

ARTICLE

The “STICKINESS” of stigma: Guilt by association after a friend’s arrest

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Abstract

Prior research has examined the consequences of one’s police contact, but the consequences of vicarious police contact are not as well known. This study expands on labeling theory and the concept of “stickiness” by assessing whether a friend’s arrest increases the likelihood of one’s police contact. Using a sample of rural youth ($N = 13,170$), I find that a friend’s arrest is associated with an increase in the likelihood of one’s first arrest the next year after accounting for other predictors of police contact. Based on my theoretical framework, I interpret this finding as “guilt by association.” In addition, ending relationships with friends who have been arrested does not significantly impact this relationship. This study concludes that police contact may be harmful for a youth’s social network and builds on the concept of stickiness by suggesting that stigma not only sticks from one individual to another but may also stay despite efforts to end one’s association with the arrested individual. The study expands on preexisting research on the consequences of adolescent police contact by introducing a friend’s police contact as a way in which an individual may be more likely to become involved in the justice system.

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KEYWORDS

adolescent police contact, arrest, guilt by association, peers, stigma

1 | INTRODUCTION

Police are omnipresent in the lives of many adolescents. They patrol their schools and neighborhoods and are encouraged to intervene in minor behavioral problems to prevent more serious delinquency. Accordingly, between 16 and 27 percent of youth in the United States are estimated to experience arrest before the age of 18 (Brame et al., 2012), so many youth will either experience police contact directly or indirectly through their peers. Much of the research on the consequences of justice system contact within one's social network has focused on the effects of criminal justice contact on one's family (e.g., Braman, 2004; Jacobsen, 2019; Porter & King, 2015; Roettger & Swisher, 2011; Siennick et al., 2014; Turney, 2015; Wakefield & Wildeman, 2013), so this study will move beyond familial relationships to examine the potential consequence of arrest on one's friends. In particular, I examine the extent to which a friend's arrest is associated with one's likelihood of experiencing a first arrest independent of behavior and other factors.

A peer's recent arrest may increase the risk of an adolescent's arrest because they associate with someone who has been involved in the justice system (McAra & McVie, 2005; Rocheleau & Chavez, 2015). I theorize that an increase in the likelihood of arrest may occur through "guilt by association," which refers to the transfer of stigma from a stigmatized individual to a member of their social network (Goffman, 1963). Thus, my first research question asks whether a friend's arrest changes the likelihood of a first arrest independent of one's behavior. In the context of the prior literature, I hypothesize that a friend's recent police contact will increase the likelihood of experiencing a first arrest. If associating with someone who has been arrested increases the likelihood of one's police contact, then some youth may dissolve their ties with friends that have recently been arrested to avoid that contact. Thus, my second research question asks whether dissolving a friendship tie with someone who has been arrested mitigates any changes in the likelihood of experiencing a first arrest after a friend's prior arrest. I hypothesize that dissolving a friendship tie with someone who has been arrested will reduce the likelihood of experiencing a first arrest. If dissolving the tie with a friend who has been arrested does not mitigate the impact of a friend's arrest, however, then the stigma of a friend's criminal justice system contact may stay with an individual despite their efforts to avoid it.

I frame the theoretical contribution of this study on the criminological concept of "stickiness." The current study investigates whether the stigma of a friend's arrest is "sticky" in two ways. First, if the stigma associated with one's arrest transfers to their friends, then that stigma could stick from one individual to another. Second, if dissolving the tie with an arrested friend does not mitigate this guilt-by-association effect, then the stigma of having a friend who has been arrested likely sticks with the individual regardless of their attempts to mitigate the stigma. To address these research questions, I use survey data from youth in rural middle and high schools and methodology that allows for both between- and within-individual analyses.

2 | LITERATURE REVIEW

2.1 | Adolescent Police Contact

Despite the general decline in juvenile arrests in the United States during the past decade, many youth still experience adverse police contact before adulthood. More than a million youth younger than 18 years of age were arrested in 2014, and Black youth were arrested at a disproportionately high rate compared with youth of other racial identities (Bureau of Justice Statistics, 2014). These high arrest rates may result from youth being heavily exposed to the police throughout their daily lives. For example, the reliance on police in schools has increased significantly during the past two decades (Theriot, 2009). As such, many youth are exposed to the negative consequences of police contact in adolescence.

2.1.1 | Consequences of police contact in adolescence

Police contact can become a detrimental point in an adolescent's life. For example, police contact in adolescence predicts involvement in future deviant behavior (Johnson et al., 2004; McAra & McVie, 2007; Thurau, 2009; Wiley et al., 2013), particularly in adolescence (Bersani et al., 2022). This contact may also increase the likelihood of subsequent justice system involvement (Beardlee et al., 2019; Liberman et al., 2014). Experiencing arrest during adolescence can also negatively affect educational attainment (Hirschfield, 2009; Kirk & Sampson, 2013; Sweeten, 2006; Widowson et al., 2016) and future health outcomes (McFarland et al., 2019; Tolou-Shams et al., 2007).

