Published in final edited form as:
Justice Q. 2009 June 1; 26(2): 238–267. doi:10.1080/07418820802245052.

The Influence of Dating Relationships on Friendship Networks, Identity Development, and Delinquency

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Abstract

Prior research has documented general associations between dating and delinquency, but little is known about the specific ways in which heterosexual experiences influence levels of delinquency involvement and substance use. In the current study, we hypothesize that an adolescent's level of effort and involvement in heterosexual relationships play a significant role in forming the types of friendship networks and views of self that influence the likelihood of delinquency involvement and substance use. Analyses based on a longitudinal sample of adolescent youth (n=1,090) show that high levels of dating effort and involvement with multiple partners significantly increases unstructured and delinquent peer contacts, and influences self-views as troublemaker. These broader peer contexts and related self-views, in turn, mediate the path between dating relationships, self-reported delinquency, and substance use. Findings also document moderation effects: among those youths who have developed a troublemaker identity and who associate with delinquent peers, dating heightens the risk for delinquent involvement. In contrast, among those individuals who have largely rejected the troublemaker identity and who do not associate with delinquent friends, dating relationships may confer a neutral or even protective benefit. The analyses further explore the role of gender and the delinquency of the romantic partner.

Keywords

Delinquency; Dating; Peers; Social Identity

INTRODUCTION

While researchers have long recognized that dating and sexuality are significantly correlated with delinquency (e.g., Hirschi 1969, Jessor & Jessor 1977), few studies have explored the degree to which romantic involvement during the adolescent period itself may exert an influence on life course patterns of criminal behavior. Criminologists have more often focused on heterosexual relationships later in the life course, arguing that marriage bonds act as a significant deterrent to crime (e.g., Farrington & West, 1995; Horney, Osgood, & Marshall, 1995; Laub and Sampson 2003; Laub, Nagin, & Sampson, 1998; Sampson, Laub, & Wimer, 2006). Yet studies of the adolescent period typically focus on parents and peers as the most important social network influences (e.g., Browning, Levanthal, & Brooks-Gunn, 2005; Simons et al., 2004; Warr, 2002, 1993). The more general literature on adolescence has increasingly recognized, however, that involvement in dating is a key social dynamic within the period, one that is also characterized by extensive peer socializing and identity development (e.g., Carver, Joyner, & Urdy, 2003; Collins, 2003; Magnusson, 1992;

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Giordano, Longmore, & Manning, 2006; Giordano, Longmore, Manning, & Northcutt, 2007). In the current analysis, we connect these aspects of adolescent life arguing that extensive dating involvement expands opportunities for unstructured socializing with delinquent peers, and may foster the development of a 'troublemaker identity.' These self and social processes in turn can have implications for life course patterns of delinquency and substance use.

While dating involvement and delinquency may be linked, dating does not inevitably lead to illegal behavior. Indeed, dating relationships are commonplace, and are considered a developmentally appropriate adolescent preoccupation/activity (Collins, 2003; Furman, Brown, and Feiring, 1999). Extensive involvement in dating, however, has the potential to increase the time a youth spends interacting with people and situations that provide incentives for problem behaviors such as substance use and delinquent behavior. Our conceptualization of dating effort/engagement focuses on variations in confidence and interest in dating and the number of partners, rather than the type of intense, long-term commitment to one partner that might well be associated with reduced risk for delinquency involvement. Here we argue that the routine pursuit of multiple dating interests may lead to contexts of 'risk' such as house parties, bars, pool halls, dance clubs, and late-night 'cruising,' all of which provide an unstructured environment for dating and socializing, but also a more expansive territory for criminal opportunities (Cohen, 1955; Hagan, 1991; Osgood, et al., 1996). Past work indicates that this kind of unstructured peer socializing is strongly associated with risky and illegal actives (Haynie & Osgood, 2005), and may also reinforce the tendency to take risks by sharing these experiences with similarly inclined others (Rebellon, 2006). Consequently, adolescent dating may increase interactions with people and settings that offer definitions "favorable to the violation of law" (Sutherland, 1947).

Interest and engagement in dating may also influence identity development in ways that increase risk (Matsueda and Heimer, 1997; Matseuda, 1992; Giordano et al., 2007, 2002). According to the logic of the symbolic interactionist perspective, identities are consequential because they provide a cognitive filter for decision-making, a dynamic that is especially important as one encounters novel situations (Mead, 1934). Prior work has demonstrated that identification with the rule violator label tends to amplify delinquent modes of behavior, above and beyond the influence of related risk factors (e.g., Heimer and Matsueda 1994; Giordano et al., 1999; Matsueda, 1992). And certainly interaction and communication with delinquent peers is one of the key social dynamics that influences the development of a 'troublemaker' or rule-violator view of self. In this investigation, we add to prior research on delinquent identities, arguing that a focus on same-gender peer influences does not complete the roster of life course experiences that have implications for self-concept development. Dating experiences not only increase the likelihood of association with delinquent peers (with associated implications for identity development), but may directly foster particular self-views that make delinquency and substance use more likely features of the individual's behavioral repertoire.

In contrast to these general expectations that dating in adolescence increases exposure to risk and delinquent self-views, research later in the life course suggests that romantic partnerships can potentially reduce criminal involvement (e.g., Farrington & West, 1995; Horney, Osgood, & Marshall 1995; Laub & Sampson 2003; Sampson, Laub, & Wimer, 2006). And while this may relate to the reality that adult romantic relationships are longer lasting and fundamentally more involved than most adolescent relationships (Carver, Joyner, & Urdy, 2003), it has also been suggested that marriage or other stable partnerships are associated with a gradual shift away from the delinquent and hedonistic peer cultures that often accompany early heterosexual socializing (Giordano, 2003; Hagan, 1991, Laub et al.,

1998; Warr, 1998). As mentioned briefly above, certain aspects of adolescent dating relationships could offer similar protective benefits, such as spending time alone or interacting in locales that are less conducive to crime and substance use, such as at a girlfriend's home or at the movies. If this line of theorizing is correct, youth who limit their dating to small number of monogamous relationships may also reduce exposure to, and participation in, criminal offending and substance use.

Dating relationships can play more immediate roles as well. The delinquency of peers is one of the most robust predictors of self-reported crime (Akers & Sellers, 2004) and although these analyses have traditionally focused on same-sex friends, the romantic dyad represents an additional source of influence. Haynie, Giordano, Manning, and Longmore, (2005) for example, find similar levels of delinquency between romantic partners, even after accounting for the level of crime and deviance in the larger friend network. The current research expands on these earlier analyses by taking into consideration the likelihood that youth draw their romantic interests from the peer networks in which they are enmeshed, thus implicating the youth's overall orientation toward dating and dating history as factors which potentially influence the delinquency of romantic partners.

Finally, the current research explores the possibility that gender influences the nature of the dating-delinquency relationship. Prior research focused on both juvenile and adult samples has highlighted the negative effects of girls' heterosexual contacts (Caspi et al., 1993; Leverentz, 2006; Haynie, 2003; McCarthy, Felmlee, & Hagan, 2004; Simons et al., 2002; Stattin & Magnusson, 1990; Steffensmeier & Allan, 1996) while emphasizing the notion of a 'good marriage effect' among male offenders (Blokland & Nieuwbeerta, 2005; Horney et al., 1995; Laub & Sampson, 2003). This research goes beyond past work by considering gender differences, not only in the links between dating and delinquency, but also the connection with peer networks and developing self-views. Below we highlight previous research on dating involvement and delinquency, and develop a symbolic interactionist theoretical framework focusing on specific ways in which these social experiences may influence adolescent involvement in delinquency and substance use.

