interest and Involvement**

*Permissive Sex Attitudes* are measured with a 4-item scale that asks respondents how much they agree with the following statements: “I would have to be committed to a girl/guy in order to have sex with her/him,” “I would feel comfortable having sex with someone I was attracted to but did not know very well,” “A person should only have sex if they are married,” and “A person should only have sex if they love someone.” Items are recoded so that higher scores reflect more permissive sexual attitudes. Responses range from (1) strongly disagree, to (5) strongly agree. A scale is created by taking the mean across all of the items (alpha = .64).

*Dating Effort* is measured with an 8-item scale. Three items ask respondents how often they do the following: “Flirt with a guy/girl,” “Begin a conversation with an attractive guy/girl you would like to date,” and “Ask someone out on a date.” Five items ask respondents when interested in a girl/guy, how often do they do the following: “Go

out of your way to run into that person,” “Call that person at home,” “Offer to do favors for that person,” “Talk to your friends about that person,” “Keep pursuing her/him until you've got her/him.” Responses range (1) never, to (5) very often. A scale is created by taking the mean across all of the items ( $\alpha = .84$ ).<sup>8</sup>

*New Sexual Partnerships* is measured by subtracting the respondents' total number of life-time sexual partners at wave 1 from his/her number of sexual partners at the wave 3 interview. Because about 73 percent (72.67%) of the wave 1 sample report not having experienced sexual intercourse, we opted to measure the change in sexual partnerships as an indicator of progressive involvement in the heterosexual world. Furthermore this measurement strategy allows us to identify and delete respondents that gave inconsistent or erroneous responses to the survey question at wave 3 interview. Virgins at wave 1 and 3 are coded '0' for their number of lifetime sexual partners.

### **Prior Delinquent Involvement**

*Self-reported Delinquency* at wave 1 is a control variable that parallels the wave 3 dependent variable ( $\alpha = .72$ ). *Friend Delinquency* is a 10-item measure identical to the scale used as a dependent variable (as measured in wave 3) and described above ( $\alpha = .82$ ).

### **Conventional Attachments**

*Parental Attachment* is a 5-item scale from the teen survey that measures the degree to which adolescents feel bonded or emotionally attached to their parents. The items include: “My parents often ask about what I am doing in school,” “My parents give me the right amount of affection,” “My parents trust me,” “I feel close to my parents,” and “I'm closer to my parents than a lot of kids my age.” Responses range from (1)

strongly disagree to (5) strongly agree. The parental attachment score is the mean of these items ( $\alpha = .79$ ).

*Parental Monitoring* is a 6-item scale from the teen survey that measures parental supervision over activities and decisions and asks, “How often do your parents let you make your own decisions about: the time you must be home on weekend nights, what you wear, the people you hang around with, your social life, who you can date, and how often you can date.” Responses range from (1) never to, (5) very often. Items are recoded so that higher scores indicate greater parental monitoring. A scale is created by taking the mean of these seven items ( $\alpha = .79$ ).

*School Attachment* is a 2-item scale from the teen survey that reflects the level of commitment that respondents feel to academic grades and achievement. Items include: “Good grades are important to me,” and “I try hard in school.” Responses range from (1) strongly disagree to (5) strongly agree. The school attachment score is the mean of these items ( $\alpha = .67$ ).

### **Social Ecology**

Neighborhood factors are measured using two scales derived from responses in the parent surveys. *Neighborhood efficacy* is operationalized as a 4-item measure of the parent respondents’ perceptions of the neighborhood in which they currently live. In keeping with past research on benchmarks for neighborhood efficacy, this scale includes questions pertaining to informal social control, social networks, and social capital (Sampson and Groves, 1989; Sampson et al., 1999). Items include: “I know most of the people in my neighborhood,” “In the past month, I have stopped on the street to talk with someone who lives in my neighborhood,” “People in this neighborhood look out for each

other,” and “I feel safe in my neighborhood.” Responses range from (1) strongly disagree to (5) strongly agree. A scale is created by taking the mean across all of the items ( $\alpha=.71$ ).

*Neighborhood disorder* is measured using a 10-item scale from the parent survey. Each item is measured as (0) “not a problem,” (1) “somewhat of a problem,” and (2) “a big problem.” Neighborhood problems include high unemployment, litter or trash in the street, run down and poorly kept buildings and yards, quarrels in which someone is badly hurt, drug use or dealing in the open, youth gangs, prostitution, vacant or abandoned houses or storefronts, abandon cars, and graffiti. The items serve to gauge the level of physical and social disorder present in the respondent’s community (Sampson and Raudenbush, 2002). The neighborhood disorder scale is created by taking the sum of responses across all 10 items to produce an overall index of neighborhood disorder or problems typically associated with crime-ridden environments ( $\alpha=.92$ ).