The individual who experiences an arrest is not the only one to endure its consequences. Vicarious police contact, or police contact experienced by a member of an individual's social network, has detrimental consequences on one's view of the police (Easton & Dennis, 1969; Geller & Fagan, 2019). Vicarious police contact is also associated with other negative outcomes such as declines in future health (McFarland et al., 2019) and educational achievement (Gottlieb & Wilson, 2019). Thus, this type of police contact should be considered when investigating the dynamics of youth–police interactions. The current study argues that another potential consequence of vicarious police contact is that youth with a friend who has been arrested may be more likely to be arrested for the first time and, thus, endure the negative outcomes associated with it. This experience would begin a cycle of cumulative disadvantage (Sampson & Laub, 1997) that may make them more susceptible to future justice system contact and other negative outcomes over the life course.

2.1.2 | Correlates of police contact in adolescence

Given the prevalence of police contact in adolescents' lives and its impact on one's likelihood of future justice system contact, education, and health, we must consider the many factors that may increase the likelihood of arrest during adolescence. Labeling theory suggests that factors other than one's behavior can predispose someone to police contact, including other characteristics of the youth and members of their social network (e.g., Bass, 2001; Brunson & Miller, 2006; Crutchfield et al., 2009; Dannefer & Schutt, 1982; Paternoster & Iovanni, 1989). For example, youth who differ in their race, gender, and socioeconomic status experience different probabilities of arrest

and differ in the perception that one is being watched and targeted by the police (for race: Fine et al., 2003; Gaston, 2019; Kochel et al., 2011; Lurigio et al., 2009; Ruck et al., 2008; for gender: Brunson & Miller, 2006; for socioeconomic status: McAra & McVie, 2005; Sampson, 1986).

Prior research has considered the impact of status characteristics such as race, gender, and socioeconomic status on the likelihood of arrest with race, particularly for Black youth, being strongly correlated with the likelihood of arrest in adolescence (e.g., Huizinga & Elliott, 1987; Sampson, 1986; Tapia, 2010). One other status characteristic that may be related to arrest is an affiliation with someone who has had justice system contact. Because receiving a deviant label may increase an adolescent's likelihood of future arrest (Lieberman et al., 2014), it then follows that associating with someone who has been arrested may increase their likelihood of arrest through the transfer of the deviant label. Thus, a friend's arrest may be an additional status characteristic that heightens an adolescent's likelihood of apprehension.

2.2 | Guilt by Association and Surveillance

Prior literature has established that youth may be more likely to be arrested when they have friends engaged in delinquency (e.g., Morash, 1984). One possible reason for this phenomenon is that early contact with the system increases involvement with deviant peers (Bernburg et al., 2006), which may encourage further delinquency (Haynie, 2001; McGloin, 2009; Warr & Stafford, 1991). Thus, youth who have friends who have been arrested may simply be more likely to come into police contact through changes in their delinquent behavior. Selection into delinquent peer groups, however, is not the only way in which peers could increase one's likelihood of being arrested.

2.2.1 | Stigma transfer and surveillance

As Goffman (1963) explained, the stigma from one individual's characteristics or behavior is passed on to the other members of their social group (which he referred to as "guilt by association"). This idea is supported by psychological research that shows that people transfer the perceptions they have of someone onto others affiliated with that individual (Molet et al., 2013). This phenomenon may apply to stigmatization from justice system involvement because of the labeling and stigmatizing effect of contact with law enforcement on the perception of an individual by others (e.g., Becker, 1963; Lemert, 1967; Paternoster & Iovanni, 1989). Prior work has supported the idea that individuals perceive that the stigma of punishment could transfer from one person to another. For example, family members of those who have been incarcerated feel stigmatized by these relationships and believe that they need to hide that information from others (Braman, 2004). In addition, youth who experience parental incarceration tend to be punished more often in school than their peers, even after controlling for differences in behavior (Jacobsen, 2019). One possible explanation for this outcome is that the stigma of a parent's incarceration is transferred to the child and their teachers subsequently surveil them more than they do other students.