BACKGROUND

Dating and Delinquency are Connected via Selection Effects

Early on social scientists characterized adolescent dating/sexual activity and delinquency as co-occurring problems or as part of a package of risky behaviors (e.g., Hirschi 1969, Jessor and Jessor, 1977; Thomas, 1967) In this framework, an underlying propensity or trait of the developing adolescent is seen as influencing the likelihood of pursuing heterosexual experiences as well as engaging in delinquency and drug use (Gottfredson and Hirschi 1990). This approach has some merit because both actions represent a certain degree of precociousness or 'adult-mimicry' (e.g., Hirschi, 1969; Moffitt, 1993; Katz, 1988; Wright et al., 1999). More recent work has examined links between dating and delinquency by focusing on physical maturation and the hormonal changes that occur during adolescence (e.g., Caspi et al., 1993; Cleveland, 2003; Moffitt, 1997; Felson & Haynie 2002; Haynie, 2003; Haynie & Piquero 2006; Rowe, 2000; Stattin & Magnusson, 1990). These studies indicate that, compared to similar aged peers, adolescents who are relatively more advanced in their physical maturity tend to associate in social networks that provide the opportunities for sexual and romantic exploration as well as delinquency and substance use. While recognizing the importance of biological (Udry, 2000) and social selection processes (Matsueda & Anderson, 1998) a symbolic interactionist perspective focuses more attention on the possibility that the dating experience itself can influence the adolescent's networks of affiliation and views of self. Dating is a relatively new experience for youth, one that has the potential to open up pathways to delinquent behavior that were previously unavailable until

the teen years. During this period, both increased interest in the opposite sex and social expectations undoubtedly motivate youth to explore romantic/sexual interests by engaging in casual or unstructured socializing, possibly in risky settings (e.g. unsupervised parties) and with company who are similarly inclined. Therefore, while the onset of delinquency may precede involvement in dating, the two may become interwoven in adolescence, creating a new dynamic potentially associated with increased involvement in risky and antisocial behaviors (see Simons, Johnson, Conger, & Elder, 1998 for a related example).

Dating Potentially Increases Unstructured Socializing and Delinquent Peer Contacts

In addition to the role of selection processes, then, the observed positive relationship between dating and delinquency may influence exposure to social settings (e.g. house parties, night clubs) that are common meeting places for heterosexual interaction as well as criminal activity (e.g., Agnew & Petersen, 1989; Cohen & Felson, 1979; Cloward & Ohlin, 1960; Osgood & Anderson, 2004; Osgood et al., 1996; Stark, 1987; Vazsonyi et al., 2002; Warr, 2005). Expanding on these ideas, Rebellon (2006) suggests that learning theories are a useful organizing perspective: 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; see also Anderson, 1999; Cleveland, 2003; Kanazawa & Still 2000; Moffitt, 1993). These researchers argue that adolescents may use delinquency to amplify their dating success, as risky behaviors can communicate a sense of autonomy and social power that may be valued by members of the opposite sex.

We extend this line of inquiry by considering dating involvement as a potentially significant influence on both the character of routine activities (Osgood et al., 1996) and the nature of adolescents' social ties and experiences (Giordano, 1995). Past studies are replete with examples that position peer relationships as central for understanding delinquent patterns among youth (e.g., Akers & Sellers, 2004; Haynie, 2001, 2002; Warr, 2002). Viewed from a social learning perspective, the delinquency of peers provides an example of how to behave in casual or unstructured settings and may further reinforce emerging antisocial tendencies (e.g., Rebellon, 2006). The routine activities perspective emphasizes the role of everyday interactions and opportunity structures in either amplifying or diminishing risk for delinquent involvement (Osgood et al., 2004, 1996; Haynie & Osgood, 2005; Warr, 2005). Other studies have examined the risks associated with unstructured adolescent contact by showing how isolation from school-based friendship networks is protective against some illegal activity (Demuth, 2004; Kreager, 2004).

The current research takes an integrated position on these dynamics (e.g., Matsueda & Anderson, 1998; Thornberry et al., 1994) by emphasizing that individuals are not simply passive recipients of a specific nexus of social contacts. As Emirbayer and Goodwin (1994) suggested, the individual has an important role in creating the very networks that will, nevertheless, exert a significant influence on them. This approach suggests a kind of agentic version of social learning theory that accords well with previous findings documenting a role of both selection (initial similarity) and socialization (mutual influence processes) in the observed concordance in behavior between adolescents and their friends (Kandel 1978). Youths also vary in their interest in, confidence entering and engagement with the dating world; a sociological view of these processes rejects a straightforward "kinds of people" explanation for expecting linkages between dating involvement and delinquent behavior (where both are associated with a 'latent trait' or biological predisposition, as suggested above). Instead, we argue that these relationships may actually influence criminal offending patterns by immersing youth in a delinquent or party subculture (Hagan, 1991) that provides additional definitions favorable for substance use and other risk-taking. 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). The more ambitious youth

would likely enjoy greater success in the dating arena, potentially expanding opportunities for unstructured socializing and involvement with more delinquent friends, acquaintances and romantic partners.

Dating Experiences Influence Identity Development

Prior research has shown that unstructured socializing and involvement with delinquent peers are related to self-reported involvement. The discussion above is consistent with this emphasis, but expands the focus on network influences to include attention to dating relationships, which may affect delinquency by virtue of amplifying such social opportunities and experiences. Another mechanism through which dating may influence patterns of delinquency, however, is through effects on the adolescent's developing identity.

Involvement with delinquent peers has repeatedly been linked to increases in the likelihood of delinquency (Warr, 2002, 1993), but the literature also shows that these interactions influence the youth's view of self as a troublemaker or rule-violator (Matsueda, 1992). Moreover, research has documented that these views of self, over time, are likely to increase commitment to delinquent lines of action (Raudenbush & Chan, 1992). The typical multivariate approach to delinquency examines a set of predictors considered as separate factors; thus tapping the adolescent's self-concept is potentially important, as it represents a crystallization of the various influences, suggesting how these combine at the level of the individual. Related to this, the self-concept is also understood as providing a level of organization and coherence, acting as a kind of cognitive lens that guides action, as the individual inevitably moves forward and confronts novel situations and choice points (Becker, 1963; Heimer & Matsueda, 1994; Matsueda, 1992; Mead 1934).