### **Socio-Demographics**

*Age* is measured in years. Gender (*female*) is dichotomized with male as the reference category. Race is categorized into four groups: *white, black, non-white Hispanic, and other race*. Family structure is categorized into four mutually exclusive groups: *two-biological parent household, single, step, and other family structure*. The two-parent family is used as the reference category as past research indicates that children from other family structures are, on average, at greater risk for negative social outcomes (e.g., Brown, 2006; Demuth and Brown, 2004). Parental socioeconomic status is measured with annual income that ranges (1) less than 25,000 to (9) over 75,000, and educational levels that range from (1) 1<sup>st</sup>-8<sup>th</sup> grade to (7) obtained a professional degree

or more than a 4-year college. If the parent reported a spousal/partner income, that was added to create the *Household income* score. Similarly for education, the highest score between the parent and his/her spouse/partner was selected to represent *Household education*

### *Analytic Strategy*

We first present descriptive statistics, including gender comparisons based on t-tests and chi-squares. We then present the bivariate regression models where the dependent variables are regressed on each heterosexual variable: permissive sex attitudes, dating effort, and new sexual partnerships between interview waves. Next we present models that include the control variables. Interactions of gender and the heterosexual interest and involvement variables are tested but not presented in the tables. Three weighted-least-squares regression models are estimated for the outcomes self-reported delinquency, friend delinquency, and romantic partner delinquency. Weighted-least-squares is preferred over ordinary-least-squares due to the presence of heteroscedastic errors.<sup>9</sup> Logistic regression is used to estimate resonance with the partner identity.<sup>10</sup> Analysis of the subscales relies on weighted-least-squares for party deviance and Tobit regression for criminal involvement.

## **RESULTS**

Table 1 descriptive results show that most of the respondents report some level of delinquent behavior at waves 1 and 3, but mean levels are low. As expected the levels increase over time with significantly higher mean delinquency scores at wave 3 (significance test not shown). Similarly, friends and romantic partners are reported to be involved in low mean levels of delinquent behavior. As expected, males report a higher

number of delinquent acts, for themselves and their friends, than do female respondents. Females, however, report higher average romantic partner delinquency than do males. This finding is consistent with the higher average delinquency scores of male adolescents. The mean level for party deviance is higher than the wave 3 average for the general index while the mean for criminal involvement is lower. Similar gender differences emerge for wave 3 party deviance and criminal involvement. In terms of the partier identity, about 35 percent of the sample agree or strongly agree that they can be described as a partier. A significantly larger proportion of males than females adhere to this identity.

**\*\* Table 1 about here\*\***

Our indicators of heterosexual interest and involvement show mid-range responses. The mean of dating effort and permissive sex attitudes are 3.05 and 2.23, respectively. On average, the respondents reported about 3 new sexual partnerships between interview waves and the range is 0 to 58. Males replied with statistically significant higher scores on all the indicators for heterosexual interest and involvement.

The remaining variables include social ecology, conventional attachments, socio-demographic indicators, and family structure. Neighborhood disorder and efficacy scores from the parent survey indicate low to mid-range mean responses for the sample, respectively. Teens report low to mid-range mean scores on parental monitoring and attachment, but indicate relatively higher levels of school attachment. Girls report significantly higher levels of school attachment compared to boys. A similar percent of boys (46.6%) and girls (53.4%) are present in the sample, who are about 15 and 18 years of age at wave 1 and 3 interviews, respectively. The majority of respondents (56.97%)

come from a household where both biological parents are present. Girls in the sample are more likely than boys to come from a non-traditional family background. Over half of the sample is white (65.43%), nearly a quarter are black (21.55%), about ten percent are non-white Hispanic (10.58%), and ‘other’ race (2.45%). Parent reports of household income and education indicate the sample is largely middle-class with at least 12 years of schooling.

### **Delinquency, Social Relationships, and Identity**

The coefficients in Table 2 (panel 1) indicate that each heterosexual interest and involvement variable (permissive sex attitudes, dating effort, and new sexual partnerships), is positive and significantly related to self-reported delinquency, friends’ and romantic partners’ delinquency, and partner identity at the bivariate level.

**\*\* Table 2 about here\*\***

Table 3 present results for multivariate analyses estimating the influence of heterosexual interest and involvement on the self-reported general delinquency index, friends’ and romantic partners’ delinquency, and partner identity, once control variables are included in the models.<sup>11</sup> Permissive sexual attitudes, dating effort, and the number of new sexual partnerships are all significant and positively associated with self-reported delinquency net of controls. In terms of predicting friends’ and partners’ delinquency, dating effort and new sexual partners positively influence the level of friends’ and romantic partners’ delinquency at the multivariate level. However, permissive sex attitudes do not predict delinquent friends or romantic partners in the full model. Once prior delinquency and conventional attachments are included in the model, permissive sex attitudes are not significantly related to friends’ and partners’ delinquency. At the

multivariate level, all three heterosexual interest and involvement variables are positively associated with the partier identity.

**\*\*Table 3 about here\*\***

In addition, prior delinquency is significant and positively related to all outcomes. Friends' delinquency is not related to the respondent's current delinquent behavior. In the bivariate regression (not shown), friends' delinquency is a significant and positive predictor of later delinquency. Friends' delinquency at wave 1, however, predicts wave 3 friend and romantic partner delinquency, but does not increase the odds of endorsing the partier identity.

