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Sex Differences in the Influence of Relationships on Adolescent Offending

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Abstract: The impact of romantic relationships during the adolescent period has received significantly less attention in the literature compared to the influence of romantic relationships during adulthood. Specifically, how these influences may differ between females and males. As such, the current study uses four waves of data from the Pathways to Desistance study to examine how elements of romantic relationships, including relationship quality, monitoring, and antisocial influence, affect adolescent delinquent behaviors by sex. Results indicated several important findings regarding the desistance effects of romantic relationship quality, monitoring, and antisocial influence on adolescent violent and non-violent offending, and these varied widely by sex. Limitations, future research, and policy recommendations are discussed.

Keywords: sex differences; adolescence; adolescent offending; romantic relationships; desistance



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1. Introduction

Adolescence is the period between the onset of puberty and when individuals achieve self-sufficiency (Blakemore and Mills 2014). During this time, individuals start to develop their own identities separate from their families and peer groups, gain independence, and begin to acquire the necessary social skills to develop adult relationships. Additionally, this is the period in which adolescents move from only close relationships with families and peers to the development of romantic relationships (Adams et al. 2001; Giordano et al. 2006).

Prior to adolescence, interactions are typically with peers of the same sex (Furman 2002; Maccoby 1990; Zimmer-Gembeck 2002). However, as juveniles move into middle adolescence, they start forming mixed-sex friend groups, and romantic relationships typically follow (Furman 2002; Zimmer-Gembeck 2002). By age 16, approximately 60% of adolescents report having a romantic relationship (Carver et al. 2003), and by the end of high school, between 70% and 90% of individuals report having been involved in some type of romantic relationship (Zimmer-Gembeck 2002). This period of juvenility is marked by significant social learning and the ability for an adolescent to engage in a peer group (Del Giudice et al. 2009). However, this is not without cost as adolescents may engage in social competition for status and dominance within their chosen group, and this competition can carry over into adulthood (Del Giudice et al. 2009).

Scholars suggest that like peer relationships, adolescent romantic relationships have similar influences. While the influence of being in a romantic relationship has been studied in some depth, less is known about how the quality of adolescent romantic relationships influence involvement in delinquency between girls and boys. Using the theoretical foundations of Sampson and Laub's (1993) age-graded theory of informal social control, the

current study uses data from the Pathways to Desistance Study to examine how specific elements of romantic relationships, including quality, monitoring by a partner, and antisocial influence of a partner, affect violent and non-violent self-reported offending in adolescence, with special attention to variations between participant sex and type of offending.

1.1. Review of Literature

Romantic relationships during adolescence are important for various reasons, including adolescent functioning, long-term outcomes (Collins 2003), the development of independence, dating, and sexual behaviors (Adams et al. 2001; Giordano et al. 2006). However, it is not just being in a romantic relationship that matters. The quality of the romantic relationship is important for positive feelings of self-worth (Harter 1999; Kuttler et al. 1999). However, adolescent romantic relationships are not always positive and, instead, can also play a negative role in adolescents' lives (Florsheim and Moore 2008). Adolescents who are in romantic relationships may be more likely to experience conflict and mood swings compared to those who are not in romantic relationships (Larson and Richards 1994; Savin-Williams 1996). Moreover, romantic relationships may facilitate participation in risky behaviors, including substance use and unprotected sex (Crouter and Booth 2006; Seefeldt et al. 2003). Further, antisocial boys and girls have been found to gravitate toward romantic partners who are also involved in antisocial behavior (Capaldi and Crosby 1997; Moffitt et al. 2001).

According to McCarthy and Casey (2008), adolescent romantic relationships should operate in terms of attachments as other relationships do. They hold that the quality of adolescent romantic attachments and strengths of the bonds should influence antisocial behaviors. That is, adolescents with strong attachments should have a decrease in delinquent behaviors, but those with weak attachments will have no appreciable effect on delinquency. This could be explained by individual factors such as impulsivity. Further, strong, high-quality adolescent romantic relationships may have even more of a deterrent effect on adolescent delinquency than peer relationships, which are usually thought to impact delinquency involvement, likely because this is the age when romantic relationships start to matter more compared to peer relationships (McCarthy and Casey 2008). Moreover, romantic relationship quality is associated with the effect of one's relationship on desistance (Forrest 2014). However, if individuals are not emotionally invested in their partners and relationships, then desistance may not occur (Forrest 2014). Research has established that youth develop romantic relationships during adolescence. However, the quality of these romantic relationships are not readily assessed (Adams et al. 2001). Healthy, or positive, adolescent romantic relationships are marked by support, trust, open communication, affection, intimacy, nurturance, increased likelihood of positive relationships in early adulthood, and partners who are of similar age (Galliher et al. 2004; Gavin and Furman 1996; Sorensen 2007). Unhealthy, or negative, adolescent romantic relationships are characterized by conflict, irritation, and antagonism (Galliher et al. 2004). An increased quality of adolescent romantic relationships is associated with higher levels of self-worth and self-esteem (Barber and Eccles 2003; Connolly and Konarski 1994), and as adolescent's age, the quality of their romantic relationships should increase in terms of intimacy, companionship, and closeness (Buhrmester and Furman 1987; Shulman and Scharf 2000).

In terms of monitoring, while much of the literature on monitoring and adolescent behavior focuses on parental monitoring, there is a growing interest in understanding the role of monitoring by romantic partners. Studies have found that adolescents in relationships characterized by high levels of monitoring tend to exhibit lower levels of delinquency and criminal behavior (Giordano et al. 2015). This suggests that monitoring within romantic relationships operates similarly to parental monitoring in deterring delinquent behavior. Further, Angulski et al. (2018) used data from the Pathways to Desistance study to parse out the connection between romantic relationships and substance use. They found that individuals with higher levels of partner monitoring were less likely to be intoxicated, use marijuana, or use hard drugs.

1.2. Assortative Mating

Numerous researchers have documented the influence of assortative mating on marriage and subsequent antisocial and criminal behavior (Caspi et al. 1990; Krueger et al. 1998). Assortative mating posits that people choose like-minded partners (Caspi et al. 1990) and, as such, antisocial individuals have a higher likelihood of selecting other antisocial individuals to mate with (Caspi et al. 1990). Support for assortative mating has been found in studies of criminal convictions in general (Rowe and Farrington 1997), marijuana use (Yamaguchi and Kandel 1997), and antisocial behavior (Capaldi and Crosby 1997; Kim and Capaldi 2004; Moffitt et al. 2001). Even when geographical, educational, and social factors are accounted for, individuals consistently select partners based on similar cognitive abilities and personality traits (Caspi et al. 1990). If individuals select spouses based on shared traits, then it is possible that romantic relationships may reinforce both positive and negative behavior (Caspi et al. 1990). Therefore, romantic relationships may substantially contribute to continuity in behavior because, by selecting certain mates, individuals are selecting their environments until the relationship ends (Caspi et al. 1990). Moffitt et al. (2001) note that antisocial women who were partnered with antisocial men demonstrated both persistence and increases in their personal antisocial behavior. However, if antisocial women partnered with prosocial men, then this promoted women's desistance (Moffitt et al. 2001). Essentially, antisocial partners may not only impact individuals' participation in criminal behavior but may also moderate the influence of other social bonds and influences on crime (Simons et al. 2002).

Simons et al. (2002) also noted gender differences; women were more strongly influenced by an antisocial partner in terms of criminality compared to men, but if women were in high-quality relationships, desistance was found. For men, results indicated that deviant peers were the most influential on behavior, and once deviant peers were accounted for, there was no longer an effect of the quality of romantic relationships or partners' behavior on criminality. These findings lend support to the contention that romantic relationships do influence individuals' behavior, but the direction of this effect is dependent on the partners' own behavior.