These observations fit well with symbolic interactionist emphases, as they highlight the importance of self processes, which are viewed as both a "social product and a social force" (Rosenberg 1981); yet most discussions in this tradition have focused on how peer factors (and to a lesser extent parents) influence identity development, leaving the influence of heterosexual experiences relatively unexplored (Longmore, 1998). Much prior research, particularly on male adolescents, privileges same gender peers as sources of identification and influence, whether the focus is on delinquent conduct, self-concept formation, or how these are connected. However, peer relationships are multi-faceted in their influence on adolescent development. This phase of the life course gains much of its distinctiveness due to teens' increased interest in and involvement with the opposite sex (Collins, 2003; Sullivan 1953). Thus, it is reasonable to expect that dating experiences are a source of further variation in the contours of the individual's identity. As adolescents begin to crystallize their identities, in most instances they will not initially aspire to become a 'felon,' or 'total burnout.' As Stryker (1980) and other self-theorists have argued, individuals do not seek to develop discrediting identities, but instead act based on apparently universal desire to maintain/enhance social and personal regard (McCall and Simmons 1966). However, as Matsueda (1992) cogently argued, this need not entail striving for success along traditional lines. Given the particularities of social influence processes and variations in available cultural capital, individuals may consider being known as a 'partier' (Hagan, 1991), a 'delinquent' (Rebellon & Manasse, 2004) and even a 'loyal gang member' (Anderson, 1999; Topalli, 2005) as worthy components of their identities. Moreover, due to the health risks associated with extensive dating involvement (i.e., unwanted pregnancy, STDs) the latter represents yet another motivational influence for the development and maintenance of a risk-taking self-concept.

The Role of Gender

While delinquent acts are frequently carried out with same-gender peers, a more complete assessment of the adolescent's identity portfolio requires some attention to the heterosexual realms of experience. One set of literature that is suggestive in this regard is that focused on "masculinities and crime." Scholars such as Messerschmidt (1993) and Katz (1988) have argued that male delinquency can be understood as an attempt to display or enact traditional notions of masculinity—by implication, then, not only does readiness to fight or loyalty to peers foster a traditionally masculine identity—aggressive pursuit of and success within the context of the heterosexual world potentially rounds out the dimensions of this type of masculine self. Indeed, Sanchez-Jankowski (1991) in a discussion of the utilitarian benefits of gang membership, noted that the male youth he studied often pointed out that their gang affiliations were an asset in attracting the interest of young women. Scholars such as Anderson (1999) have highlighted that particularly for disadvantaged, minority youth, success within the heterosexual world is particularly status-enhancing, since achievement in educational and occupational pursuits is often elusive due to structural constraints (see also Majors and Billson 1992; Coates 1999).

Feminist perspectives have highlighted that young women face much different social pressures and identity concerns, as "norms of comportment" (whether we focus on delinquency/conformity or the heterosexual arena) are gendered to a significant degree (Chesney-Lind & Sheldon, 2004; Steffensmeier & Allan, 1996). Chesney-Lind and Sheldon (2004), for example, point out that juvenile justice personnel, parents and the larger society have frequently approached girls' delinquency from the standpoint of an attempt to police their sexuality, as much if not more than to curtail their involvement in other problem behaviors. Girls' sexuality has also emerged as an important consideration in discussions of girls' involvement in gang life, although scholars differ on the role of these heterosexual liaisons (i.e., contrasting conceptions of female gang members as either independent actors or appendages to male members of the gang) (see Chesney-Lind & Hagedorn, 1999). While previous critiques have been offered for the "bad boyfriend" explanation of female crime/delinquency (e.g., Giordano, Cernkovich & Holland 2003), particularly as a stand-alone theory, these different traditions within the female crime literature do provide several reasons to expect gendered effects with regard to the influence of dating experiences.

Since female base rates of offending are generally low, on average (Steffensmeier et al., 2005), 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 to develop a delinquent identity. McCarthy, Felmlee, and Hagan (2004) recently documented that among school and 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 & Sampson 2003) have not always been found for women offenders (Giordano, Cernkovich, & Rudolph 2003; Leverentz 2006). This may be due to inequitable relationship contributions in delinquency between males and females (Nagin & Paternoster, 1994), or shifts away from delinquent peer groups in which males more frequently have been 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. Thus, a secondary objective of this analysis is to determine whether dating involvement differentially influences male and female adolescents' views of self as a troublemaker and odds of affiliating with delinquent peers, and in turn the likelihood of engaging in delinquent behavior and substance use.

Additional Complications—The Delinquency of the Romantic Partner

Further complicating the links between dating and delinquency is the possibility that the behaviors and attitudes of the romantic partner also contribute to an understanding of the adolescent's levels of involvement in delinquency and substance use (Giordano et al., 2003; Haynie et al., 2005; Lonardo et al., 2007; Longmore, Taylor, Giordano, & Manning, 2008; Simons et al., 2002). Prior research documents that romantic partners often share similar levels of involvement in crime and substance use, but has not offered a comprehensive portrait of how these associations are developed. The youth's overall orientation toward heterosexual interactions may play a crucial role in the 'types' of romantic partners that become available. As we have previously argued, the level of interest and involvement in dating is likely to expand, or contract, exposure and participation in unstructured and delinquent peer networks. As a result, opportunities for dating a conventional partner or a delinquent one may depend, at least in part, on the adolescent's more general pattern of dating, socializing, and peer involvements.

THE CURRENT STUDY

Building on prior cross-sectional research (e.g., Haynie et al., 2005), we examine the dating-delinquency relationship using three waves of panel data from the Toledo Adolescent Relationships Study. We hypothesize that adolescents who report relatively high levels of effort and involvement in dating relationships will also associate with delinquent peers and maintain troublemaking self-views that reflect these network experiences. Delinquent peer contacts and strong endorsement of the troublemaker identity will in turn heighten the risk for later delinquency and substance use.[1] In general, we expect that the relationship between dating and delinquency is mediated by peer contacts and self-views, however, we also explore conditional effects: dating predicts crime and substance use insofar as these heterosexual interactions are themselves associated with casual and delinquent peer contacts that provide reinforcement of troublemaking self-views. In contrast, dating that does not amplify such opportunities and normative influences will not prove to increase the risk of delinquency and substance use, but instead, reduce these behaviors— possibly through romantic involvement with a non-delinquent partner. Thus, as a final test, we examine the influence of early heterosexual experiences on the chances of dating a delinquent or substance using boyfriend/girlfriend. We hypothesize that youth with extensive dating histories are likely to form romantic partnerships based on their interactions within the delinquent peer network. Recognizing that over time, youth often go on to accumulate a number of romantic experiences (e.g., Carver et al., 2003), for these particular analyses, information on romantic partner delinquency is assessed across all three waves of data to determine the overall impact of dating on the type of partner with whom the adolescent affiliates.

[1]While our theoretical discussion focuses on the development of heterosexual relationships as an influence on the life-course of crime and substance use, it could be argued that extensive involvement in dating and juvenile offending are rather manifestations of the same underlying propensity toward risky activities (Gottfredson & Hirschi 1990; Jessor & Jessor, 1977). Accordingly, all of the wave 1 survey items were factor analyzed using a principle iterated extraction method and oblique rotation (Hatcher, 1994). Oblique rotation is preferred here as the factors are assumed to be correlated (Reise, Waller, & Comrey, 2000). Factors with Eigen-values below one were not extracted. The rotated factor pattern identified two major latent dimensions that explained over 99 percent of the total variance. All delinquency and substance use items and most of the identity items loaded strongly (.48 to .67) on the first dimension, which explains about 64 percent of the total variance. These same items loaded near zero on the second factor. In contrast, all items in the dating effort scale and the dating partner item loaded strongly (.44 to .65) on the second dimension, and close to zero on the first. This second dimension explained an additional 36 percent of the total variance. Only the 'partier' identity item loaded on both dimensions in relatively equal proportions. These supplemental analyses support our notion that high levels of dating involvement are conceptually distinct from the other risk-related behaviors and attitudes we examine in the models described below. Nevertheless, these two factors are positively correlated ($r = .28$, $p < .001$ [with the partier item]; $r = .27$; $p < .001$ [without the partier item]), consistent with our overall argument that extensive dating involvement heightens the risk for crime and substance use.