Because of this stigma transfer, adolescents may then be surveilled if their friends have had recent justice system contact. For example, some jurisdictions create specific police units to monitor individuals with extensive criminal records (Martin & Sherman, 1986), and those who have had contact with the justice system may have the details of their records published online

(Lageson, 2021). Police also use social media to gain access to gang members' friends and their activities (Behrman, 2015), which assists them in surveilling those who interact with gang members (Durán, 2009; Ralphs et al., 2009). An individual may be added to a "heat list" if someone they associate with comes to police attention, even if that person's interaction with the police did not involve a crime (Ferguson, 2017). If an officer closely monitors someone who has been arrested, then they may subsequently monitor their friends. Goffman made a similar prediction in his original work on stigma by stating that police may arrest someone based on suspicion for associating with someone they have arrested previously (1963, p. 47). Thus, an adolescent with a friend who has been arrested may be more likely to come into police contact than they would have prior to the friend's arrest and would then be more likely to experience police contact than similarly situated youth.

Qualitative studies of police behavior also suggest that officers may surveil those who associate with people they have arrested. An analysis of police investigatory tools provides examples of British police surveilling those with friends who have been arrested (Meehan, 1993). Furthermore, police can use a youth's friends as informants against them, which provides further evidence that knowledge of one's friends matters to the police (Dodge, 2006). Youth are also incentivized to give police information about their friends in exchange for an easier punishment (e.g., Samuels-Wortley, 2021). Thus, youth may be surveilled more often by police after a friend's arrest if the police asked about or saw one's friends during the arrest. If an adolescent is surveilled more because they are friends with someone who has recently been in contact with the police, then their intrinsic likelihood of experiencing a first arrest and their likelihood of a first arrest relative to others may increase.

2.2.2 | Co-offending and police surveillance

This stigma transfer may be even more likely between friends than in other social relationships because police may highly surveil groups of adolescents for two reasons. First is the prevalence of group-based delinquency and co-offending. Prior literature has established that adolescents are much more likely to commit delinquency in groups than they are alone and that youth who commit delinquent acts tend to have friends who also engage in delinquency (Hindelang, 1976; Osgood et al., 2013; Thornberry et al., 1993; Tolson & Urberg, 1993; Warr, 1993). Groups of youth who engage in delinquency may also be more conspicuous to police, which may increase the likelihood of arrest. These youth may eventually be arrested because of their increased "group hazard," or the increase in the likelihood of arrest from being in a group setting (Erickson, 1971; Hindelang, 1976; Lantz, 2020). Tillyer and Tillyer (2015) found that the likelihood of arrest increases with the number of co-offending individuals, which suggests that group hazard may occur because of the high visibility of large groups of youth to the police. Thus, youth who associate with others engaged in delinquency may experience an increase in the likelihood of arrest resulting from police suspicions of them.

Another way in which groups of adolescents may induce police surveillance is in how they spend their time. Because of the patterns in friendship selection and group behavior, police may be suspicious of instances in which youth are gathered in groups, especially if they are engaged in unstructured activities without adults around (Osgood et al., 1996). For example, Liederbach (2007) found that police in small towns tend to monitor areas in which youth loiter than they do other spaces, which may lead to an increased likelihood of surveillance of youth whose friends have been arrested. This finding is supported by evidence stating that some parents tell their

children to avoid police contact by not congregating in groups (Brunson & Weitzer, 2011), which suggests this phenomenon is commonly understood. Police may also believe that being in a gang or having friends engaged in illegal activity leads to one's delinquent behavior (McAra & McVie, 2005; Miller, 1975; Ralphs et al., 2009). Thus, unstructured socializing and stereotyping of groups of youth may increase the likelihood of arrest for those with previously arrested friends because of increased visibility to the police and the assumption that groups of adolescents engaged in unstructured socializing will commit delinquent acts.

2.2.3 | Stickiness of stigma transfer

The research presented speaks to the concept of “sticky stigma.” Those youth with family members who have been incarcerated feel stigmatized by their justice system contact and may think that it could put them at risk of their system contact (Braman, 2004). Whether this stigma increases the probability of one's justice system contact compared with that of others or their intrinsic likelihood of arrest is unclear, however. Stigma sticking from one individual to another could increase one's likelihood of arrest compared with that of other youth who do not have friends who have been arrested by police (between the individual) or compared with their likelihood of arrest before the friend's arrest (within the individual). Prior research has investigated the effects of familial justice contact on one's punishment (e.g., Jacobsen, 2019), but little is known about whether this same stigma transfer would apply to a friend's arrest.