1.3. Sex Differences in Adolescent Romantic Relationships

While there are sex differences in the intimacy of friendships, that is, girls are closer to their female friends than boys are to their male friends (Sharabany et al. 1981; Shulman et al. 1997b), the same has not been found for cross-sex friendships (Reisman 1990), or for adolescent romantic relationships (Shulman et al. 1997b). That said, girls spend much more time than boys thinking about the opposite sex (Richards et al. 1998), and girls also have a higher level of respect for their romantic partners (Connolly and Johnson 1996; Shulman et al. 1997a). Additionally, girls are more likely than boys to derive their sense of self from romantic attachments (Maccoby 1990), so romantic relationships are thought to be particularly important for adolescent girls' emotional development (Crick and Zahn-Waxler 2003). Compared to boys, girls are more focused on relationships, more distressed when relationships are threatened, and more concerned with care and attachments in their relationships (Gilligan 1982; Perry and Pauletti 2011; Shulman and Scharf 2000).

In contrast to girls' views on romantic relationships, boys view romantic relationships competitively and often ridicule other boys who express positive feelings for girls (Giordano et al. 2006). It has been theorized that the differences in perception of romantic relationships between girls and boys is because women's lives are often organized around maintaining relationships, and thus, girls feel more at ease with emotional closeness (Gilligan 1982). Furthermore, traditionally, women are expected to be more nurturing toward their partners and family (Papp 1989) and, consequently, it is expected that female adolescents would feel closer and more nurturing toward their romantic partners than male adolescents (Shulman and Scharf 2000).

1.4. Delinquency in Adolescence

Adolescence is a period fraught with opportunities for delinquency. During this time, increased unsupervised time with peers can often result in greater opportunity for sexual experimentation, substance abuse, and crime and delinquency (Sickmund et al. 1997; U.S. Department of Education and U.S. Department of Justice 1998). Risk factors for the onset of delinquency during adolescence have included individual risk factors (e.g., low intelligence, risk-taking, aggression); familial risk factors (e.g., child abuse or neglect, criminal parents, broken families); socioeconomic risk factors (e.g., low socioeconomic status, large family size); peer factors (e.g., delinquent peers); school risk factors (e.g., going to a school with a high level of delinquency); and neighborhood risk factors (e.g., living in a high-crime area; Farrington 2003; Hawkins et al. 1998). Further, research has noted that aggressive behaviors undergo important changes during the transition from early to middle childhood and beyond (Del Giudice et al. 2009). These aggressive behavior changes have been noted to be due to genotypic factors (Hyun Rhee and Waldman 2002; Miles and Carey 1997), but also aggression has an important function in juvenility because of its role in achieving social status during adolescence, and also because it can be functional for acquiring competitive strategies that can be used in adult life (Hawley et al. 2007).

Romantic relationships are found by some researchers to have negative influences on adolescent delinquency (Cauffman et al. 2008; Furman and Shaffer 2003; Meeus et al. 2004; Monahan et al. 2014; Zimmer-Gembeck et al. 2001). Earlier involvement in romantic relationships (e.g., before the age of 15) is often associated with increased substance use, delinquency, and sexual activity (Cui et al. 2012; Davies and Windle 2000; Farrington 1995; Meeus et al. 2004; Miller et al. 2009; Wong 2005; Zimmer-Gembeck et al. 2001). Haynie et al. (2005) reported that romantic partners' delinquency was positively correlated to respondents' delinquency even after peer delinquency was controlled for. However, it may be that dating a deviant partner, not just being in a romantic relationship, has more of an impact on individuals' behavior (Miller et al. 2009). Adolescents may get caught up in a relationship (Montgomery 2005) and participate in behaviors they may not have without the deviant partner (Miller et al. 2009). Additionally, once an adolescent is out of the relationship, research suggests that break-ups may also be associated with criminal behavior (Larson et al. 2016; Simpson 1987).

There are marked differences in the stability of antisocial behavior; some people may behave antisocially, but their behavior is temporary or situational, whereas for others, their antisocial behavior is stable and persistent (Moffitt 1993). Moffitt's (1993) dual taxonomy of adolescent antisocial behavior is one used to explain both temporary antisocial behavior and persistent antisocial behavior. In her theory, there are two types of offenders—life-course persistent and adolescence-limited. Life-course persistent offenders are a relatively small group, but they show continuity in delinquent behavior from a small child (e.g., biting hitting, truancy, selling drugs) into adulthood (e.g., robbery and rape; Moffitt 1993). For adolescent-limited offenders, Moffitt asserts that discontinuity is the hallmark of these individuals. They do not have a notable history of antisocial behavior in young childhood, nor do they have a future of antisocial behavior into adulthood.

In terms of interpersonal relationships, romantic partners may enhance pre-existing delinquency (Eklund et al. 2010). Further, both romantic partners and peers can have protective and harmful effects when taken in conjunction with psychopathic traits, depending on the quality of the romantic relationship and level of antisocial influence (Backman et al. 2018). Haynie and Osgood (2005) examined the role of peer relationships, including romantic partnerships, in adolescent delinquency, drawing on Moffitt's theoretical framework. They found that peer associations significantly impact delinquent behaviors, with adolescents susceptible to peer influence exhibiting higher levels of delinquency. This study underscores the importance of considering romantic relationships within the broader social context in understanding adolescent delinquency patterns. Moffitt's dual taxonomy provides a framework for understanding the heterogeneity of individuals' experiences with both romantic relationships and criminal behavior during adolescence. It highlights

the importance of considering the developmental trajectories and underlying factors that contribute to these behaviors.

Sex Differences in Adolescent Delinquency

Research has consistently noted that males are more likely to commit delinquent acts and use drugs compared to females (Giordano and Cernkovich 1997; Gottfredson and Hirschi 1990; Hindelang et al. 1981). One of the strongest arguments for why boys commit more delinquency than girls relates to supervision. Girls' interactions with their peers are supervised more closely than boys (Cernkovich and Giordano 1987). This supervision may limit girls' interactions with their peers, reduce sexual activity and teen pregnancy, and work to reduce their participation in delinquency (Daigle et al. 2007). It is well documented throughout the extant literature that peer influence is highly related to delinquency (Paternoster and Triplett 1988; Thornberry and Krohn 1997). This can be the case for both boys and girls (Elliott et al. 1985), but some researchers have suggested that it is truer for boys than for girls (Mears et al. 1998; Smith and Paternoster 1987).

Further, it is believed that female delinquency may be more relationship-oriented than male delinquency (Cauffman et al. 2008; Odgers and Moretti 2002), with girls more influenced by their partners' behavior (Rhule-Louie and McMahon 2007). Additionally, compared to boys, delinquency by romantic partners (e.g., stealing, burglary, and fighting) has a stronger effect on girls' engagement in minor deviance (Haynie et al. 2005). This is especially true for girls dating older boys who may be more likely to use alcohol, engage in sexual behaviors under the influence of substances, and experience sexual coercion (Cauffman et al. 2008; Gowen et al. 2004; Marin et al. 2000; Mezzich et al. 1997).