The neighborhood variables included in the full models do not emerge as significant predictors of later delinquent behavior and relationships. In a bivariate regression (not shown), neighborhood efficacy is negatively related to friends' and romantic partners' delinquency, but is mediated to non-significance after past delinquency and other covariates are introduced. Neighborhood disorder is not significant in the full models but at the bivariate level (not shown) does show a small negative association with self-reported delinquency. The unexpected direction of the previous relationship is replicated in the model for party deviance (see below) but not for criminal involvement.

Parental and school attachments show small negative effects on later self-reported delinquency and on romantic partners' delinquency. School attachment is negatively related to later friends' delinquency in the full model, and in a reduced model without wave 1 delinquency, parental attachment also shares a negative relationship with this outcome. At the bivariate level (not shown), parental monitoring appears to guard against

delinquency and delinquent relationships, but is attenuated as covariates are added to the model. Similarly, school and parental attachment are negatively related to adherence to the partier identity in reduced models, while parental monitoring does not share a relationship with partier identity, even at the bivariate level.

Socio-demographic variables are related to all of the outcomes. Youth in their later teen years and early twenties are more steeply involved in delinquency and report dating more delinquent partners than the youngest respondents. Gender is not significant in the full models for predicting later delinquency, delinquent friends, and partier identity. In bivariate regression (not shown), female mean levels of delinquency, friend delinquency, and partier identity are all significantly lower than that of male levels. Heterosexual interest and involvement mediates the gender gap in these outcomes. Black respondents, on average, report lower mean levels of delinquent behavior and delinquent relationships as compared to white respondents. Further analyses indicate that black respondents report higher levels of violent behavior than whites. The difference in race effects is primarily due to higher levels of substance use among white respondents.<sup>12</sup> Blacks are more likely than whites, though, to endorse the partier identity. Family structure variables indicate that respondents from single-parent backgrounds are significantly more likely than respondents from two-parent backgrounds to be involved in delinquency. With reference to friends' delinquency and partier identity as outcomes, the influence of family structure is attenuated after heterosexual variables and past delinquency are added to the models.

### *Gendered Processes*

Next we introduced a series of gender interactions into the models in order to determine whether the influence of the heterosexual interest and involvement on delinquency is conditioned on gender (results not shown). These interactions assess the influence of gender in connection with dating effort, permissive sexual attitudes and new sexual partnerships as influences on each of the four outcome variables.<sup>13</sup> Four of the twelve interactions are significant, suggesting overall similarities and a few gender differences in the effects of the heterosexual predictors.

Levels of permissive sexual attitudes are similarly related to both male and female later reports of delinquency, friend and romantic partner delinquency, and partner identity (gender interactions were not significant for these analyses). Dating effort also has a similar effect for males and females on self-reported delinquency, partner delinquency, and partner identity.

New sexual partnerships reveal different effects for boys and girls on each outcome except partner identity. The interaction of gender and new sexual partnerships on self-reported delinquency is significant ( $b = .025$   $p < .001$ ). New sexual partnerships influence later delinquency for both male and female respondents, but is over four times larger for females than for males ( $b = .055$   $p < .001$  for females,  $b = .012$   $p < .05$  for males). Similarly, the effect of initiating new sexual partnerships between interview waves on friends' delinquency is dependent on gender ( $b = .020$   $p < .05$ ) and appreciably larger ( $b = .043$   $p < .001$  for females,  $b = .020$   $p < .01$  for males) among the girls in the sample. The effect of dating effort on friends' delinquency is also gender dependent ( $b = .186$   $p < .05$ ), showing a stronger influence among females ( $b = .300$   $p < .001$ ) than males ( $b = .114$   $p < .05$ ).

As for romantic partners' delinquency, the effect of new sexual partnerships is also dependent on gender ( $b = .059$   $p < .001$ ), showing a statistically positive effect for females ( $b = .073$   $p < .001$ ), but not for males ( $b = .009$  non-significant for males).

Taken together, in most respects heterosexual interest and involvement have similar effects for young males and females. A key exception concerns female adolescents, who typically report fewer new sexual partners, but among those who do report a relatively larger number of new partners, this has a delinquency-amplifying effect, as well as a significant impact on later characteristics of girls' social networks (friends' and partners' delinquency). It is important to reiterate that effects are found to be generally significant for male delinquency as well, but the effects are often larger for girls and extended to the other outcomes.