Our analyses control for observed criminal heterogeneity by including all waves of observation for delinquency and substance use in models testing the effects of dating on peer relationships and social identity. Moreover, unobserved heterogeneity is modeled in multilevel fashion by allowing the intercept and time to have a random variance component (see Appendix 1).[2] Traditional controls for school and familial influences are also included since strong attachment to these institutions are considered barriers for participation in delinquency (e.g., Cernkovich & Giordano, 1987, 1992; Simons et al., 2004). Further, in light of past research that suggests women, more so than men, are negatively influenced by heterosexual relationships, we explore the effects of dating involvement by gender using interaction terms so that we retain the full sample size for all tests of statistical significance.

DATA

Our research uses survey data from the Toledo Adolescent Relationships Study (TARS). The TARS data set is a longitudinal survey collected over three waves 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 attitudes and behaviors, as well as a broad range of other attitudinal and behavioral measures including items that pertain to social identity and delinquency. In addition, the TARS data include a variety of identity measures collected across all waves, making it possible to track the development of self-views over time.

The TARS 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 7th, 9th, and 11th 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 stratified, random sample was devised by the National Opinion Research Center and includes over-samples of African American and Hispanic adolescents.[3] Based on Census data, the socio-demographic characteristics of the Toledo metropolitan area closely parallel those of the nation in terms of race (13% in the Toledo MSA and 12% in the U.S. are African American); education (80% in the Toledo MSA and 84% in the U.S. are high school graduates); median family income ($50,046 in the Toledo MSA and $50,287 in the U.S.); and marital status (73.5% in the Toledo MSA 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. Parent reports from the first wave of data collection are used in this paper to gauge the levels of socioeconomic status and family structure.

In this study we rely on the three waves of the TARS data, converted into person-period format for the purpose of the longitudinal analysis.[4] 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 15.1 years in wave 1, 16.3 in wave 2, and 18.3 years in wave 3. The average time interval separating the second wave from the first is about 14 months, and approximately 21 months separate the third wave of interviews from the second. The total

[2]Estimates for the 'rate of change' (dating involvement X time) are explored in models for substance use, peer associations and social identity, however, as the effect size for a rate of change may be relatively small, BIC is used as a guide here for judging whether the a cross-product represents a general improvement in the model fit. Age effects are also explored (dating involvement X age) as the relatively older respondents (i.e. those with adult legal status) may be further along in their dating experience and thus relate differently to involvement in delinquency and substance use.

[3]The sampling frame was divided into 18 strata by grade, race/ethnicity, and sex. When students who were initially selected dropped out of the study, the sample was expanded by selecting the "next" unselected student from the same stratum. Sampling weights were calculated based on the inverse probability of selection.

[4]Multivariate data formats are converted in person-period formats by repeating each person-level id for all variables, across all longitudinal data waves (see Willet, 1998 for more detailed instructions).

time of the study ranges from 0 to 45 months, although the average study length is 35 months, or about 3 years (Table 1). The analytic sample (N= 1090) is based on respondents that answered the majority of the delinquency and substance use items at each interview.[5]

MEASURES

Dating Involvement

Dating Effort is measured at wave 1 with an 8-item scale. Three items ask respondents "how often do you 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 you 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; and keep pursuing her/him until you've got her/him?" Responses range (0) never, to (4) very often. A scale is created by taking the mean across all of the items. The intention of the dating effort scale is to capture, in a more holistic way, emerging attitudes and lifestyle choices.[6] *Number of Dating Partners* is measured at each wave. Respondents indicate the number of people of they have dated in the past 12 months. The number of dating partners is logged to normalize the distribution.[7] See table 1 for a listing of Cronbach alpha levels for all measurement scales.

Delinquency and Substance Use

Self-Reported Delinquency is measured with a 7-item scale, assessed at each interview, which asks respondents "how often in the past 12 months have you: stolen something worth 5 dollars or less; stolen something worth more than 50 dollars; damaged or destroyed property on purpose; carried a hidden weapon other than a plain pocket knife; attacked someone with the idea of seriously hurting him/her; sold drugs; and broken into a vehicle or building (or tried to break in) to steal something or just look around?" Responses range (0) never, to (8) almost daily. A scale is created by summing the responses. The resulting summation score is logged to normalize the distribution. *Self-Reported Substance Use* is a 3-item scale, assessed at each interview, which asks respondents "how often in the past 12 months have you: drank alcohol; been drunk in public; and used drugs to get high not because you were sick?" Responses range (0) never, to (8) almost daily. A scale is created by summing the responses. The resulting summation score is logged to normalized the distribution. The substance use and delinquency measures are adapted from the earlier scale development work of Elliott, Huizinga, and Ageton (1985).

Peer Associations and Social Identity

Unstructured Socializing is measured at each wave with one item that asks respondents "during the past week: how many times did you just hang out with your friends?" Responses range (0) not at all, to (3) five or more times. While this single measure of unstructured

[5]Logistic regression shows no significant relationship between the 20 (1.8% of the analytic sample) deleted cases that failed to answer the delinquency and substance use items and all other measures employed in the current study. Mean imputation is used to fill in the missing observations on the independent variables. Analyses for romantic partner substance use and delinquency employ a slightly smaller sample (1058) which excludes respondents who do not report dating anyone over the course of the study.

[6]See Rowe, Vazsonyi, & Figueredo (1997) for a related, albeit differently focused, measure of attitudes and behaviors toward effort and involvement in heterosexual relationships.

[7]Several of our predictors have an over-dispersed distribution where the variance exceeds the mean by a factor greater than 2. The natural log of these continuous variables is estimated in the multilevel analyses, however, the raw scores are presented in the descriptive results (Table 1). Logging the raw scores normalizes the distribution and reduces the influence that extreme outlying values have on the mean. This transformation also allows for an elasticity interpretation (Woolridge, 2000) for the effects of the logged continuous variables on the log of delinquency— that is a (p) percent increase in (y) for each 1 percent increase in (x). Non-logged predictors can be exponentiated to recover the percent increase in (y) per unit increase in (x). Further, logging continuous variables in multilevel models helps to ameliorate problems of non-convergence that arise due to unequal scaling across the variables (Singer and Willet, 2003).

socializing is less than ideal, it does reflect similarly to that of previous work (see Haynie & Osgood, 2005 for example). The *Friend Delinquency and Friend Substance Use* scales refer to the five friends that the respondent "hangs out with most of the time." These scales are measured with the same items as the self-report scales and are also logged to normalize their distributions. *Romantic Partner Delinquency and Substance Use* are measured with dichotomous indicators: (1) if the respondent implicates a romantic partner in any level of delinquency or substance use in the past 12 months (same as the delinquency and substance use scales above), and (0) if not.