1.5. Age-Graded Theory of Informal Social Control

Sampson and Laub's (1993) age-graded theory of informal social control is based off the central idea of social control theory. That is, they held that crime and deviance are more likely to occur when individuals' bonds to society are weak or broken (Sampson and Laub 1993). The important institutions for both formal and informal social control vary across the life-course, but also the role of age-graded informal social control varies through the bonds between individuals and other social institutions (e.g., work, family, and school) (Laub and Sampson 1993; Sampson and Laub 1997). Additionally, Sampson and Laub emphasized the quality of social ties as opposed to simply the timing or the occurrence of life events (Sampson and Laub 1993). Based on age-graded informal social control, delinquency peaks during adolescence because attachment to delinquent peers is of high importance during this time (Farrington 2003). In terms of romantic relationships, Sampson and Laub (1993) emphasized the importance of marriage as a turning point, but also acknowledged other supportive relationships, such as non-marriage romantic relationships, as important factors in promoting social control and desistance from criminal behavior over the life course.

Few studies specifically use the age-graded theory of informal social control to examine adolescent desistance. Of those few, it has been found that close relationships with prosocial others contribute to desistance in adolescents (Hirschi 1969; Laub and Sampson 1993; Warr 1998). Further, romantic relationships can act as a "wake-up call" for adolescents to stop offending by placing them in a new social network and/or reducing the time they would normally spend with antisocial peers (Barry 2010; Gunnison and Mazerolle 2007).

Following Sampson and Laub's age-graded theory of informal social control, focusing specifically on the influence of romantic relationships, the current study evaluates how elements of romantic relationships affect offending in adolescence, with differences explored by sex, using data from the Pathways to Desistance Study. It is hypothesized that romantic relationships will affect desistance more as individuals age, and this relationship will vary by participant sex and offending type. Specifically, it is hypothesized that females participating in both non-violent and violent offending will be more likely to desist than their male counterparts. This is a continuation of a previous paper by the authors in which

the full sample was assessed to determine whether relationship characteristics influenced adolescent desistance from violent and non-violent crime (Zedaker et al. 2023).

2. Materials and Methods

The present analyses use data from the Pathways to Desistance Study, collected from two juvenile detention centers located in Maricopa County, Arizona, and Philadelphia County, Pennsylvania (Mulvey and Schubert 2012). Panel data were collected every 6 months from 2000–2010, with 645 and 700 adjudicated juveniles at baseline, respectively (Mulvey 2000). Participants were first interviewed after being adjudicated for a serious offense and serving time in a residential facility. They were between the ages of 14 and 19 at the first interview. Self-report data were collected then validated through third-party interviews and official arrest/court records. Life history calendars were used to assist with recollection of offending and relationship variables, among others.

As this paper focuses on the effects of adolescent relationships, the current hypotheses will be tested using the first four waves of data, where respondents’ average age increased from approximately 16 to 18 years of age. See Table 1 for additional descriptive statistics. Only respondents who reported being in a relationship at the time of each respective data collection are included. The sample number varied by wave. Respondents could skip a wave of data collection and return for a follow-up wave (Schubert et al. 2004). Further, the number of respondents in a relationship varied by wave. Only respondents in a relationship were filtered into questions about relationship characteristics, which were the key independent variables of exploration in this analysis. Sample counts ranged from 431–731, depending on the wave of data¹.

Table 1. Descriptive statistics for full sample with bivariate comparisons by sex.

Variable	Wave 1 (N = 713)		Wave 1 Differences by Sex		Wave 2 (N = 431)		Wave 2 Differences by Sex		Range
	M	SD	t	p-Value	M	SD	t	p-Value	
Non-violent offending	4.05	2.68	5.02	<0.001	1.16	1.87	2.46	0.007	0–10
Violent offending	1.56	1.67	5.07	<0.001	0.45	0.97	3.18	<0.001	0–6
Relationship quality	4.09	0.55	−1.19	0.118	4.05	0.65	2.35	0.010	1–5
Relationship monitoring	2.69	0.84	−5.17	<0.001	2.92	0.88	−3.04	0.001	1–4
Antisocial influence of partner	0.28	0.84	−0.75	0.226	0.35	0.84	−2.66	0.004	0–7
Impulsiveness	2.98	0.96	−0.29	0.385	3.04	0.96	−1.71	0.044	1–5
Neighborhood conditions	2.44	0.75	0.02	0.494	2.35	0.81	0.84	0.200	1–4
Binge drinking	2.33	2.25	2.20	0.014	2.38	2.23	2.67	0.004	1–9
Marijuana use	6.48	3.17	−0.50	0.307	3.31	3.11	−0.47	0.318	1–9
Other drugs use	3.03	2.91	−3.83	<0.001	1.72	1.86	−1.52	0.064	1–9
Peer influence/behaviors	4.82	3.89	2.87	0.002	3.69	3.32	4.39	<0.001	1–25
Parent socioeconomic status	51.22	11.94	1.87	0.031	---	---	---	---	16.5–77
Friends CJ history	1.23	1.13	3.46	<0.001	1.06	1.13	3.73	<0.001	0–4
Age	16.16	1.09	0.70	0.244	16.65	1.10	0.96	0.168	14–18
	<i>n</i>	%	χ^2	<i>p</i> -Value	<i>n</i>	%	χ^2	<i>p</i> -Value	Range
Sex (Male)	604	84.71	---	---	335	77.73	---	---	0–1
Family CJ activity (Yes)	580	81.35	0.05	0.817	84	19.49	0.65	0.420	0–1
In a gang (Yes)	127	17.81	3.69 (M)	0.055	57	13.23	7.41 (M)	0.006	0–1
Have children (Yes)	89	12.48	4.40 (F)	0.036	64	14.85	1.17	0.279	0–1
Race: White	108	15.15	5.39 (F)	0.020	95	22.04	5.52 (F)	0.019	0–1
Race Black	340	47.69	1.76	0.185	157	36.43	1.38	0.240	0–1
Race: Hispanic	240	33.66	0.92	0.339	163	37.82	1.26	0.261	0–1

Notes: (1) Only Wave 1 and Wave 2 descriptive statistics are presented due to consistency between Waves 2–4. Additional descriptive statistics available upon request. (2) Alphas presented are from Wave 1. (3) With chi-square tests, the sex with the higher likelihood is noted next to the score. (4) Race was three dichotomous variables (e.g., white/non-white).

2.1. Variables

2.1.1. Dependent Variables

Two variables, non-violent and violent offending, measured self-reported delinquency post-release. Therefore, the offending variables are not a measure of beginning offending but continuing and/or desisting following time in a residential juvenile facility. Both variables were calculated as summative variety scores, with a higher score indicating more types of offending reported. Non-violent offending consisted of 10 items, all intentional: destroying property, setting fire to a house/building/car/vacant lot, entering a building to steal, shoplifting, buying/receiving/selling stolen property, using checks/credit cards illegally, stealing a car/motorcycle, selling marijuana, selling other drugs, and driving drunk/high. At Wave 1, these behaviors were measured based on “ever” having done so. In Waves 2–4, they were measured as committed in the last six months.

Violent offending consisted of six delinquent behaviors: carjacking someone, shooting someone where the bullet hit them, shooting at someone [without hitting them], robbery with a weapon, robbery without a weapon, and beating up someone so badly that they needed a doctor. Wave 1 data indicated the number of offenses a participant had committed, while follow-up waves asked about the previous six months.

Sex was a one-item measure indicating “male” or “female.” While this is considered as “gender” in the dataset, there did not appear to be options measuring if a respondent was cis- or transgender. Therefore, it will be considered as biological sex in this analysis. At baseline, the majority of respondents were male.

2.1.2. Independent Variables

The present analysis only examines the effects of relationship characteristics on continued offending or desisting. Therefore, only those participants in a relationship during the recall period of each wave are included. Approximately 2/3 of participants were in a relationship at Wave 1 (61.23%). In Waves 2–4, an average of 46% of males and 63% of females reported being in a relationship. If respondents were currently in, or had been in, a romantic relationship during the recall period, they were asked a series of questions about the relationship. If the respondent was no longer in the relationship they were being questioned about, questions were asked in past tense.