### **Party Deviance and Criminal Involvement**

Although our primary research question concerned heterosexual influences on a global assessment of delinquency, such scales typically include a number of less serious forms of deviance. Thus, the ten item delinquency was factor analyzed, resulting in a two factor solution, including items that tap what might be considered 'party deviance' and those that index more serious levels of 'criminal involvement' respectively. This distinction accords with Hagan's (1991) findings on the distinction of youth subcultures and more recently with Haynie (2003) who also separated party orientated behaviors from more serious unlawful activity.<sup>15</sup>

The second panel of Table 2 shows that each of the indicators for heterosexual interest and involvement are positively associated with party deviance. The multivariate model in Table 5 replicates the bivariate results for party deviance, indicating a positive

and statistically significant relationship for all heterosexual indices on later substance use and public intoxication, net of controls. Table 2 (panel 2) also shows a positive and statistically significant bivariate relationship for all heterosexual indices on later criminal involvement. However, in the multivariate model for criminal involvement (see Table 5), dating effort is the only significant heterosexual indicator. The positive impact of sexual partners and attitudes are mediated by controlling for prior delinquent involvement at wave 1.<sup>16</sup>

**\*\*Table 5 about here\*\***

The effects of the control variables are similar to the findings for the general delinquency index. The few exceptions concern neighborhood and parental effects, age, and the role of gender. Neighborhood disorder shares a negative and significant relationship with party deviance, indicating higher rates of drug and alcohol use among youth from relatively safe and economically stable communities (see Wright et al., 1999(b)). Parental monitoring is significant and positively related to criminal involvement — a somewhat counterintuitive finding which can be understood in terms of parental reactions to adolescent delinquency (i.e., teens are monitored more closely after violating rules). Age is negatively related to criminal involvement while positively related to party deviance. This pattern suggests that adolescent respondents generally age out of most delinquent behaviors, but during early adulthood, elevate their levels of participation in socially orientated risk-taking (i.e., partying). In the criminal involvement model, the average for female respondents is significantly lower in comparison to males, but similar to the general delinquency index, the gender gap in party deviance is mediated after heterosexual indices are added to the model.

Gender interactions explored in the subscale models show similar results to the general delinquency index. Permissive sex attitudes and dating effort show similar effects on party deviance for males and females. A significant gender difference is found, however, for the effect of new sexual partnerships on party deviance ( $b=.046$   $p<.01$ ). In the party deviance model, the effect of new sexual partnerships is greater ( $b = .064$   $p<.001$ ) for females than for males ( $b = .019$   $p<.05$ ). The influence of early heterosexual interest and involvement on later criminal involvement does not vary according to gender. These analyses show that the gender difference in the effect of new sexual partnerships observed in analyses focused on the general delinquency index is due largely to party deviance rather than more serious criminal involvement.

## **DISCUSSION**

The above analyses document that adolescent attitudes about and experiences in connection with dating and sexuality are significant predictors of later delinquency, even after introducing controls for initial delinquency level, friends' delinquency and other traditional predictors. The current analyses suggest that over the long term, these heterosexual experiences add significantly to our knowledge about network influences on delinquency, whether examining a general index, party deviance or a subscale focused on relatively more serious criminal acts. The indices of heterosexual involvement also predicted the level of delinquency of later friends and romantic partners, as well as the likelihood of endorsing a partier identity. The latter can be conceptualized as features of the individual's social network and self-concept that may serve to further solidify delinquent actions.

Moreover, the influence of friends' delinquency on later self-reported delinquency and partner identity is found to be mediated once heterosexual interest and involvement is included into the models. These findings suggest that having delinquent friends in adolescence is important not only for the reasons previous researchers have documented (e.g., Warr, 2002), but because they provide additional connections to heterosexual involvement, and at times a favorable normative climate for more permissive sexual attitudes/behaviors (Hagan, 1991), which in turn heightens delinquency risk.

Analyses highlight some areas of similarity as well as difference by gender. In general, heterosexual interest and involvement is significant for male and female delinquency and related outcomes. After the variation in these factors are accounted, there is no longer a statistically significant difference by gender in self-reports of general delinquency, delinquent friendships, or partner identity. This suggests that differential attitudes and behaviors relating to the heterosexual realms of experience contribute to the gender gap in adolescent delinquency. In some analyses heterosexual experiences were more strongly linked to girls' relative to boys' delinquency, (e.g., models focused on party deviance), but in analyses focused on the criminal subscale gender interactions were not significant. These findings accord with prior work by Haynie et al. (2005) that documented some gendered effects of romantic partner delinquency for minor but not serious delinquency, and our view that the "bad boyfriend" explanation of female crime may be more efficient for explaining the involvement of girls who are on the margins of criminal activity, rather than the behavior of the small subset who are chronic/serious offenders.

These results add to our understanding of social network experiences as influences on delinquency, as prior work has tended to emphasize almost exclusively the impact of same-gender peers. However, these findings accord well with the early observation made by Thrasher (1927) that delinquency itself actually occupies only a small portion of the adolescent's time. The criminological literature has filled in our knowledge about some of the other key aspects of adolescent life that appear consequential for delinquency. For example, family factors, school attachment and success, and involvement in extracurricular activities (particularly school sanctioned, organized clubs and organizations) all appear to have a significant deterrent effect (Agnew, 2001; Osgood et al., 1996). The findings presented here, at a minimum serve to round out the portrait of the social life of the budding delinquent, an important extension given the centrality of heterosexual relationships to the developmental work that is associated with the adolescent period (Sullivan 1953). Furthermore, since the models presented controls for traditional predictors and initial delinquency level, these findings serve to substantiate our view that involvement in heterosexual relationships "matters" for understanding life course patterns of delinquent behavior.