2.3 | Friendship Dissolution as a Response to a Friend's Police Contact

Given the rise in surveillance of individuals who have been involved in the justice system (Brayne, 2014), avoiding certain individuals or institutions may be a way to avoid future police surveillance. Individuals with prior police contact have demonstrated avoidance of public institutions such as hospitals and schools because of fear of being detected by police in those settings (Goffman, 2009; Haskins & Jacobsen, 2017). Some adolescents also have reported that refraining from delinquent behavior is not enough to avoid police contact, so they take other measures to avoid arrest (Futterman et al., 2016; Weitzer & Brunson, 2009). One strategy to avoid police contact may be to associate with those not likely to be viewed as delinquent. For example, one strategy boys may use to avoid police attention is to associate with girls rather than with other boys (Shedd, 2015). For those with prior police contact, friends may become a potential liability that could get them re-involved in the justice system because of stigma by association (Goffman, 2009), so they may take measures to avoid that surveillance. Some of this surveillance avoidance includes staying away from public spaces and from others who may start “drama” and attract the police. These individuals may even stop socializing altogether to avoid any interpersonal problems that may involve the police (Fader, 2021).

Thus, youth may drop friendship ties with someone who has been recently arrested because they believe that those friendships may increase their likelihood of police contact. Prior studies have shown that youth who have been sanctioned in school or arrested are rejected by their nonsanctioned friends (for arrest: Jacobsen et al., 2021; Jacobsen & Tinney, *in press*; for school punishment: Jacobsen, 2020; Zhang, 1994). Jacobsen and colleagues (2021), using the same population of youth as the current study, found that youth who were arrested in the prior year were less likely to be nominated as friends by their peers in the next year. Youth who were arrested also

were less likely to nominate friends themselves in the next year, suggesting that police contact may be associated with greater social withdrawal and peer rejection. Although we cannot ascertain why youth drop these friends (i.e., not maintain their relationships), Jacobsen and colleagues (2021) suggested that arrest is related to weakened social ties.

These findings are consistent with the early stigma literature that suggests that those who have not been labeled as deviant may withdraw themselves from those who have been labeled as such (Goffman, 1963; Lemert, 1967). What is unknown, however, is whether dropping these friendship ties decreases the guilt by association that could occur after a friend is arrested. Given the prevalence of police surveillance and the emphasis that police place on an arrested individual's friendships (e.g., Dodge, 2006), the police may continue to surveil the friend of someone they have arrested even if the friendship between the two individuals has ended. Thus, I assess the extent to which the association between a youth's arrest and the arrest of their friend is moderated by the dissolution of the friendship tie.

2.3.1 | Friendship dissolution and stickiness

The concept of stickiness within criminology often describes friendships among youth engaged in delinquency (Warr, 1993), but the current study extends this to include the stigmatization that may result from these friendships. Warr (1993) hypothesized that once an adolescent forms friendships with peers engaged in delinquency, they continue to keep those types of friendships, even if they do not keep the same friends. Thus, having relationships with others engaged in delinquency may become "sticky." The current study builds on this concept by testing whether stigma "sticks" to youth similarly to how delinquent friendships stick to an individual.

An additional facet of the "stickiness" literature that relates to the current study is the research suggesting that associations with delinquent others may not be as "sticky" as predicted by Warr (1993). Friendships between adolescents are often unstable, especially with friends engaged in delinquency (Kreager et al., 2011; Rude & Herda, 2010). Despite Warr's (1993) prediction that youth will continue to be friends with those engaged in delinquency, individual ties with these youth tend to be more unstable than friendships between youth not involved in delinquency (Marcus, 1996). Research also suggests that co-offending pairs or groups are often transitory; on average, youth co-offend with the same person only once (McGloin et al., 2008; Reiss & Farrington, 1991). One mechanism of the instability of these friendship ties is that youth not engaged in delinquency may avoid those who have been punished for deviant behavior (Jacobsen, 2020; Zhang, 1994). All of this research supports the hypotheses of the current study because youth may sever ties with their arrested friends, but the guilt by association after a friend's recent arrest may persist despite the end of the friendship.

Prior research also supports the idea that stigma from one's justice system involvement "sticks" with an individual long after the contact occurs (Sampson & Laub, 1997; Uggen & Blahnik, 2016). This stigma may increase one's justice system contact later in life (Chiricos et al., 2007; Liberman et al., 2014) and decrease employment and educational opportunities (for employment: Pager, 2003; for education: Stewart & Uggen, 2020). Even police contact that does not result in a criminal record could lead to stigma that sticks over time (Uggen et al., 2014), which suggests that even low-level contact with the justice system could have detrimental effects. Those impacted by guilt by association, then, may experience the same long-term "stickiness" even if they drop their arrested friends. This stickiness may manifest in an increased likelihood of arrest that lasts

over time (a within-individual effect) and may mark them as someone always more likely to experience arrest than others (a between-individual effect). The within-individual effect is of particular interest because stigma transfer may lead to an individual's police contact that would not have occurred if they did not have a friend who was arrested. Thus, guilt by association may be an important negative consequence of vicarious police contact, particularly if it can begin a cycle of cumulative disadvantage through one's police contact (Sampson & Laub, 1997). Although the current study does not directly test stickiness, I present it as a theoretical framework through which to investigate the impact of a friend's arrest on the likelihood of one's first arrest.