Three subscales of the Quality of Relationships index (Pierce et al. 1997) were adapted to measure relationship characteristics at each wave (reported alphas = 0.78–0.81). Quality of romantic relationships consisted of seven items (e.g., “In general, how happy are you with your relationship?”). Relationship monitoring consisted of five items measuring how much a respondent’s partner knew about their activities (e.g., “How much does [name] know who you spend time with?”). Lastly, *antisocial influence* used seven count items to measure if the respondent’s romantic partner had suggested they engage in offending behaviors, including drinking (all respondents are under the legal age), getting drunk, being high, selling drugs, stealing something, beating someone up, carrying a weapon, or the partner using force to get the respondent to do something against their will. Lastly, an item asked respondents if their partner had ever tried to stop them from committing a crime. Higher scores indicate increased presence of these characteristics.

2.1.3. Control Variables

Impulse control is considered a proxy measure of self-control and consists of eight adapted items from the Weinberger Adjustment Inventory (Weinberger and Schwartz 1990; e.g., “I say the first thing that comes to mind”). Higher scores indicate higher levels of impulse control ($\alpha = 0.78$). The neighborhood conditions scale consisted of 21 items asking respondents how often various forms of physical (e.g., cigarettes on the street) and social disorders (e.g., gangs hanging out) occurred in their neighborhoods. Higher scores indicate higher levels of neighborhood disorder ($\alpha = 0.96$).

Use of substances was measured through separate variables asking about frequency of use. Binge drinking was operationalized as the number of times the respondent had

five or more drinks in one setting, with options ranging from “not at all” to “every day”. For all waves, this was measured as the last 6 months. Marijuana use was measured using the same response categories. At Wave 1, frequency was based on “ever”, and in follow-up waves, it was based on the last six months. Other drug use was measured as the frequency of using any of several other illicit drugs, including sedatives, stimulants, cocaine, opiates, ecstasy, hallucinogens, inhalants, and amyl nitrate (Wave 1 “ever”; Wave 2 “last six months”).

Peer relationships were measured using 19 items adapted from the Rochester Youth Study (Thornberry et al. 1994) exploring peer antisocial influence (e.g., “How many of your friends have suggested that you should sell drugs?”) and peer antisocial behavior (e.g., “How many of your friends have purposely damaged or destroyed property that did not belong to them?”). Higher scores indicated an increased presence of antisocial peers ($\alpha = 0.83$). Also measuring the possible influence of peers, respondents were asked how many of their four closest friends had been arrested. Respondents who reported having zero friends were coded as having zero of their friends arrested to reduce the amount of missing data.

Parental variables were measured by parents’ socioeconomic status. Parent SES was calculated using mother’s education level, father’s education level, mother’s occupation, and father’s occupation. These data were only taken at baseline with higher scores indicating higher social position. The possibility of familial influence was also measured by any family involvement in criminal activity. This was a dichotomous measure asked at all waves, with Wave 1 asking if anyone in the family had “ever” been arrested, while follow-up waves were asked if their family had been involved in criminal activity during the recall period.

Lastly, two additional variables that have been shown to influence criminal activity and have notable sex-based differences were included (Bjerregaard and Smith 1993; Kreager et al. 2010). Gang involvement was a dichotomous item asking if respondents had “ever” been in a gang or had been in a gang during the recall period. Being a parent was also a dichotomous variable measuring whether respondents had children or not.

Race was measured through three dichotomous variables: white versus non-white, black versus non-black, and Hispanic versus non-Hispanic.

3. Results

3.1. Bivariate Results

Bivariate results explore the sex difference for all variables of interest. As noted above, many of the Wave 1 variables asked about behaviors “ever” occurring, while later waves asked respondents to reflect on the past 6 months only. For this reason, there are notable differences from Wave 1 to Wave 2, but there were fewer differences between Waves 2, 3, and 4. Bivariate statistics for Wave 1 and Wave 2 can be seen in Table 1.

Males engaged in more types of non-violent offending compared to females (Wave 1 $M = 4.12$ and 3.07 , respectively, $t = 5.02$, $p < 0.001$). When comparing violent offending, males also engaged in significantly more types of violent crime compared to females (Wave 1 $M = 1.52$ and 0.86 , respectively, $t = 5.07$; $p < 0.001$).

At Wave 1, there were no differences in a respondent being in a romantic relationship based on sex ($\chi^2 = 2.83$, $p < 0.05$). In Waves 2–4, chi-square analyses support statistically significant ($p < 0.001$) differences by sex at each wave, with females more likely to be in a relationship at each wave (Wave 2 $\chi^2 = 16.44$; $p < 0.001$). With regard to relationship characteristics, at Wave 1, only partner monitoring showed significant sex differences, but at later waves, all three variables had significant differences by sex. Males reported higher levels of relationship quality compared to females (Wave 2 $M = 4.08$ versus 3.92 , respectively; $t = 2.35$; $p < 0.01$). However, females reported greater relationship monitoring compared to males (Wave 2 $M = 3.04$ vs. 2.76 , respectively; $t = -3.04$; $p < 0.01$) and more antisocial influence from partners (Wave 2 $M = 0.48$ vs. $M = 0.26$, respectively; $t = -2.66$, $p < 0.01$).

Bivariate examinations comparing correlations between the three main independent relationship variables were also conducted. At all waves of data, males and females had a significant positive relationship between relationship quality and relationship monitoring (males, in order of wave, $r = 0.45, 0.43, 0.42, 0.37$; females, in order of wave, $r = 0.53, 0.49, 0.54, 0.47$; $p < 0.001$ at all waves, for both sexes). For both sexes, there was a significant negative relationship between relationship quality and antisocial influence of their partner at Waves 2–4, but not at Wave 1. Correlations suggest a stronger relationship between these variables for females compared to males (males, in order of wave, $r = -0.11, p < 0.05$; $r = -0.09, p < 0.05$; $r = -0.13, p < 0.01$; females in order of wave, $r = -0.22, p < 0.05$; $r = -0.46, p < 0.001$; $r = -0.39, p < 0.001$). Lastly, there was no significant relationship between monitoring and antisocial partner influence for males. For females, this relationship was only significant at Wave 2 ($r = -0.21, p < 0.05$).

Control variables were also examined for differences based on sex. There were no sex differences in impulse control at Wave 1. There were significant differences at Wave 2, but these were not consistent in Waves 3 and 4. There were also no significant differences between males and females regarding neighborhood disorder.

Differences in substance use varied by the type of substance. Males generally reported a greater frequency of binge drinking compared to females (Wave 1 $M = 2.39$ versus 2.00, respectively; $t = 2.20$; $p < 0.05$). There were not significant differences in marijuana use by sex. However, females reported a greater frequency of “ever” using other drugs compared to males (Wave 1 $M = 3.84$ vs. 2.95, respectively; $t = -3.83$; $p < 0.001$). During recall periods, differences by sex were not consistent.

Males reported a significantly higher presence of antisocial behavior and influencing peers compared to females (Wave 1 $M = 4.80$ versus 3.90, respectively; $t = 2.87$; $p < 0.05$), and this was consistent. Further, males reported significantly more peer involvement with the criminal justice system compared to females (Wave 1 $M = 1.28$ vs. 0.97, respectively; $t = 3.46$; $p < 0.001$). Family items had varied differences by sex. In the current data, parents of male respondents had significantly higher social positions compared to female respondents (Wave 1 $M = 51.66$ vs. 49.82, respectively; $t = 1.87$; $p < 0.05$). There were no sex differences in family criminal involvement variables.