There are several limitations to the current study. Our focus on three dimensions of heterosexual interest and involvement does not provide a comprehensive assessment of all aspects of dating and sexuality that may have implications for delinquency involvement. The localized nature of the TARS sample also limits the generalizability of these results. In the current study we were also unable to explore factors in early childhood that may have contributed to the variability in interest and involvement in heterosexual relationships we observed in this study of adolescent respondents. For

example, it is possible that for girls, early family experiences, such as parental drug use/criminality (see Giordano and Mohler-Rockewell, 2001) and/or sexual victimization increase the likelihood of risk-taking in the heterosexual arena, which in turn seems to have a significant effect on later conduct. This is particularly likely where the referent is serious delinquency.

Although we employed a symbolic interactionist version of social learning theory to frame our research agenda, other researchers might well adapt a different theoretical lens. For example, the association between heterosexual involvement and delinquency could be seen as evidence of an underlying personality trait that predisposes the individual to act in a certain manner in the context of heterosexual experiences, and also heightens risk for continued delinquency involvement. Our results did show, however, that sexual attitudes/behaviors explain additional variance over and above the initial delinquency level. This hints that stable traits or dispositions are not entirely satisfactory explanations (Cernkovich and Giordano, 2001; Nagin and Paterson, 1991, 2000). However, it is also possible that time one delinquency is a poor proxy for such a “trait.” Even if conceptualized in personality or dispositional terms, however, it appears that information about the heterosexual realm captures aspects of the self that are not comprehensively indexed by the measure of time one delinquency. In addition, we believe that the symbolic interactionist perspective adds to the conceptual picture: in addition to foregrounding the identity and social network implications of heterosexual involvement, this perspective reminds us that delinquent, as conforming actions, are imbued with meanings for the individuals involved.

More research is obviously needed on the gendered aspects of these dating and sexual relationship experiences and how they relate to delinquent behavior. Since the male-based literature in particular has often ignored boys' relationships with girls, particularly during the adolescent period (MacLeod, 1987), in some respects the significant connections documented among male respondents are particularly interesting and unexpected. These results suggest the importance of a more comprehensive approach to prevention/intervention for boys as well as girls, as some patterns of dating/sexual behavior appear not only to heighten risk for sexually transmitted infections and pregnancy, but for later delinquent behavior as well.

## NOTES

1. See e.g., Richie's (1996) argument that many women are "compelled" to engage in criminal acts because of male instigation or to defend themselves against abuse within intimate relationships.

2. We find that 43 respondents reported fewer life-time sexual partners at wave 3 than at wave 1, and are removed from all analyses due to their inconsistent responses. An additional 32 cases are missing from waves 1 and 3 on this variable. Finally, 14 more respondents are missing on either the dependent variables or other adolescent independent variables. The 89 respondents missing from the adolescent surveys are excluded from the multivariate analyses.

3. Information on Romantic Partner Delinquency is available in the wave 1 interview, however, a significant proportion of the sample (N= 201, or 18.11% of the respondents that participated in all waves of data collection) reported that they had never dated by the time of wave 1 interview, and likewise are validly missing for this particular measure. Wave 1 Romantic Partner Delinquency is not included in the predictor set to avoid deleting any more respondents from the current study.

4. Over-dispersion and/or skewness in the dependent variables can be diagnosed by referring to Table 1. The variance (square of the standard deviations) is more than twice the mean scores for the dependent variables. This indicates over-dispersion in the data points (DeMaris, 2004). In this case the data is right-skewed, with about 20 percent of the sample reporting a 0 level of delinquency for themselves and for their friends and romantic partners. By logging the dependent variables the distribution of responses becomes more normalized. For example, the mean for the logged version of wave 3 delinquency is 1.34 with a variance of 1.01 (i.e. no more evidence of over-dispersion). A highly skewed distribution can distort standard error estimates if not corrected by logarithmic transformation or by another method that addresses issues of over-dispersion.

5. The relatively small number of respondents that reported a criminal act at wave 3 interview (23.60%) vs. those that did not (76.40%) warranted the use of an estimation method other than ordinary-least-squares. We used a Tobit model to account for the inflated number of respondents that report a zero level of criminal involvement at wave 3 interview. Negative binomial estimates can also handle distributions that are inflated at zero, however, since the general delinquency index is not a discrete event count, as assumed under negative binomial estimates, the Tobit model is a more optimal method (for discussion see: DeMaris, 2004; Paternoster and Triplett, 1988; Osgood, Finken, and McMorris, 2002).