Troublemaker Identity is measured at all three waves with a 3-item scale that was created from a larger list of items that ask respondents "to what extent do you agree that others would describe you as: a partier; something of a hell-raiser; a troublemaker; smart; well-liked; and popular?" As such, this approach taps the reflected appraisals of others, which is strongly linked to but not identical to the adolescent's own self-appraisal (Matsueda, 1992). Factor analysis reveals that three items (troublemaker, partier, and hell-raiser) share loadings on one factor that range, on average, between .45 and .67.[8] These results suggest a single-factor solution for the three identity items which we labeled "troublemaker." The items that measure the troublemaker identity range (0) strongly disagree, to (4) strongly agree. At each wave, the mean of the three items is taken to create a scale.

Controls

Parent and School Attachments—*Parental Attachment* is measured at wave 1 with a 5-item scale from the teen survey that assesses 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. *School Attachment* is measured at wave 1 with a 2-item scale that reflects the level of investment that respondents place on academics. 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. *Grades* are measured at wave 1 with a single item that asks respondents what kind of grades they received, on average, in school the past year. If respondents had dropped-out of school or not attended the previous year, the question refers to when they were in school. Responses range (9) almost all A's, to (1) almost all F's.

Socio-Demographics—*Age* is measured in years at the first interview. *Gender* is dichotomized (1= female). *Race/Ethnicity* is represented with four dummy variables: white, black, non-white Hispanic/Latino, and 'other' race/ethnicity, with white as the reference category. *Family structure*, measured at first interview, is dichotomized (1 = two biological parent household) and (0 = for other family structures). Parent socioeconomic status is measured with annual parent *income* that ranges (1) less than 25,000 to (9) over 75,000, and *parent education* that ranges (1) 1st–8th grade to (7) obtained a professional degree or more than a 4-year college.[9] *Time* is clocked by the number of months since the first interview. All respondents have a value of zero for time at first interview and then vary from one another for the two follow-up interviews.

[8]The principle iterated extraction method and oblique rotation (SAS 'promax') is preferred here as factors are assumed to be correlated. The troublemaker factor reported Eigen values above 1 across all waves.

[9]The reporting parent is the biological mother of the adolescent respondent for over eighty percent of the sample. The next largest parent category is the biological father who makes up approximately eight percent of the parent sample.

RESULTS

Descriptive results (Table 1) show that the sample mean for dating effort is in the midrange, while respondents report having between 2 to 3 dating partners, on average, at each wave. Only about three percent (n = 32) of the analytic sample reports no dating partners across all three waves (not in Table 1). Relatively low levels of delinquency are reported at each wave, with no significant change in mean scores over the three waves. Compared to delinquency, the frequency of substance use is higher and shows significant growth over time.[10] Mean levels of unstructured socializing, friend delinquency and substance use also show significant changes between the first and third waves, with delinquency and substance use increasing ($t = 20.25$, and $t = 4.26$ $p<.001$, respectively), while unstructured socializing decreases ($t= -4.31$ $p<.001$). At waves 1 and 3, about twenty percent of the sample report involvement with a delinquent romantic partner, while this percent in slightly lower (by about five percentage points) at wave 2. Involvement with a substance using partner is more common, with about thirty-eight percent dating at waves 1 and 2, followed by a relatively large increase (63.76%, McNemar's test: 185.78, $p<.001$) at wave 3. Mean levels for the troublemaker identity are low, indicating that respondents, on average, do not agree with this self attribution and levels of agreement remain relatively stable across all waves (descriptive statistics for the control variables are also listed in Table 1).

The far-right column in Table 1 compares raw mean scores by gender using between-persons t-tests and chi-square tests (results not shown). An asterisk in the male column indicates a significantly higher value for males and an asterisk in the female column indicates a significantly higher value for females. Male respondents, compared to female respondents, score higher on the dating effort and dating partner measures, and report higher mean scores for delinquency at all waves. A male-female gender gap does not emerge for substance use until the third wave. Males also report consistently higher levels of unstructured socializing and delinquency of friends, while friends' substance use is similar across gender until wave 3 when the male average surpasses the female average by a significant margin. Female respondents, at all waves, are more likely than male respondents to indicate a romantic partner involved in delinquency and substance use (see Table 1 for gender comparisons among the control variables).

Table 2 presents the fixed effects for the multilevel model estimates of peer associations and the troublemaker identity; below are interactions related to gender.[11] Friend delinquency/substance use and the troublemaker identity are predicted by models that include two indices of dating involvement (dating effort and the number of dating partners) and other controls. As hypothesized, dating involvement is significantly related to levels of involvement in unstructured socializing, friends' delinquency and substance use, and troublemaking self-views. These effects are observed, net of controls for self-reported delinquency and substance use, attachments to parents and school, and socio-demographics (not in Table 2)[12]. Gender interactions with dating involvement reveal some instances of greater risk for

[10]Within-persons t-tests are non-significant for self-reported delinquency (w2-w1: $t = .43$, w3-w2: $t= .97$, w3-w1: $t = 1.30$, all $p>.10$) Within-persons t-tests confirm significant positive increases in mean scores for self-reported substance use (w2-w1: $t = 12.10$, w3-w2: $t = 13.83$, w3-w1: $t = 22.45$, all $p<.001$).

[11]In all multivariate analyses, self-reported delinquency and substance use is matched with its 'friend' analog measure. For example, self-reported substance use (not delinquency) is controlled for in the model that estimates friends' substance use. And in the models for romantic partner delinquency and substance use, matched self-reported and friend measures are included. Unstructured socializing and troublemaking self-views are also controlled for in all full model estimates. This modeling strategy recognizes the mutually influential role of peers, identity, and past behavior, while providing a statistically conservative test for the effects of dating involvement in relationship to these factors.

[12]For the purpose of conserving journal space, only the effects for the focus variables (dating involvement) are presented in Table 2. In these models, the effects of the control variables on peer associations and the troublemaker identity are similar to results for delinquency and substance use shown in Table 3 (results available by request).

females. Dating effort significantly increases female risk of associating with delinquent and substance using friends (b= .149 and b= .175 p<.001, respectively), but this is not the case for male respondents (b= .017 and b= −.055, non-significant). The effects of multiple dating partners on troublemaking self-views is also stronger for females than males, however it is significant for both subgroups (b= .160 p<.001 female, b=.069 p<.05 males). Finally, the cross-product (log number of dating partners X time) reveals a small positive increase in the rate of change (b= .003 p<.01) in identification with the troublemaker identity (not in Table 2). This suggests that involvement with multiple partners during the later waves is somewhat more strongly related to deviant self-views than is the case at the beginning of the study. Age effects (dating involvement X age) reveal no significant model improvements.