Lastly, for the “ever” response of gang involvement, sex differences were approaching significance. For Waves 2–4, males were significantly more likely to be involved in a gang compared to females (Wave 2: 14.57% of males versus 6.75% of females; $\chi^2 = 7.41$; $p < 0.001$). Female respondents were more likely to have children at Wave 1 (19.83% versus 12.99%, respectively), but these differences were inconsistent at future waves.

3.2. Multivariate Results

3.2.1. Non-Violent Offending of Males

Models predicting non-violent offending for male respondents can be seen in Table 2. The amount of variance predicted increased consistently from Wave 1 to Wave 4 (R^2 ranging from 0.1433 to 0.1987; $p < 0.001$ at all waves), suggesting an increase in predictability of non-violent offending for males as the sample got older. Relationship characteristics were not significant at Wave 1, predicting a variety of non-violent offenses ever committed, or, at Wave 2, predicting a variety of non-violent offenses committed during the recall period. At Wave 3, approximately 12 months post-release, one of three relationship characteristics was significant with decreased monitoring from a romantic partner related to increased non-violent offending variety ($b = -0.221$; $p < 0.001$). However, at Wave 4, when respondents averaged approximately 18 years of age, all three relationship characteristics were significantly related to non-violent offending variety: increased relationship quality ($b = 0.362$; $p < 0.01$), decreased monitoring from a romantic partner ($b = -0.243$; $p < 0.01$), and increased antisocial influence ($b = 0.298$; $p < 0.001$).

Table 2. Negative binomial regressions predicting non-violent offending for males in a relationship.

Variable	Wave 1 (N = 604)		Wave 2 (N = 334)		Wave 3 (N = 355)		Wave 4 (N = 415)	
	b (SE)	p						
Relationship quality	−0.004 (0.039)	0.917	0.029 (0.131)	0.823	0.120 (0.133)	0.366	0.362 (0.113)	0.001
Relationship monitoring	0.018 (0.028)	0.528	−0.143 (0.094)	0.128	−0.221 (0.104)	0.034	−0.243 (0.078)	0.002
Antisocial influence of partner	0.009 (0.023)	0.681	−0.038 (0.084)	0.650	−0.013 (0.082)	0.874	0.298 (0.086)	<0.001
Previous non-violent offending	---	---	0.099 (0.030)	0.001	0.094 (0.036)	0.009	0.200 (0.036)	<0.001
Previous violent offending	---	---	---	---	---	---	---	---
Impulsiveness	−0.111 (0.025)	<0.001	−0.203 (0.086)	0.018	−0.075 (0.086)	0.386	−0.257 (0.074)	0.001
Neighborhood conditions	−0.025 (0.030)	0.412	−0.215 (0.099)	0.030	0.035 (0.097)	0.722	−0.046 (0.081)	0.573
Binge drinking	0.011 (0.009)	0.233	0.034 (0.031)	0.273	0.082 (0.033)	0.013	0.071 (0.030)	0.019
Marijuana use	0.074 (0.009)	<0.001	0.091 (0.023)	<0.001	0.139 (0.023)	<0.001	0.098 (0.021)	<0.001
Other drugs use	0.040 (0.008)	<0.001	0.085 (0.034)	0.014	0.095 (0.037)	0.010	0.121 (0.034)	<0.001
Peer influence/behaviors	0.027 (0.005)	<0.001	0.071 (0.023)	0.002	0.093 (0.022)	<0.001	0.068 (0.021)	0.001
Friends CJ history	0.042 (0.018)	0.018	0.070 (0.062)	0.256	0.041 (0.059)	0.486	0.191 (0.056)	0.001
Family CJ history	0.099 (0.060)	0.101	0.546 (0.159)	0.001	0.525 (0.166)	0.002	0.205 (0.165)	0.215
In a gang	0.133 (0.051)	0.009	0.127 (0.185)	0.490	−0.041 (0.194)	0.831	−0.025 (0.198)	0.899
Have children	−0.048 (0.062)	0.440	−0.164 (0.221)	0.457	−0.224 (0.197)	0.255	−0.017 (0.152)	0.912
Parent socioeconomic status	−0.001 (0.002)	0.491	---	---	---	---	---	---
Race: White	0.052 (0.113)	0.645	---	---	---	---	---	---
Race: Black	−0.024 (0.110)	0.820	---	---	---	---	---	---
Race: Hispanic	−0.022 (0.108)	0.841	---	---	---	---	---	---
Pseudo R ²	0.1433	<0.001	0.1511	<0.001	0.1823	<0.001	0.1987	<0.001

Non-violent offending at previous waves consistently predicted non-violent offending in the current wave ($b = 0.099; 0.094; 0.200; p < 0.01$ at all waves). Increased marijuana use and drug use were significant predictors of an increased variety of non-violent offending for males at all four waves of data collection ($b = 0.074; 0.091; 0.139; 0.098; p < 0.001$ at all waves for marijuana use; $b = 0.040; 0.085; 0.095; 0.121; p < 0.05$ at all waves for other drug use). Additionally, increased peer influence and antisocial behaviors were significantly related to increased non-violent offending behaviors at all four waves of data collection ($b = 0.027; 0.071; 0.093; 0.068; p < 0.01$ at all waves). Six of the remaining variables had significance at various waves, but their impact was not consistent throughout the time frame studied. For example, increased binge drinking was only significant at later waves, or as the sample got older. These findings can be seen in Table 2.

3.2.2. Non-Violent Offending of Females

Due to the decreased number of female respondents in the sample, bivariate correlations were first conducted exploring the relationship between non-violent offending and the variables of interest. These examined female participants only². To prevent overestimation of the multivariate models, only variables significant at the bivariate level were entered into the multivariate analyses. Variance for female non-violent offending was low at Wave 1 ($R^2 = 0.1374; p < 0.001$) but increased significantly at Waves 2–4 (R^2 ranges from 0.2440 to 0.3150; $p < 0.001$). Results for non-violent offending variety of female respondents can be seen in Table 3.

Table 3. Negative binomial regressions predicting non-violent offending for females in a relationship.

Variable	Wave 1 (N = 110)		Wave 2 (N = 105)		Wave 3 (N = 148)		Wave 4 (N = 112)	
	b (SE)	p						
Relationship quality	0.150 (0.133)	0.260	−0.546 (0.182)	0.003	---	---	−0.167 (0.293)	0.568
Relationship monitoring	−0.108 (0.093)	0.243	0.467 (0.213)	0.028	---	---	0.491 (0.382)	0.198
Partner antisocial influence	0.054 (0.065)	0.413	−0.108 (0.121)	0.373	---	---	0.013 (0.237)	0.958
Previous non-violent offending	---	---	0.117 (0.077)	0.130	0.034 (0.111)	0.760	0.029 (0.212)	0.892
Previous violent offending	---	---	---	---	---	---	---	---
Impulsiveness	−0.259 (0.084)	0.002	−0.340 (0.208)	0.102	−0.508 (0.221)	0.021	−0.175 (0.292)	0.549
Neighborhood conditions	---	---	---	---	−0.356 (0.264)	0.178	---	---
Binge drinking	0.002 (0.031)	0.947	−0.081 (0.098)	0.408	−0.054 (0.093)	0.564	0.042 (0.154)	0.787
Marijuana use	0.082 (0.027)	0.002	0.107 (0.057)	0.060	0.154 (0.063)	0.015	0.160 (0.089)	0.071
Other drugs use	0.056 (0.021)	0.007	0.164 (0.058)	0.005	0.111 (0.088)	0.210	0.392 (0.136)	0.008
Peer influence/behaviors	−0.002 (0.024)	0.919	0.189 (0.047)	<0.001	0.187 (0.083)	0.024	0.029 (0.065)	0.656
Friends CJ history	0.042 (0.068)	0.531	0.069 (0.137)	0.615	0.302 (0.202)	0.136	0.429 (0.258)	0.096
Family CJ history	0.170 (0.173)	0.327	0.449 (0.308)	0.145	0.469 (0.461)	0.309	0.741 (0.502)	0.140
In a gang	−0.072 (0.190)	0.704	---	---	0.161 (0.665)	0.809	---	---
Have children	---	---	---	---	---	---	---	---
Race: White	0.065 (0.170)	0.700	---	---	---	---	---	---
Race: Black	−0.269 (0.174)	0.121	---	---	---	---	---	---
Pseudo R ²	0.1374	<0.001	0.3150	<0.001	0.2451	<0.001	0.2440	<0.001

Note: To void an overestimated model based on a smaller sample size for females, variables were removed due to non-significant relationships at the bivariate level based on individual waves.