6. Missing response values for the adolescent respondents primarily concern the 'new sexual partnerships' variable. Logistic regression was performed to test whether the missing cases failed to report, or gave an inconsistent report on their number of lifetime sexual partners as a function of other parameters in the model. A model (missing = 1, 0 if otherwise) for missing responses on 'new sexual partnerships' was run with all time one predictors. Results (not shown) reveal that high reports of dating effort and permissive sex attitudes significantly increase the odds of being 'missing', net of other covariates. No other wave 1 parameters significantly contribute to being 'missing'. Furthermore, dating effort and permissive sex attitudes are found to be positively correlated with the number of sexual partners reported at wave 1 and 3 interviews. These findings suggest that the inconsistency of reports on new sexual partners may be due to a failure of these respondents to accurately or willingly recall the number partners in their extensive sexual histories.

7. Wave 1 responses to the self-report and friend delinquency items were factor analyzed. In the initial factor loadings, each set of responses reported a factor with an Eigen-value greater than three; the rest of the factors reported Eigen-values below one. Prior delinquency and friend delinquency was consequently modeled as general indices rather than subscales.

8. Because a broad range of survey items capture 'dating effort,' exploratory factory analysis was used to analyze the responses. Results (not shown) indicate one dominate factor with an Eigen-value greater than 3

and factor loadings all above .30. The next largest factor retained an Eigen-value below 1, suggesting that the scale is tapping into one underlying dimension that we have labeled 'dating effort' (Hatcher, 1994).

9. Ordinary-least-squares regression assumes the errors of  $y^{\wedge}$  under a given set of parameters to be constant across observations. When this assumption is violated, the estimates of the standard errors for the beta coefficients are no longer reliable, and the errors from the regression are said to be heteroscedastic. We tested for this violation by regressing a squared term for errors from each continuous outcome on all independent predictors. Results (not shown) reveal a significant ( $p < .01$ ) F-value for each outcome, indicating that sigma is unique for each covariate pattern. Several methods may be used to account for heteroscedasticity, but we chose weighted-least-squares because the model assumes a heteroscedastic error structure (DeMaris, 2004).

10. The sensitivity of the models was checked by running the data with multiple statistical techniques. In general, ordinary-least-squares, negative binomial, and Tobit estimates reveal the same results shown by the weighted-least-squares models in Table 3. These findings indicate that our results are robust to various methods of estimation. Results available upon request from authors.

11. The r-square values in the table are calculated from the beta estimates reported in the weight-least-squares out-put. Statistical packages (SAS) report the model r-square from the transformed matrix which often inflates the actually level of explained variance. We corrected for this inflation by recovering the sum of squared residuals in the WLS models and re-estimating the r-square values (see DeMaris, 2004 pp. 205-206). DeMaris (2002) recommends the use of the McKelvey and Zavoina (1975) r-square to account for the variation in the latent scale underlying a binary response. This r-square analog has an explained variance interpretation and is bound to a range of 0 to 1. Because the current study uses a binary response to measure "partier" as an indication of social identity, this construct suits the conditions found under the latent scale interpretation.

12. Analysis of variance for mean differences across race categories (not shown) indicate that black and Hispanic respondents report significantly higher levels of 'attacking someone' than white or other race respondents. White respondents report significantly higher mean levels of drinking alcohol and public intoxication than black respondents. Levels of drug use are similar for all race categories.

13. Before generating the interaction terms, all continuous variables were 'centered' giving them a mean of zero. This allows for a meaningful interpretation of the focus variables within the interaction models (not shown). In this case the interpretation is the average effect of heterosexual involvement on delinquency for males and females. We switched out reference categories to compare gender-specific effects. VIF scores were all well below 10, indicating no threat of multicollinearity.

14. From the factoring loadings it is clear, however, that 'sold drugs' could be assigned to either subscale. Considering that over 92 percent of the sample reports no involvement in drug trafficking, and that the behavior is typically adjudicated as a serious offense, it has more in common statistically and substantively with the items in the criminal involvement scale than with the party deviance scale.

15. The pseudo r-square presented under the criminal involvement model is Laitila's (1993) r-square analog for assessing discriminatory power in a Tobit model. It is bound between 0 and 1 and is interpreted as the amount of explained variance for the underlying continuous scale.

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**Table 1. Descriptive Statistics and Gender Comparisons**