2.4 | Alternative Mechanisms

Although guilt by association is the proposed theoretical mechanism for the relationship between a friend's arrest and one's first arrest, other reasons exist besides guilt by association that an increase in the likelihood of arrest may occur after a friend's police contact. A friend's arrest could be associated with one's arrest through changes in delinquent behavior. Youth with friends engaged in delinquency may also be more likely to start engaging in delinquency themselves, which would increase the likelihood of their first arrest independent of a friend's police contact. Youth already engaged in delinquency with a high likelihood of arrest may seek out friends like them, but these youth were simply arrested later than their friends. Regardless of whether the impact of peers on delinquency originates from selection or influence (McGloin & Thomas, 2019), the impact of peer delinquency could mean that a friend's arrest is associated with one's own through peer-based delinquency rather than through stigma.

Other factors may also contribute to an adolescent's likelihood of arrest above and beyond peer delinquency. Changes in one's life may increase the likelihood of one's delinquency, such as the introduction of strain (Agnew, 1992) or a decline in some form of social control such as parental supervision (Hirschi, 1969). Independent of whether an adolescent has friends engaged in delinquency, increases in one's delinquent behavior would naturally impact the likelihood of police contact. Changes in policing through the addition of school resource officers (Theriot, 2009) or additional neighborhood police may also increase one's likelihood of arrest independent of their friends' arrests through increased police contact. I account for an individual's and friends' delinquency in the analyses along with other measures associated with arrest (e.g., parental supervision and socioeconomic status), but the possibility remains that these factors could contribute to changes in the likelihood of arrest above and beyond guilt by association. Stigma transfer could influence the likelihood of arrest through these other factors. Although I propose increased surveillance and stereotyping as the framework through which guilt by association would influence the likelihood of arrest, the negative label associated with having an arrested friend could induce secondary deviance (Lemert, 1951) through association with deviant peers (Bernburg et al., 2006; Wiley et al., 2013). Negative labeling events could also induce strain and increase delinquent behavior (e.g., Simons et al., 2003).

2.5 | Prior Research and Contributions

Some prior research has suggested that guilt by association could occur after a friend's punishment. Rocheleau and Chavez (2015) found that youth with friends engaged in self-reported

delinquent behavior tended to receive more school sanctions compared with those with friends not engaged in delinquent behavior. In addition, McAra and McVie (2005) found that those who reported that their friends had had any form of earlier contact with the police were more likely to experience police contact themselves. Although the prior research did provide evidence that guilt by association can occur in the context of punishment, whether this phenomenon would occur after a more formal sanction, such as arrest, remains unclear. Furthermore, these earlier studies examined the association between a friend's punishment or deviance and one's punishment solely during two time points. The current study investigates guilt by association across multiple years. Furthermore, the current study assesses how guilt by association could be mitigated by dropping the tie with a friend who has been arrested. Given the evidence of stickiness of labels from one's justice system contact (Uggen & Blahnik, 2016; Uggen et al., 2014), this key factor is missing from the current research on guilt by association.

These prior works also focused on between-individual comparisons. Although comparing youth who have not had a friend arrested to youth who have is important, prior research on the negative impacts of justice system contact suggests that guilt by association would not have solely between-person effects. For instance, Sampson and Laub's (1997) work on cumulative disadvantage highlighted the importance of assessing within-individual effects when studying labeling processes. The transfer of stigma may be a crucial consequence of vicarious police contact if it results in an individual's police contact that may not have occurred without a friend's arrest, which would alter the life course by exposing them to the negative consequences of justice system involvement. Thus, we must use methods that allow for assessing both between- and within-person effects of guilt by association from a friend's arrest.

Beyond expanding on the aforementioned studies on guilt by association, the current research makes other key contributions. This study focuses on the impact of a friend's arrest because of the increasing importance of friendship during adolescence. At this age, youth gain independence from their parents and spend an increasing share of their time with friends (e.g., Perry et al., 1993). Adolescents may then be more likely to be seen by police with their friends than with their siblings or parents. Thus, the transfer of stigma between friends may be equally or more salient than the transfer of parental stigma for adolescents. Prior research regarding stigma by association after arrest primarily has focused on the consequences of incarceration for one's family members (e.g., Braman, 2004; Jacobsen, 2019; Mears & Siennick, 2016; Roettger & Swisher, 2011; Wildeman, 2014), so this study expands on this research by focusing on the stigma associated with a friend's recent arrest.