Relationship characteristics were only significant for females at Wave 2, when the female sample averaged approximately 16 ½ years old. At this wave, decreased relationship quality ($b = -0.546; p < 0.01$) and increased relationship monitoring ($b = 0.467; p < 0.05$) were related to increased non-violent offending variety. Unlike male respondents, previous non-violent offending was not predictive of non-violent offending variety in future waves for females. The most consistent relationship with non-violent offending variety for females was increased marijuana use. This was either significant or approaching significance at all four waves ($b = 0.082; 0.107; 0.154; 0.160; p < 0.10$ at all waves). Use of other drugs, influence of peers, and impulse control were significant at various waves, but these relationships were not consistent across the full timeframe analyzed here. Neighborhood conditions, frequency of binge drinking, friends’ history of arrest, family history of criminal activity, gang membership, and having children were all either non-significant at the bivariate level (and therefore not analyzed at the multivariate level) or non-significant at the multivariate level for all waves of data.

3.2.3. Violent Offending for Males

Models of male violent offending variety can be seen in Table 4. On average, more variance was predicted by the violent offending models (R^2 range from 0.1046 to 0.1865; $p < 0.001$ at all waves) in comparison to the non-violent offending models for males. Only at Wave 2, when male respondents were approximately 16 ½ years old, were any of the relationship characteristic variables statistically significant; higher levels of relationship quality were significantly related to increased violent offending variety ($b = 0.376; p < 0.05$), with decreased relationship monitoring approaching significance ($b = -0.296; p < 0.10$). The latter was also true at Wave 4. Aside from these three instances, relationship characteristics were not related to violent offending variety among males. Increased antisocial peer

behaviors and influence were statistically significant at Waves 1–3 ($b = 0.053; 0.087; 0.130; p < 0.01$) and approaching significance at Wave 4 ($b = 0.072; p < 0.10$).

Table 4. Negative binomial regressions predicting violent offending for males in a relationship ($N = 604$).

Variable	Wave 1 ($N = 604$)		Wave 2 ($N = 330$)		Wave 3 ($N = 353$)		Wave 4 ($N = 414$)	
	b (SE)	p						
Relationship quality	0.042 (0.070)	0.548	0.376 (0.186)	0.043	0.040 (0.206)	0.846	0.281 (0.228)	0.216
Relationship monitoring	0.040 (0.049)	0.413	−0.207 (0.124)	0.094	−0.178 (0.165)	0.283	−0.296 (0.164)	0.071
Partner antisocial influence	0.040 (0.040)	0.316	0.077 (0.111)	0.486	0.022 (0.118)	0.854	0.234 (0.187)	0.211
Previous non-violent offending	---	---	---	---	---	---	---	---
Previous violent offending	---	---	0.239 (0.053)	<0.001	0.131 (0.107)	0.219	0.366 (0.143)	0.010
Impulsiveness	−0.127 (0.043)	0.003	−0.244 (0.118)	0.039	−0.178 (0.135)	0.186	−0.199 (0.153)	0.195
Neighborhood conditions	0.012 (0.053)	0.819	−0.058 (0.136)	0.670	0.297 (0.163)	0.068	−0.014 (0.171)	0.937
Binge drinking	0.033 (0.016)	0.037	0.038 (0.042)	0.375	0.120 (0.053)	0.022	0.110 (0.057)	0.053
Marijuana use	0.052 (0.015)	<0.001	0.026 (0.034)	0.443	0.145 (0.036)	<0.001	0.072 (0.043)	0.092
Other drugs use	0.055 (0.014)	<0.001	0.022 (0.051)	0.671	−0.026 (0.060)	0.658	0.116 (0.071)	0.102
Peer influence/behaviors	0.053 (0.010)	<0.001	0.087 (0.029)	0.003	0.130 (0.035)	<0.001	0.080 (0.045)	0.078
Friends' CJ history	0.035 (0.031)	0.264	0.014 (0.086)	0.874	0.097 (0.092)	0.290	0.111 (0.115)	0.334
Family CJ history	0.105 (0.106)	0.319	0.548 (0.209)	0.009	0.830 (0.256)	0.001	−0.055 (0.362)	0.879
In a gang	0.270 (0.089)	0.002	0.401 (0.233)	0.084	−0.211 (0.309)	0.495	0.029 (0.394)	0.941
Have children	0.024 (0.398)	0.822	−0.299 (0.318)	0.348	−0.070 (0.303)	0.817	0.485 (0.289)	0.094
Parent socioeconomic status	−0.005 (0.003)	0.102	---	---	---	---	---	---
Race: White	−0.077 (0.208)	0.709	---	---	---	---	---	---
Race: Black	0.187 (0.197)	0.342	---	---	---	---	---	---
Race: Hispanic	−0.067 (0.195)	0.732	---	---	---	---	---	---
Pseudo R^2	0.1046	<0.001	0.1707	<0.001	0.1865	<0.001	0.1402	<0.001

Prior violent offending variety, impulse control, marijuana use, use of other drugs, family criminal activity, and gang membership were significant at various waves, but these relationships were not consistent. Neighborhood conditions, friends' arrest history, and having children were not significantly related to violent offending variety for males at any wave of data collection analyzed here.

3.2.4. Violent Offending for Females

Similar to male violent offending models, female models examining violent offending variety predicted more variance overall (R^2 range from 0.0886 to 0.5144; $p < 0.05$ at all waves) compared to non-violent models. Also similar to males, relationship characteristics were only related to the violent offending variety at Wave 2, when female respondents were approximately 16 ½ years old. Increased relationship quality ($b = 1.590; p < 0.05$) and decreased monitoring ($b = −1.468; p < 0.05$) were significantly related to violent offending variety at this stage. Results of these models can be seen in Table 5.

Table 5. Negative binomial regressions predicting violent offending for females in a relationship.