Table 3 presents the multilevel estimates for self-reported delinquency and substance use. Model 1 for delinquency and substance use indicates a positive and significant influence for the effects of dating involvement, net of controls for parent and school attachments and socio-demographic indicators. Model 2 adds peer associations and identity, which are positive and significant in their effects on the dependent variables, however, the indicators for dating involvement are no longer significant in the full models. These results suggest that the dating-delinquency relationship is mediated through delinquent and unstructured peer contact and identification with troublemaking self-views. Further, adding this block of variables reduces the effect of gender to non-significance in the model for delinquency, while in the model for substance use, female mean levels emerge as significantly higher than male levels. In both cases, these results reinforce the notion that the higher average self-reported delinquency and substance use among males is partially attributed to their greater involvement in deviant peer networks and stronger endorsement of the troublemaker identity. However, among females that are similar to males in these respects, delinquency is quite similar and substance use is significantly higher. Model 2 focusing on delinquency indicates no significant age effects or change in trajectory (months into study), while substance use is significantly higher among the relatively older respondents and rises significantly over time. Further, the cross-product (log number of dating partners X age) is significant (b= .029 p<.01), indicating a stronger association between dating and substance use among youth in later adolescence and early adulthood (not in Table 3). [13]

The findings in Table 4 indicate that the dating-delinquency connection is significantly moderated by peer associations and the troublemaker identity. This applies to all but one interaction (log number of dating partners X unstructured socializing) suggesting the importance of these intervening mechanisms. Moderation effects are less prevalent in the model for substance use, appearing only in cross-products that include friends' substance use. Table 5 shows the effects of dating involvement on self-reported delinquency and substance use according to the level of agreement with the troublemaker identity and extent to which unstructured socializing and delinquent peer contacts are engaged. At average (mean) levels of the moderators, dating involvement is not significantly related to self-reported delinquency, and in only one respect does it share a significant relationship with substance use. At higher levels (+1 S.D. above mean), however, dating involvement is consistently associated with increases in delinquency and substance use. In contrast, the interactions also indicate some instances where dating involvement is associated with lowered participation in delinquency, specifically where levels of friends' delinquency and the troublemaker identity are at least one standard deviation below their means.[14] Gender

[13]The random variance components for intercept and time indicate that, net of controls, there is significant unexplained variability in the initial levels of delinquency and substance use, as well as change in these scores over time. The models' chi-square indicates that the multilevel estimates are a significant improvement over pooled-OLS. The decrease in BIC from models 1 to models 2 indicates an improvement in the goodness-of-fit. The models' rsquare statistics indicate the total proportion of variance explained between and within-person levels of delinquency and substance use.

interactions (not in table) indicate that the effect of dating partners on substance use is only significant among females (b= .067 p<.001).

Table 6 presents results from the generalized estimating equations for the log odds of dating a romantic partner involved in delinquency and substance use. Findings indicate that the overall number of dating partners reported has a significant and positive influence on these odds, net of peer associations, past behaviors, self-views, and socio- demographic indicators. However, the influence of dating effort is significant only among females. These results equally imply that, among youths who are limited in their dating experience, the romantic partners with whom they are involved tend to avoid delinquent behavior and abstain from drug and alcohol use. The indicators for unstructured socializing and the troublemaker identity are significant in reduced models (not in Table 6) but fail to achieve statistical significance after including controls for the behavior of friends and self-reported involvement in delinquency and substance use. Models indicate that relatively older, female respondents are at a significantly greater risk than are younger male respondents for involvement with a romantic partner who participates in delinquency and substance use. Finally, interactions by age and time reveal one significant cross-product (dating effort X time on partner delinquency: b= −.013 p<.01) which suggests that higher levels of dating effort initially associated with partner delinquency (b= .325, p<.001), over time (an average of two years), are no longer significant (not in Table 6).

DISCUSSION

Previous research has long recognized that adolescent dating involvement shares an association with delinquent behavior (Hirschi, 1969; Jessor & Jessor, 1977; Thomas, 1967), yet surprisingly few studies have examined the influence of heterosexual relationships on crime and risk-taking, as well as peer contacts and developing self-views. The above analyses indicate that involvement in dating, along with more traditional predictors, influences peer associations and identity development processes, which in turn influence levels of self-reported delinquency and substance use. Youth who dedicate only a small amount of effort toward dating may spend less time pursuing relationships in contexts where risky and delinquent behavior is prevalent, and may develop fewer “definitions favorable to the violation of law” (Sutherland, 1947). As a consequence, identity is likely to be informed to a greater extent by contacts within more conventional social arenas (i.e., family and school), thereby lessening the degree to which delinquent modes of conduct are perceived as viable choices. However, for those youth who are more highly engaged in the pursuit of new dating partners, this may lead to more social settings with criminogenic potential, and the development of an identity that amplifies youth’s delinquent behavior and substance use. Moreover, evidence of an age effect is found, suggesting a stronger relationship between dating and substance use among older respondents. These findings emphasize the role of lifestyle choices in early adulthood, connecting the ‘single-life’ with routine opportunities for drug and alcohol use and delinquent behavior.

The dating-delinquency relationship is further complicated, however, as evidence shown here reveals a link between youths’ overall orientations toward dating and the delinquent/substance using qualities of their romantic partners. This suggests that the risks related to extensive involvement in dating have multiple effects, as youths most heavily involved in the dating world are also more likely affiliated with romantic/sexual partners who have criminal histories. Furthermore, the link between heterosexual contacts and identity also

[14]Targeted-centering (DeMaris, 2004) is used to test for significance across levels of the moderator. This method allows SAS to compute the significance test and avoids the otherwise tedious hand computation of covariance algebra that is normally required to evaluate the effects of x on y, across levels of z.

intensifies over time, where involvement in multiple dating relationships is more supportive of the troublemaker identity in the later waves of the study than earlier in adolescence.

Analyses highlight some areas of similarity as well as difference by gender. The influence of dating involvement is evident for males and females, however, these heterosexual contacts seem to place females at a relatively greater risk for delinquent peer associations and troublemaking self-views. Female compared to male levels of substance use are also found to be more often associated with multiple dating relationships. Findings further highlight that involvement in dating place females at a relatively greater risk because of the tendency of more sexually active women to involve themselves with a romantic partner who may encourage deviant and illegal conduct. And while females are, on average, less likely than males to associate with delinquent peers and to endorse the troublemaker identity, those who are similar to males in these respects also participate in similar levels of delinquency and report relatively higher rates of substance use.

In spite of these differences between males and females, more limited involvement in the dating world in connection with non-delinquent friendship associations appears to confer a prosocial benefit for both genders. This finding is potentially important, because past research on female delinquency has posited a strong role for negative male influence on girls' delinquency (Haynie, 2003; Simons et al., 2002). The current research finds some evidence supporting this claim, but adds to the literature by showing that the differential response to heterosexual involvement depends on involvement in other social relationships (delinquent or prosocial orientation of the peer group) as well as the adolescent's self-concept.

In current analyses, risk-taking behaviors as well as traditional delinquency predictors have been taken into account, suggesting that the heterosexual realms of experience have consequences for crime and substance use above and beyond individual dispositions toward deviance. While it may be argued that the dating-delinquency relationship is spurious (the notion that both are products of a stable trait or an extension of early childhood), the symbolic interactionist perspective is useful for understanding why these areas of life coalesce during adolescence. The social experiences that accompany sex and romance add new dimensions to the ways in which peers interact and relate to one another. Staying out past curfew, for example, may facilitate a youth's desire to rendezvous with a romantic partner and cruising bars may facilitate casual sexual encounters, however, these social routines may also increase the opportunity for crime (and victimization) and further reinforce a view of self that favors risky and illegal conduct. Yet it is important to highlight that these routines may be structured around the actors' interest in heterosexual contact and not necessarily motivations that are anti-social or inherently unlawful (e.g., Felson, 1994; Katz, 1988). This adds to prior theorizing about criminal activity that has long emphasized the degree to which such acts may be associated with motivations that extend beyond the purely utilitarian (e.g., Cohen's 1955 notion of short-run hedonism).