The current study also contributes to labeling theory by incorporating Goffman's (1963) concept of guilt by association into the criminological concept of stickiness (Braman, 2004; Uggen & Blahnik, 2016; Uggen et al., 2014; Warr, 1993). First, if the stigma associated with arrest transfers to one's friends, then it could be said that stigma sticks from one individual to another. Second, if dropping the friendship tie with this friend does not mitigate this guilt-by-association effect, then the stigma of having a friend who has been arrested likely sticks with the individual regardless of whether that friendship still exists.

Although I cannot directly test guilt by association and its relationship with friendship dissolution, the methods used in the current study along with the theoretical mechanisms explained above explore the possibility of guilt by association operating within the context of arrest during adolescence. This study thus builds a foundation for future work on the multiple ways in which "stickiness" could be applied within the criminological literature beyond its original conception (Warr, 1993) and how the concept of guilt by association may be studied in relation to justice

system contact. I theorize that stickiness would manifest through the association between an arrested juvenile and their friends and the subsequent assumption that the friend of an arrested youth is involved in delinquent behavior. Stickiness would consist of stigma transfer (friends of arrested youth have a deviant label placed on them) and the persistence of stigma (the label will persist even if the friendship between the youth has ended). Even though I cannot measure police perceptions of youth and their surveillance directly in this study, I account for other factors related to police contact, such as delinquency, to isolate the unique impact of a friend's arrest on one's first arrest.

3 | DATA AND METHODOLOGY

3.1 | Data

This study uses data from the Promoting School-University-Community Partnerships to Enhance Resilience (PROSPER) partnership, a program aimed at preventing adolescent drug use and risky behavior in rural communities. The PROSPER study includes all students within 28 school districts in Iowa and Pennsylvania with enrollment sizes between 1,300 and 5,200 students. The size of the communities ranged from approximately 7,000 to slightly less than 45,000 residents with the average being 19,000 residents (Chilenski et al., 2014). Thus, all districts fit into the definition of rural communities provided by the U.S. Census Bureau (i.e., populations fewer than 50,000 people; Ratcliffe, 2015). In addition, at least 15 percent of the students in each district must have been eligible for free or reduced-price lunch, which is an indicator of low socioeconomic status. Participants were in one of two cohorts. The first cohort comprised the sixth-grade students in 2002, and the second comprised the sixth-grade students in 2003. Fall and spring surveys were administered in the sixth grade, and subsequent surveys were administered in the spring of each year through the twelfth grade (Spoth et al., 2011; Spoth et al., 2007). Students entered or exited the survey as they transferred in or out of the participating school districts. Although the focus of the original study was the prevalence of adolescent drug use in these rural communities, the surveys also asked students about their delinquency, police contact, behavior, and status characteristics.

These data align well with the current study for several reasons. Each year, the participants nominated up to two best friends and five close friends. The potential relevance of the distinction between best and close friends is explored in a supplemental analysis. The participants nominated friends who were also in the sample, so self-reported police contact from each friend could be assessed (as opposed to an individual's perception of their friend's police contact). In addition, the eight waves of the survey were administered over seven consecutive years, which gives multiple time points to study the research questions. This approach is methodologically advantageous as year-to-year changes in the likelihood of police contact are assessed along with changes in friendship over adolescence. Finally, the focus on rural communities gives a unique opportunity to study the ways in which high familiarity between youth and police could facilitate stigmatization.

Although the PROSPER youth may differ from their counterparts in urban and suburban areas in certain ways, their experience with the police is still useful for studying stigma by association. Guilt by association may be prevalent in rural areas when police are more intimately familiar with the adolescents in their area. In addition, PROSPER youth were involved in similar levels of substance use as their contemporaries in urban settings, which

suggests that they are comparable in deviant behavior (see Johnston et al., 2021)¹ and peer influence on delinquency (Gallupe et al., 2019). Incidences of arrest are also comparable between rural and urban youth (Osgood & Chambers, 2003). Thus, the PROSPER youth, despite their rurality, may still have some similar experiences with the police to youth in urban areas.

The number of youth who completed the survey each year varies. On average, youth answered four out of the seven surveys (approximately 80 percent of participants [13,478 youth] answered at least two surveys). The first wave was dropped as a result of the low prevalence of students who were arrested before the sixth grade (2.9 percent of the first wave sample were arrested; another 15,630 student-years). Because of these exclusion criteria, each wave in the current study represents one grade level (sixth–twelfth grade). In addition, I dropped one school district because it declined to participate in the collection of network data (648 youth). If youth in the first cohort were held back a grade (768 person-years), they were added to the second cohort for the remaining years and the information from the years in which they were in the first cohort was dropped. The final sample size is 46,494 observations from 13,170 adolescents.² This sample consists of youth who completed the entirety of the survey, or at least made it to the end of the survey in which the friendship nominations were made. Therefore, missingness for individual questions is not a large concern. Marginalized students (students non-White or of low socioeconomic status) and boys, however, were less likely to complete the survey in its entirety than other students. Thus, the sample may include fewer of those subjects as the waves continue. The questions from the survey that were used in this study are listed in the online supporting information.³