Variable	Wave 1 (N = 110)		Wave 2 (N = 96)		Wave 3 (N = 148)		Wave 4 (N = 106)	
	b (SE)	p	b (SE)	P	b (SE)	p	b (SE)	p
Relationship quality	0.151 (0.300)	0.613	10.590 (0.745)	0.033	---	---	0.221 (0.820)	0.788
Relationship monitoring	−0.052 (0.201)	0.797	−10.468 (0.730)	0.044	---	---	10.430 (10.203)	0.234
Partner antisocial influence	−0.068 (0.207)	0.744	−0.304 (0.294)	0.302	---	---	0.513 (0.612)	0.402
Previous non-violent offending	---	---	---	---	---	---	---	---
Previous violent offending	---	---	0.490 (0.275)	0.074	0.347 (0.340)	0.308	10.071 (10.055)	0.310
Impulsiveness	−0.132 (0.174)	0.446	0.249 (0.437)	0.568	−10.110 (0.419)	0.008	−20.218 (10.214)	0.068
Neighborhood conditions	---	---	10.509 (0.694)	0.030	0.690 (0.426)	0.106	0.553 (0.941)	0.557
Binge drinking	0.000 (0.071)	0.997	---	---	---	---	−0.833 (0.659)	0.206
Marijuana use	−0.017 (0.052)	0.743	---	---	−0.017 (0.138)	0.901	---	---
Other drugs use	0.048 (0.048)	0.316	0.194 (0.133)	0.143	−0.412 (0.221)	0.062	0.288 (0.288)	0.317
Peer influence/behaviors	0.033 (0.055)	0.551	0.222 (0.110)	0.043	0.351 (0.106)	0.001	0.066 (0.108)	0.538
Friends’ CJ history	0.301 (0.142)	0.035	---	---	−0.336 (0.485)	0.488	---	---
Family CJ history	−0.226 (0.336)	0.502	10.664 (0.768)	0.030	20.051 (0.735)	0.005	---	---
In a gang	0.902 (0.409)	0.027	20.855 (0.864)	0.001	0.749 (0.875)	0.392	---	---
Have children	---	---	---	---	---	---	---	---
Race: White	0.304 (0.417)	0.466	---	---	---	---	---	---
Race: Black	0.344 (0.362)	0.342	---	---	---	---	---	---
Pseudo R ²	0.0886	0.015	0.5144	<0.001	0.3417	<0.001	0.4128	0.0210

Note: To void an overestimated model based on a smaller sample size for females, the following variables were removed due to non-significant relationships at the bivariate level: Hispanic dummy variable, parent socioeconomic status, neighborhood characteristics.

Again, significant variables were inconsistent across waves. Previous violent offending was only approaching significance at Wave 2 ($b = 0.490$; $p < 0.10$) and was not a significant predictor of violent offending variety at later waves. Impulse control, neighborhood conditions, peer influence and behaviors, friends’ history of arrest, family criminal activity, and being in a gang were all significantly related to the violent offending variety during at least one wave of data collection, as seen in Table 5. Binge drinking, marijuana use, other drug use, and having children were either not significant at the bivariate level for any wave. Therefore, they were not included in the multivariate models or were not significant at multivariate models for any wave of data.

4. Discussion

While research has assessed how adolescent romantic relationships affect delinquency (Cauffman et al. 2008; Cui et al. 2012; Davies and Windle 2000; Farrington 1995; Furman and Shaffer 2003; Larson et al. 2016; Meeus et al. 2004; Miller et al. 2009; Simpson 1987; Wong 2005; Zimmer-Gembeck et al. 2001), less is known about how these effects differ by sex (but see Cauffman et al. 2008; Haynie et al. 2005; Odgers and Moretti 2002) and/or age. Using Sampson and Laub’s (1993) age-graded theory of informal social control as a theoretical scaffolding, the current study used data from the Pathways to Desistance Study to determine how specific elements of romantic relationships (i.e., quality, monitoring by a partner, and antisocial influence of a partner) affect violent and non-violent offending in adolescence.

Bivariate results demonstrated differences in offending and romantic relationships between males and females. Supporting prior research (Giordano and Cernkovich 1997; Gottfredson and Hirschi 1990; Hindelang et al. 1981), males engaged in the more non-

violent and violent offending variety compared to females. Bivariate results also suggested that relationship characteristics differed as participants aged. Specifically, by the last wave of data collection, males reported higher levels of relationship quality compared to females. However, females reported greater relationship monitoring and more antisocial influence from partners compared to males. It appears that relationship dimensions operated differently for male and female participants.

Overall, romantic relationship characteristics seemingly mattered more for males in terms of desistance of offending over time, particularly with regards to the non-violent offending variety. By Wave 4, all three relationship characteristics were significant in predicting the non-violent offending variety among males. Alternatively, romantic relationship variables were only significant for female participants during Wave 2. Additionally, the results suggested that some romantic relationship variables operated differently between males and females. Taken together, these findings demonstrate the dynamic nature of adolescent relationships.

First, results demonstrated that the increased antisocial influence of romantic partners increased non-violent offending variety among males. The significant association between antisocial influence of romantic partners and criminal behavior is well established in the literature ([Angulski et al. 2018](#); [Craig et al. 2020](#); [Haynie et al. 2005](#); [Herrera et al. 2010](#)). However, it was expected that the antisocial influence of a partner would be more important for females as opposed to males when explaining offending behavior, based on research from [Haynie et al. \(2005\)](#). In the current study, the antisocial influence of a partner was not related to any female offending variety across any wave. It could be that this sample of justice-involved females were not perceiving their romantic partners to be delinquent, which could explain the non-significant results. It is also important to note that antisocial influence could be more pronounced for girls dating older boys because they are more likely to use alcohol, engage in sexual behaviors under the influence of substances, and experience sexual coercion ([Cauffman et al. 2008](#); [Gowen et al. 2004](#); [Marin et al. 2000](#); [Mezzich et al. 1997](#)). Unfortunately, this study was unable to control or account for the age of the romantic partner, which may explain the lack of significance. Future studies should undertake this research endeavor to explore how antisocial influence and age differences of partners affects offending behaviors.

Relationship monitoring operated in the expected direction for male offending but was inconsistent for female offending. Specifically, increased relationship monitoring significantly decreased non-violent offending variety among male participants at Wave 3 and Wave 4. This finding supports the broader literature on relationship characteristics and criminal behavior ([Craig et al. 2020](#); [Hirschi 1969](#); [Giordano et al. 2015](#); [Laub and Sampson 1993](#); [Warr 1998](#)). It could be that relationship-monitoring acts as a protective measure against non-violent offending among male juvenile offenders. However, for females, increased relationship monitoring increased non-violent offending and decreased violent offending, and these relationships were only significant at Wave 2. These results were unexpected. The sample in this study was juvenile delinquents. It could be that romantic partner monitoring functions differently among delinquent female adolescents, particularly during middle adolescence when peer and romantic relationships can have a major influence on behavior. In general, monitoring often reflects the knowledge and supervision of a romantic partner's routine and daily activities, both of which often serve as proxies for underlying mechanisms of social control. Theoretically, this would reduce engagement in delinquency if the romantic partner were exhibiting prosocial behaviors (see [Moffitt et al. 2001](#)). However, delinquent females may be more likely to be in romantic relationships with delinquent males, which could have an impact on offending behavior. Girls and women are more heavily influenced by their partners' behavior ([Haynie et al. 2005](#); [Moffitt et al. 2001](#); [Rhule-Louie and McMahon 2007](#)). This is especially true as it relates to minor deviance and less serious offenses ([Haynie et al. 2005](#)). As such, it could be that this sample of delinquent females are in romantic relationships with delinquent partners, thus increasing their own likelihood of non-violent offending.