There are several limitations to the current study. The localized nature of the TARS sample limits the generalizability of these results. In addition, the timing of the study censors our ability to explain initial (wave 1) variation, not only in crime and deviance, but in dating effort and involvement as well. Experiences in early childhood may have contributed to the variability in both of these behaviors. 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. Our analysis has also emphasized heterosexual relationships, suggesting the need to explore these relationships among gay and

lesbian youth. And although these results suggest that it is important to take into account dating experiences as well as criminologists' more traditional focus on the delinquency of one's peers, more research is needed on the mechanisms through which and conditions under which dating effort/involvement amplifies or acts as protective factor in relation to involvement in delinquency and substance use. Certainly, the conditional effects suggest complex linkages between identity, social experiences and behavioral choices that need greater research scrutiny. The findings presented here, at a minimum, serve to round out the portrait of the social life of the budding delinquent and are potentially useful given the centrality of heterosexual relationships to the developmental work that is associated with the adolescent period (Sullivan 1953).

More research is also needed on the gendered aspects of heterosexual experiences and how they relate to delinquent behavior. Early research and juvenile justice personnel alike frequently sexualized girls' offenses—as Chesney-Lind and Sheldon (2004) 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). 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 behavior appear not only to heighten risk for such outcomes as sexually transmitted infections and pregnancy, but for later delinquent behavior and substance use as well.

Acknowledgments

This research was supported by a grant from the National Institute of Child Health and Human Development (HD36223), and by the Center for Family and Demographic Research at Bowling Green State University, which has core funding from the National Institute of Child Health and Human Development (HD042831-01).

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Appendix 1. ANALYTIC STRATEGY

We use a multilevel procedure and three waves of data to estimate regression parameters for the variables: unstructured peer socializing; friend delinquency/substance use; the troublemaker identity; and self-reported delinquency and substance use. These regression equations are capable of calculating rates of change as well as the overall stability of a behavior or attitude by including multiple, time-ordered, observations of the dependent variable(s) in the estimation of the beta coefficients. This statistical method improves upon ordinary-least-squares estimates and cross-sectional designs by modeling the serially correlated and heteroscedastic error structure that underlies time-series panel data (see Lauretsin (1998); Raudenbush & Chan (1992) for related discussions). The variable representing time (months into study), and the intercept are modeled as fixed effects with a

random variance component. By allowing the intercept to have a random variance component, we model the differences in the estimate of error between-persons (i.e. heterogeneity), and by allowing time to have a random variance component, we model the differences in the estimate of error within-persons (i.e. over time).

The multilevel regression is conceptualized as a two-level model, but for ease of interpretation, we present level one and two models as a composite.

Composite Model:

$$Y_{ij}=\sum_{i=1}^{n}0_i\gamma_k X_{ik}+(\varepsilon_{ij}+\zeta_{0i}+\zeta_{1i}\mathrm{Time}_{ij}).$$

The notation $\sum_{i=1}^{n}0_i\gamma_k X_{ik}$ is the structural part of the model and represents a vector of fixed effects and the intercept for the *i*th respondent at the *j*th time of measurement. The notation ($\varepsilon_{ij} + \zeta_{0i} + \zeta_{1i}$ Time $_{ij}$) is the stochastic part of the model and represents the random variance components (ζ) for time and the intercept, and the error (ε). Although not formally presented above, the models for delinquent and unstructured peer socializing, troublemaker, and substance use take the same form as the model for delinquency. The models for romantic partner delinquency/substance also use information from all three waves, but because these variables are measured dichotomously and are assumed to be correlated over time, a generalized estimating equation for the log odds of these relationships was selected for these particular analyses (see Carey, Zeger, & Diggle, 1993).

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Table 1

Descriptive Statistics and Gender Comparisons

	Mean or %	S.D.	Range		Alpha	Male	Female
Dating Involvement							
(Wave 1) Dating Effort	2.04	0.77	0	4	.81	*	
(Wave 1) Number of Dating Partners	2.62	4.56	0	52		*	
(W2) Number of Dating Partners	2.20	2.91	0	45		*	
(W3) Number of Dating Partners	2.91	4.37	0	60		*	
Delinquency and Substance Use							
(Wave 1) Self-Reported Delinquency	0.98	3.24	0	49	.80	*	
(W2) Self-Reported Delinquency	1.06	3.36	0	38	.78	*	
(W3) Self-Reported Delinquency	1.18	3.38	0	31	.75	*	
(Wave 1) Self-Reported Substance Use	1.82	3.46	0	22	.77		
(W2) Self-Reported Substance Use	2.92	4.31	0	21	.75		
(W3) Self-Reported Substance Use	4.10	4.73	0	22	.74	*	
Peer Associations and Social Identity							
(Wave 1) Unstructured Socializing	2.12	0.93	0	3		*	
(W2) Unstructured Socializing	2.11	0.92	0	3		*	
(W3) Unstructured Socializing	1.96	0.98	0	3		*	
(Wave1)Friend Delinquency	2.52	4.85	0	48	.75	*	
(W2) Friend Delinquency	2.73	5.74	0	51	.82	*	
(W3) Friend Delinquency	3.47	6.94	0	56	.84	*	
(Wave1)Friend Substance Use	3.61	5.11	0	24	.85		
(W2) Friend Substance Use	4.87	5.48	0	24	.80		
(W3) Friend Substance Use	7.15	5.85	0	24	.75	*	
(Wave 1) % Dating a Delinquent Partner	20.18%		0	1			*
(W2) % Dating a Delinquent Partner	15.50%		0	1			*
(W3) % Dating a Delinquent Partner	20.20%		0	1			*
(Wave 1) % Dating a Substance Using Partner	38.35%		0	1			*
(W2) % Dating a Substance Using Partner	38.39%		0	1			*
(W3) % Dating a Substance Using Partner	63.76%		0	1			*
(Wave 1)Troublemaker Identity	1.52	0.86	0	4	.67	*	

	Mean or %	S.D.	Range		Alpha	Male	Female
(W2) Troublemaker Identity	1.55	0.84	0	4	.67	*	
(W3) Troublemaker Identity	1.48	0.85	0	4	.67	*	
Controls (Wave 1)							
Parental Attachment	3.96	.647	1	5	.76		
School Attachment	4.13	.713	1	5	.66		*
Grades	6.21	2.06	1	9			*
Age in Years	15.1	1.67	12	19			
Gender (Female = 1)	49.76%		0	1			
Race/Ethnicity							
White	67.75%		0	1			
Black	23.22%						
Non-White Hispanic/Latino	6.72%						
Other Race	2.32%						
Family Structure (Two Biological Parents = 1)	52.99%		0	1		*	
Parent Income	3.29	2.06	1	9			
Parent Education	4.16	1.53	1	7			
Time at Wave 2 (in months since first interview)	13.88	1.94	10	22			
Time at Wave 3 (in months since second interview)	21.35	2.27	12	32			
Total Time in Study	35.24	2.48	28	45			

N = 1090

*The asterisks indicate a significantly higher score ($p<.05$) for the corresponding gender category

Note: Source—Toledo Adolescent Relationships Study. Means and proportions are weighted.