3.2 | Measures

3.2.1 | Dependent variable

First arrest is measured by a binary variable indicating whether the individual had been arrested for the first time ever that year. This measure is based on the question, “In the past year, how many times have you been picked up by the police for breaking a law?” If an adolescent has been arrested, then any observations after the first arrest are removed from the sample so that a value of zero means that they have never been arrested, and one means they experienced their first arrest in the past year even if they were arrested multiple times. This measure may include youth officially booked at a police station and youth momentarily detained for breaking the law but not brought to the police station. I refer to both instances as arrests because justice system actors in rural areas may tend to rely more on informal social control methods such as driving youth home than on formal social control methods like an officially recorded arrest (Feld, 1991). Police may be aware of where an adolescent resides and decide to bring them home for minor infractions

¹The study by Johnston and colleagues (2021) analyzed data from the Monitoring the Future study, which studies a nationally representative sample of adolescents from 1975 to present.

²Prior studies have raised concerns regarding the eighth wave (twelfth grade) because of lower response rates (e.g., Jacobsen et al., 2021). I conducted a robustness check by removing the eighth wave, but it had no significant impact on the results.

³Additional supporting information can be found in the full text tab for this article in the Wiley Online Library at <http://onlinelibrary.wiley.com/doi/10.1111/crim.2023.61.issue-2/issuetoc>.

rather than bring them to the station (Liederbach & Frank, 2003). Thus, these youth would not be included in official arrest statistics but still would be held in police custody (Black & Reiss, 1970). This question excludes instances in which youth are picked up by the police for reasons other than a suspected law violation (e.g., roadside assistance or protection) or are stopped and questioned without being detained. Being picked up by police may be stigmatizing among rural youth, regardless of whether an “official” arrest occurred (Jacobsen et al., 2021). By the twelfth grade, 8 percent of participants in the final sample had been arrested for the first time during the previous year.

3.2.2 | Independent variable

The primary independent variable is whether at least one friend was arrested the year prior (a lagged measure of a friend’s arrest). A value of zero indicates that an individual had no friends arrested that year, and one indicates that they did. In the twelfth grade, 14 percent of youth had at least one friend who had been arrested the year prior. The average number of friends arrested each year (among those who had at least one friend picked up by police) was 1.24. Although delinquency is included as a control variable, these actions are not directly linked to the arrest measure. This noted limitation signifies that guilt by association is possibly impacted by the severity of the offense for which youth are picked up. This measure also does not indicate whether any further criminal justice action was taken after the arrest. Youth with friends who move further along the justice system may experience a stronger impact from a friend’s arrest than those whose contact stops after the arrest.

3.2.3 | Friendship dissolution

The second research question asks whether dropping a friendship tie with someone who was arrested the preceding year reduces any effect of a friend’s arrest observed in the results for the first question. *Friendship dissolution* specifies whether all friends who had been arrested the prior year were dropped in the current year. From year to year, one’s friendship nominations may change. A best friend may be reassigned as a close friend, a close friend may be reassigned as a best friend, or a friend may no longer be nominated. *Friendship dissolution* is a binary variable equal to one if none of their arrested friends were nominated as friends the next year. As will be discussed further in the Limitations section, we cannot ascertain why these friends were dropped, although the reason I propose here is that arrested friends are dropped to avoid guilt by association. Also, these friends were possibly replaced with others engaged in deviant behavior, but for the purposes of not overcomplicating the analysis with potential temporal order concerns (i.e., youth made these friends after their arrest in the current year), this possibility is not investigated in this study.

3.2.4 | Control variables

The adolescent’s *delinquency* and *substance use* are the primary control variables because they put youth at the greatest risk of arrest. *Delinquency* is a variety score of whether youth participated in

delinquent activities in the prior year (see the online supporting information). Self-reported delinquency was rare for the sample. A measure of a friend's delinquency is also included because a friend's current behavior may influence one's behavior and visibility to police (Haynie & Osgood, 2005; McGloin, 2009; Morash, 1984; Warr, 1993). *Friends' delinquency* is measured as the average value for the self-reported delinquency for one's friends in the current year. *Substance use* is a binary variable that indicates whether the person had ever used alcohol, marijuana, or other illicit substances during the prior month. The other control variables measure behavior from the prior 12 months, but the questions pertaining to monthly substance use were the most consistent throughout all waves. I thus assume that substance use in the past month approximates one's substance use in the past year.