Finally, increased relationship quality was associated with an increase in violent offending variety among males, which was the only relationship characteristic that was significant for male violent offending variety. This was only significant at Wave 2. The findings also suggested that increased relationship quality decreased non-violent offending variety but increased violent offending variety among females at Wave 2. The directional relationship between relationship quality and offending was unexpected and largely contradicts expectations of how prosocial bonds affect delinquency and criminal behavior. Broadly, prior studies have emphasized the desistance effects that relationship quality has on alcohol and drug use (Angulski et al. 2018) and offending behavior (Craig et al. 2020; Simons et al. 2002). That said, desistance may not occur if individuals are not emotionally invested in their partners and romantic relationships (Forrest 2014). Recent research has also demonstrated that romantic relationships can facilitate, reinforce, and provide support for delinquency and criminal behavior (Eklund et al. 2010; Herrera et al. 2010). Perceived relationship quality may operate differently within relationships entrenched with offending—particularly among girls and women (Haynie et al. 2005; Lee et al. 2020; Simons et al. 2002). Among justice-involved females, for example, romantic relationships classified as high quality did not appear to have the same protective factor (Cernkovich and Giordano 2001; Lee et al. 2020). Instead, these relationships were often plagued by strain and facilitated criminal opportunities (Cernkovich and Giordano 2001; Lee et al. 2020). As a result, relationship happiness and satisfaction may not be as strongly related to criminal behavior among high-risk, justice-involved samples due to weaker bonds that inhibit desistance (Cernkovich and Giordano 2001; Lee et al. 2020). Instead, criminality or criminal behavior of a romantic partner emerged as more important. Since the current study used a sample of high-risk, justice-involved adolescents, it could be that participants who perceived and reported a higher quality relationship might be more susceptible to the antisocial influence of their partner.

Several control variables were also related to non-violent and violent offending for male and female participants. Heightened impulse control was relatively stable in predicting decreased non-violent and violent offending among male and female participants. Extant literature has demonstrated that increased impulse control is often associated with rational decision-making, thus resulting in lower delinquency and offending behaviors (Caspi et al. 1990; Hawkins et al. 1998; Herrera et al. 2010). Marijuana and drug use were also consistent in predicting non-violent and violent offending among males and non-violent offending among females. This is supported by prior research that has suggested adolescent drug use may increase interactions or exposure to delinquent peers (Dishion and Loeber 1985). For males, peer influence was associated with non-violent offending and violent offending among across Waves 1–3. For females, peer influence increased non-violent and violent offending variety during Waves 2 and 3. Taken together, these results align with prior research that suggests adolescents involved with delinquent peers are at an increased risk of engaging in a myriad of antisocial behaviors, delinquency, substance use, and serious offending (Elliott et al. 1985; Farrington 2004). Interestingly, peer associations were not significant for male or female offending during the last wave of data collection. It could be that the significance of peer influence decreases as juveniles enter later stages of adolescence or emerging adulthood.

4.1. Limitations and Future Research

First, adolescent romantic relationships are not necessarily permanent or stable. The relationship status measure used in the current study did not capture the length of the relationship, and it did not reflect whether participants were in the same relationship at each data-collection point. The effect of relationship length has been associated with antisocial behavior, particularly among females, specifically females with romantic partners who encourage antisocial behavior exhibited increased offending, and this finding was salient within shorter romantic relationships (Monahan et al. 2014). Results from the current study should be interpreted with caution as adolescent romantic relationships are not necessarily

permanent or stable over time. Additionally, the study did not include a measure of partner antisocial behavior, which has been noted as significant in prior research (Capaldi and Crosby 1997; Moffitt et al. 2001). Arguments and research on assertive mating were also not considered in this analysis, namely the suggestion that antisocial individuals are more likely to engage in romantic relationships with other antisocial individuals (Caspi et al. 1990; Kim and Capaldi 2004; Simons et al. 2002).

The included relationship measures here captured perceptions of antisocial partner influences as opposed to actual partner offending. However, it is important to note that research has often relied on perceptual measures of peer and romantic partner behaviors to understand the effect these relationships have on adolescent delinquency and antisocial behavior. Juveniles who perceive their peers to be engaging in delinquency are often more likely to commit crimes or antisocial behaviors (Haynie 2002; Pratt et al. 2010; Unnever and Chouhy 2020; Young and Weerman 2013). While not as plentiful, some research assessing the effect of romantic relationships on offending has also relied on self-reported perceptions as opposed to actual measures of romantic partner criminality. Cauffman et al. (2008), for example, used a measure reflective of perceived antisocial encouragement from a partner, which was shown to increase girls' self-reported delinquency. Regardless, future research should explore how measures of partner offending impact desistance.

The literature suggests other gender-based differences in the effects of relationships on delinquency. As noted by Maccoby (1990), females adolescents place more self-worth in romantic relationships. Therefore, it is possible that female adolescents are more likely to stay in relationships with an anti-social partner to maintain a greater sense of self. The age of a partner, particularly for female adolescents, has also been shown to affect relationships (Cauffman et al. 2008; Gowen et al. 2004; Marin et al. 2000; Mezzich et al. 1997). Future research endeavors should employ measures that reflect the dynamic and nuanced nature of adolescent romantic relationships to better understand how various elements may influence offending.

Additionally, the current study did not capture specific relationship dyads (e.g., heterosexual versus same sex). The influence of romantic relationships on delinquency could operate differently between relationship dyads. However, this information cannot be disentangled without appropriate measures. It would be helpful if future empirical studies captured these differences to determine how romantic relationship characteristics affect delinquency and criminal behavior across a variety of relationship types. Finally, the sample used in the current study comprised previously adjudicated youth—a high-risk population. As a result, the findings may not be generalizable to the broader population of adolescents. It would be beneficial if future studies explored the impact of romantic relationships on delinquency among adolescents in general populations to see if findings diverge.

4.2. Policy Recommendations

Adolescence remains a critical and important time period for development. During this phase of life, individuals are experiencing a myriad of changes, including developing unique identities, establishing independence, and exploring romantic relationships (Adams et al. 2001; Giordano et al. 2006). Indeed, the majority of adolescents report having been involved in some type of romantic relationship by the end of high school (Zimmer-Gembeck 2002). School officials and administrators, therefore, are in a unique position to implement programming dedicated to teaching adolescents about healthy relationships with friends and romantic partners. Materials could focus on a variety of topics, including resisting peer pressure, recognizing the signs of unhealthy relationships, and highlighting available resources (Foshee et al. 1998)—all of which have a potential to influence behavior. It might be particularly important to provide this information to males as romantic relationships appear to have a significant impact on delinquency for this group.

Much of the existing programming addressing the effect of romantic relationships on juvenile delinquency has targeted adolescent females. For example, institutions could screen juveniles upon entry into the criminal justice system to assess past romantic relation-

ships for the risk of future engagement in particularly harmful future romantic relationships (Oudekerk and Reppucci 2009). Educational resources that focus on forming healthy and prosocial romantic and peer relationships could also be administered as justice-involved adolescents (Oudekerk and Reppucci 2009; Oudekerk et al. 2014). It could also be beneficial to connect justice-involved adolescents to extra-curricular programs, schools, employment, and volunteer programs that increase the potential of meeting prosocial romantic partners (Oudekerk and Reppucci 2009). However, the findings from this study suggest that similar programming may be just as important for justice-involved adolescent males.

Participants in this study were deemed as a high-risk sample because they were all justice-involved individuals who had experienced an arrest. Therefore, it is important to consider broader policy recommendations for youth involved in the criminal justice system. Research has demonstrated that healthy family relationships and positive adult role models can provide guidance with prosocial indicators (Sullivan 2006), thus potentially reducing adolescents' susceptibility to delinquency and criminal behavior. Mentoring programs, extracurricular activities, and employment opportunities (see de Vries et al. 2015) can provide environments that facilitate prosocial behaviors, mitigate negative influences on adolescents' lives, and potentially reduce future engagement in delinquency and criminal behavior.

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Notes

¹ After assessing for missing data patterns (Li 2013), in all four waves, for both sexes, the most common missing data pattern was for the key relationship variables in this analysis, followed by missing information about neighborhood conditions or only offending data being present and nothing else. Due to the importance of neighborhood conditions, based on literature discussed above, this variable was kept in the analysis.

² Bivariate correlations analysis upon request.

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