Table 2

Multilevel Regression Estimates for Dating Involvement Predicting Peer Associations and the Troublemaker Identity

Independent Variables:	**Dating Effort**		**Log Number of Dating Partners**		**Model R-square**
Dependent Variables:	b	S.E	b	S.E	
Unstructured Socializing	.151***	.028	.112***	.027	.091
Log Friend Delinquency	.085***	.022	.095***	.021	.372
Log Friend Substance Use	.117***	.020	.059**	.019	.567
Troublemaker Identity	.213***	.027	.108***	.022	.267
Dating Involvement by Gender:					
Independent Variables:	Dating Effort X Female		Log Number of Dating Partners X Female		
Dependent Variables:	b	S.E.	b	S.E	
Unstructured Socializing	−.012	.053	−.051	.052	
Log Friend Delinquency	.131**	.015	.025	.040	
Log Friend Substance Use	.120**	.038	.022	.037	
Troublemaker Identity	−.102	.533	.089*	.042	

N = 1090

Note: All models include controls for peer associations (expect romantic partner), troublemaker identity, delinquency/substance use, parent and school attachments, and socio-demographic indicators. Dating effort and dating partners are introduced simultaneously into the models. Random variance components for time and the intercept were estimated for each model but are not presented.

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Table 3

Multilevel Regression Estimates for Self-Reported Delinquency and Substance Use

		Delinquency Model 1		Delinquency Model 2		Substance Use Model 1		Substance Use Model 2	
Fixed Effects:	**Dating Involvement**	b	S.E	b	S.E	b	S.E	b	S.E
	Dating Effort	.117***	.020	.028	.016	.197***	.026	.032	.019
	Log Number of Dating Partners	.063***	.017	.001	.015	.107***	.019	.029	.016
	Peer Associations and Social Identity								
	Unstructured Socializing			.020*	.010			.054***	.011
	Log Friend Delinquency/Substance Use			.307***	.012			.437***	.013
	Troublemaker Identity			.112***	.011			.162***	.013
	Controls								
	Parental Attachment	−.116***	.024	−.054**	.019	−.151***	.031	−.075***	.022
	School Attachment	−.051***	.008	−.044*	.019	−.134***	.030	−.027	.022
	Grades	−.107***	.023	−.022***	.007	−.028**	.011	.001	.008
	Age (in years)	−.019*	.009	−.009	.007	.159***	.011	.082***	.009
	Gender (Female = 1)	−.138***	.030	−.046	.024	.057	.039	.065*	.028
	Black	.007	.040	.011	.032	−.388***	.051	−.211***	.037
	Non-White Hispanic/Latino	.187***	.051	.107***	.040	.069	.065	.005	.047
	Other Race	−.029	.098	−.012	.078	−.142	.126	−.109	.090
	Family Structure (Two Biological Parents = 1)	.006	.037	.040	.029	−.044	.047	−.009	.034
	Parent Income	−.002	.005	.001	.004	.008	.006	.007	.004
	Parent Education	.007	.008	.010	.007	.034**	.011	.029***	.008
	Time (Months into Study)	.001	.001	.000	.001	.017***	.001	.008***	.001
Random Variance Components:	Intercept	.147***	.016	.068***	.012	.292***	.022	.122***	.015
	Time	.001***	.000	.001***	.000	.001***	.000	.001***	.000
Summary Statistics:	BIC	6085.9		5314.2		7010.6		5803.3	
	Model χ^2	399.83***		163.68***		399.83***		280.6***	
	Model R-square	.137		.367		.314		.578	

N= 1090

Table 4

Moderating Influences in the Dating-Delinquency Relationship

Dependent Variables:	**Delinquency**		**Substance Use**	
Interaction Terms:				
Dating Effort X	b	S.E.	b	S.E
Unstructured Socializing	.036**	.013	.014	.014
Log Friend	.095***	.014	.054***	.014
Delinquency/Substance Use				
Troublemaker Identity	.042***	.012	.009	.014
Log Number of Dating Partners X				
Unstructured Socializing	.027	.015	.018	.015
Log Friend	.050***	.014	053***	.014
Delinquency/Substance Use			.	
Troublemaker Identity	.053***	.014	.022	.015

Table 5

Effects of Dating Involvement by Level of the Moderator

Level of the Moderator:	**Low**		**Average**		**High**	
Delinquency	b	S.E.	b	S.E.	b	S.E.
Dating Effort by Levels of:						
Unstructured Socializing	−.046	.032	.030	.017	.064**	.021
Log Friend Delinquency	−.058**	.020	.032	.016	.120***	.021
Troublemaker Identity	−.013	.021	.028	.016	.070***	.020
Log Number of Dating Partners by Levels of:						
Log Friend Delinquency	−.060**	.022	−.012	.016	.036*	.018
Troublemaker Identity	−.064**	.023	−.010	.016	.044*	.019
Substance Use						
Dating Effort by Levels of:						
Log Friend Substance Use	−.006	.022	.040*	.019	.084**	.026
Log Number of Dating Partners by Levels of:						
Log Friend Substance Use	−.021	.022	.030	.016	.080***	.022

Note: Unstructured socializing is considered low and high at the minimum and maximum range of the survey item. Friends' delinquency, substance use, and the troublemaker identity scales are consider low at one standard deviation below the mean and high at one standard deviation above the mean.

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Table 6

Generalized Estimates for the Log Odds of Romantic Partner Delinquency and Substance Use

Dependent Variables:	**Partner Delinquency**		**Partner Substance Use**	
Independent Variables:				
Dating Involvement	b	S.E.	b	S.E
Dating Effort	.074	.078	.155*	.070
Log Number of Dating Partners	.565***	.079	.875***	.078
Self-Reported Delinquency and Substance Use				
Delinquency/Substance Use	.538***	.078	.617***	.071
Peer Associations and Social Identity				
Unstructured Socializing	−.001	.055	−.092	.050
Log Friend Delinquency/Substance Use	.486***	.060	.398***	.061
Troublemaker Identity	.035	.055	.007	.053
Controls				
Parental Attachment	−.123	.083	−.047	.078
School Attachment	−.068	.085	−.088	.076
Grades	−.035	.031	.036	.028
Age (in years)	.069*	.033	.269***	.031
Gender (Female = 1)	1.22***	.120	.852***	.102
Black	−.004	.144	−.517***	.134
Non-White Hispanic/Latino	−.091	.182	−.097	.163
Other Race	.149	.367	−.454	.325
Family Structure (Two Biological Parents = 1)	−.120	.116	−.055	.105
Parent Income	.020	.028	.049*	.025
Parent Education	−.044	.039	−.040	.035
Time (Months into Study)	.003	.003	.020***	.003
Interaction Terms:				
Dating Effort X Female	.216*	.096	.230*	.095
Log Number of Dating Partners X Female	.220	.155	.294	.151

N = 1058

Note: Interaction terms are estimated in full models not shown here.