<b>Variables</b>	<b>Total Sample</b>	<b>Males</b>	<b>Females</b>
<b><u>General Delinquency, Social Relationships, and Social Identity</u></b>			
		<b>Mean/Percent</b>	
Delinquency (Wave 1) Range 0 to 46	2.57*** (5.20)	3.05 (6.25)	2.15 (4.03)
Delinquency (Wave 3) Range 0 to 49	5.23*** (6.62)	6.23 (7.92)	4.26 (5.05)
Friend Delinquency (Wave 1) Range 0 to 65	5.76* (8.32)	6.31 (8.89)	5.28 (7.76)
Friend Delinquency (Wave 3) Range 0 to 74	10.39*** (10.87)	12.12 (12.23)	8.88 (9.27)
Romantic Partner Delinquency (Wave 3) Range 0 to 58	5.94*** (7.41)	4.30 (5.77)	7.35 (8.33)
Partier Identification	35.36%***	42.44	29.17
<b><u>Delinquency Subscales</u></b>			
Party Deviance (Wave 3) Range 0 to 22	4.22** (4.72)	4.59 (5.12)	3.70 (5.30)
Criminal Involvement (Wave 3) Range 0 to 31	1.11*** (3.29)	1.74 (4.30)	.55 (1.87)
<b><u>Heterosexual Interest and Involvement</u></b>			
Dating Effort Range 1 to 5	3.05*** (0.77)	3.12 (0.77)	2.93 (0.76)
Permissive Sex Attitudes Range 1 to 5	2.23*** (0.82)	2.51 0.83	2.00 0.73
New Sexual Partnerships (Wave 1 to 3) Range 0 to 58	2.83*** (5.22)	3.65 (6.52)	2.10 (3.54)
<b><u>Social Ecology</u></b>			
Neighborhood Disorder Range 0 to 20	2.47 (4.26)	2.43 (4.31)	2.51 (4.22)
Neighborhood Efficacy Range 1 to 5	3.70 (0.76)	3.75 (0.72)	3.66 (0.76)
<b><u>Conventional Attachments</u></b>			
Parental Attachment Range 1 to 5	3.96 (0.64)	3.95 (0.60)	3.97 (0.68)
Parental Monitoring Range 1 to 5	2.26 (0.96)	2.22 (0.95)	2.30 (0.88)
School Attachment Range 1 to 5	4.15*** (0.71)	4.05 (0.76)	4.24 (0.65)

**Socio-Demographics**

Age (in years at Wave 1) Range 12 to 19	15.16 (1.72)	15.14 (1.71)	15.17 (1.72)
Age (in years at Wave 3) Range 15 to 22	18.13 (1.76)	18.12 (1.75)	18.13 (1.77)
Gender			
Male	46.62%		
Female	53.38%		
Race/Ethnicity			
White	65.43%	64.92	65.87
Black	21.55%	21.64	21.47
Non- White Hispanic	10.58%	10.92	10.28
Other race	2.45%	2.52	2.39
Family Structure			
Two-Biological Parent Family	53.97%**	58.40	50.09
Single Parent Family	22.23%	20.17	24.04
Step Parent Family	14.01%	13.45	14.50
Other Family Form	9.79%	7.98	11.38
Household Income Range 1 to 18	6.95 (3.92)	7.12 (3.89)	6.80 (3.95)
Household Education Range 1 to 8	5.62 (1.90)	5.55 (1.88)	5.68 (1.91)
<i>N</i>	1021	545	476

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$ , Gender Differences  
 Standard Deviation in Parenthesis  
 Source: Toledo Adolescent Relationship Study

**Table 2. Bivariate Regression of Outcomes on Heterosexual Interest and Involvement**

<b>Panel 1.</b>	<b>Self Delinquency</b>		<b>Friend Delinquency</b>		<b>Romantic Partner Delinquency</b>		<b>Partier Identity</b>	
	b	S.E.	b	S.E.	b	S.E.	b	S.E.
Permissive Sex Attitudes	.311***	.038	.281***	.038	.097*	.042	.597***	.084
Dating Effort	.329***	.039	.334***	.042	.208***	.047	.508***	.091
New Sexual Partnerships (Wave 1 to 3)	.059***	.006	.051***	.006	.057***	.008	.101***	.016

  

<b>Panel 2.</b>	<b>Party Deviance</b>		<b>Criminal Involvement</b>	
	b	S.E.	b	S.E.
Permissive Sex Attitudes	.234***	.035	2.908***	.439
Dating Effort	.312***	.037	1.726***	.490
New Sexual Partnerships (Wave 1 to 3)	.058***	.001	.310***	.063

\*p<.05 \*\*p<.01 \*\*\*p<.001

Beta estimates are unstandardized

**Table 3. Weighted Least Squares and Logistic Regression for the General Delinquency Index and Related Outcomes**

	Self Delinquency		Friend Delinquency		Romantic Partner Delinquency		Partner Identity	
	b	S. E.	B	S. E.	b	S. E.	Odds Ratio	S. E.
<b><u>Heterosexual Interest and Involvement</u></b>								
Permissive Sex Attitudes	0.077*	0.006	-0.003	0.038	0.000	0.043	1.294*	0.103
Dating Effort	.196***	.004	.196***	.038	.147***	.044	1.46***	.102
New Sexual Partnerships (Wave 1 to 3)	.028***	.006	.027***	.006	.029***	.007	1.056**	.017
<b><u>Prior Delinquent Involvement</u></b>								
Delinquency (Wave 1)	.051***	.038	.021***	.006	.018**	.007	1.085***	.022
Friend Delinquency (Wave 1)	-.004	.036	.016***	.004	.016***	.004	.999	.012
<b><u>Social Ecology</u></b>								
Neighborhood Disorder	-.010	.007	-.008	.007	-.012	.008	.964	.020
Neighborhood Efficacy	-.013	.035	-.024	.035	-.003	.041	1.191	.098
<b><u>Conventional Attachments</u></b>								
Parental Attachment	-.157***	.043	-.073	.041	-.107*	.050	.926	.120
Parental Monitoring	-.010	.033	-.034	.034	.010	.038	1.014	.086
School Attachment	-.130***	.038	-.132***	.039	-.099*	.041	.833	.109
<b><u>Socio-Demographics</u></b>								
Age	.056***	.017	.023	.017	.069***	.019	.949	.047
Gender								
(Male)								
Female	-.015	.056	-.099	.057	.535***	.064	.783	.153
Race/Ethnicity								
(White)								
Black	-.335***	.074	-.231**	.086	-.227*	.092	1.569*	.201
Hispanic	-.089	.092	.139	.081	-.175	.102	.816	.258
Other Race	-.339	.181	-.315	.211	-.504**	.188	1.226	.458
Family Structure								
(Two-Biological Parents)								
Single Parent	.195*	.092	.081	.091	.048	.106	1.179	.251
Step Parent	.123	.083	.147	.082	.006	.103	1.05	.221
Other Family Form	.158	.110	.081	.102	.085	.118	1.355	.265
Household Income	.017*	.008	.011	.008	.007	.009	1.01	.023
Household Education	.008	.017	-.001	.017	.032	.020	.971	.047
Intercept	1.364***	0.051	2.023***	.052	1.159***	.0581	-0.675***	0.140
F/X <sup>2</sup>	31.40***		22.55***		17.30***		144.621***	
R <sup>2</sup> <sub>WLS</sub> / R <sup>2</sup> <sub>MZ</sub>	.313		.251		.231		.194	

N= 1021†

\*p<.05 \*\*p<.01 \*\*\*p<.001

†N= 903 for Romantic Partner Delinquency

Beta estimates are unstandardized

Continuous independent variables are centered

Comparison groups are in parentheses

**Table 4. Varimax-Rotated Factor Loadings for the General Delinquency Index**

<b>Variables</b>	<b>Factor 1: Party Deviance</b>	<b>Factor 2: Criminal Involvement</b>
Drunk Alcohol	<b>0.741</b>	0.045
Stolen Something Worth \$5 or Less	0.105	<b>0.551</b>
Carried a Hidden Weapon	0.119	<b>0.517</b>
Damaged Property on Purpose	0.157	<b>0.725</b>
Stolen Something Worth \$50 or Less	0.042	<b>0.739</b>
Attacked Someone	0.151	<b>0.519</b>
Sold Drugs	0.357	<b>0.352</b>
Drunk in a Public Place	<b>0.738</b>	0.101
Broken into a Building or Vehicle	0.191	<b>0.584</b>
Used Drugs to get High	<b>0.551</b>	0.247
<b>Eigen-Values</b>	1.634	2.445

Factor loadings in bold type indicate the subscale scale to which items are assigned.

**Table 5. Subscale Analysis for Self-Reported Delinquency**

	<b>Party Deviance</b>		<b>Criminal Involvement</b>	
	b	S.E.	B	S.E.
<b><u>Heterosexual Interest and Involvement</u></b>				
Permissive Sex Attitudes	.097**	.036	.281	.451
Dating Effort	.183***	.033	1.347**	.452
New Sexual Partnerships (Wave 1 to 3)	.024***	.005	.119	.062
<b><u>Prior Delinquency Involvement</u></b>				
Delinquency (Wave 1)	.037***	.005	.309***	.075
Friend Delinquency (Wave 1)	-.005	.003	.095	.050
<b><u>Social Ecology</u></b>				
Neighborhood Disorder	-.013*	.006	.057	.083
Neighborhood Efficacy	-.049	.033	-.153	.440
<b><u>Conventional Attachments</u></b>				
Parental Attachment	-.127**	.041	-1.212*	.542
Parental Monitoring	-.034	.030	1.139**	.376
School Attachment	-.102**	.036	-1.805***	.476
<b><u>Socio-Demographics</u></b>				
Age	.086***	.016	-1.152***	.223
Gender				
(Male)				
Female	.085	.053	-3.209***	.708
Race				
(White)				
Black	-.417***	.067	1.384	.904
Hispanic	-.132	.081	1.724	1.058
Other Race	-.359	.180	.764	2.050
Family Structure				
Two-Biological Parents				
Single Parent	.238**	.086	.469	1.120
Step Parent	.138	.074	1.879*	.942
Other Family Form	.113	.090	.708	1.180
Household Income	.021**	.008	.008	.106
Household Education	.008	.016	.080	.208
Intercept	1.203***	.050	-5.595***	0.724
F/X <sup>2</sup>	31.97***			
R <sup>2</sup> <sub>WLS/PSEUDO</sub>	.317		.284	

\*p&lt;.05 \*\*p&lt;.01 \*\*\*p&lt;.001

Beta estimates are unstandardized