An individual's demographic characteristics that could independently influence the likelihood of arrest are also included as control variables. *Race* is a binary variable indicating whether the participant identified as White or non-White. Because of the nature of the rural sample, the sample sizes of individuals who have racial identities other than White (Black, Hispanic, Asian, Native American, or Other) are too small for meaningful analysis,⁴ so I can only analyze the difference between White and non-White individuals. *Male* is the binary indicator of one's sex or gender. A limitation of this measure is that based on the question asked in the survey (listed in the online supporting information), whether the student interpreted this as a measure of their sex assigned at birth or of their current gender identity is unclear. Whether the student received free or reduced lunch is a proxy for *low socioeconomic status* (measured as having a probability of 50 percent or higher of receiving free or reduced lunch within a given year).

Other characteristics of the individual and their social bonds may also be related to the likelihood of arrest. *School bonds* are measured as the mean of eight variables. *Absence* is a binary variable that indicates whether a student missed 16 or more days of school in the prior year. *Parental supervision* is the mean of five variables. Attributes of the individual outside of their demographic characteristics and social bonds could also predispose them to police contact. The variable of *deviant attitudes* is the sum of three ordinal variables of one's attitudes toward smoking cigarettes, drinking liquor, and using marijuana. The values are reverse coded so that higher values indicate that the individual believes use of these substances is not wrong. *Sensation seeking* is the mean value of three ordinal variables. The components of these variables are listed in the online supporting information.

A binary variable for each subject's network is also included to account for the possible interdependence of youth within the same social network. A *network* comprises all students in the same cohort and school district. In addition, *grade level* serves as an approximation for age. I also include an indicator of whether the individual *did not nominate any friends* the prior year. Controlling for youth who did not have friends ensures the results are not driven solely by youth who did not have friends at school. This issue is a concern because youth who do not have friends may differ in their likelihood of being arrested than those who have all nonarrested friends. Lastly, *treatment* is a binary variable indicating whether an individual was assigned to the PROSPER program.

⁴ Overall, 3.17 percent of participants identified as Black, 6.9 percent identified as Hispanic, 0.53 percent identified as Native American, 1.31 percent identified as Asian, and 3.85 percent identified as another race or as being part of multiple race categories.

3.3 | Analytic Plan

I use a mixed-effects logit model that allows for comparison between and within individuals. Comparing between individuals allows for exploration of whether the stigma of a friend's arrest sticks to individuals and raises their likelihood of arrest compared with youth who have not had friends arrested. This comparison, however, cannot completely account for intrinsic differences between youth who have friends who experience police contact and those who do not. In addition to social determinants of police contact like racialized identities, socioeconomic status, and sex, individual behaviors may increase the likelihood of police contact. The within-individual analyses partially account for this issue by comparing the likelihood of police contact after a friend's arrest with their average likelihood of police contact across all waves. Thus, the analyses suggest that stigma may stick to an individual after their friend's arrest and increase the likelihood of a first-time arrest, all else being equal.

The equations shown here follow Raudenbush and Bryk (2002) in modeling between-individual and within-individual change. Equations 1 and 2 show the level 1 or within-individual association between a friend's arrest and one's own. η_{ij} is the natural logarithm of the odds of arrest for individual i at grade j , given the covariates. π_{0i} is the intercept for the person-grade level. Grade is a proxy for age and is measured each year. π_{1i} is the value of the coefficient for grade. *Friend's arrest* indicates whether a friend was arrested in a given year and is centered on the cross-grade person-level means. π_{2i} is the value of the coefficient for a friend's arrest. x_{ij} is the vector of time-varying control variables, including delinquency, substance use, school bonds, supervision, sensation seeking, deviant attitudes, whether an individual had friends, and school absence. π_{3i} is the value of the coefficients for those control variables. e_{ij} represents the error term.

$$\text{Logit} = \ln \left(\frac{p_{ij}}{(1 - p_{ij})} \right) = \eta_{ij} \quad (1)$$

$$\eta_{ij} = \pi_{0i} + \pi_{1i}\text{Grade} + \pi_{2i}(\text{Friend's Arrest}) + \pi_{3i}x_{ij} + e_{ij} \quad (2)$$

$$\pi_{0i} = \beta_{00} \text{Friend's Arrest}_i + \beta_{01\dots k}x_i + \alpha_i \quad (3)$$

$$\pi_{1i} = \beta_{10} \quad (4)$$

$$\pi_{2i} = \beta_{20} \quad (5)$$

$$\pi_{3i} = \beta_{30} \quad (6)$$

Equations 3–6 show the level 2 or between-individual effects of a friend's arrest on one's own. π_{0i} is the term representing the mean value of a friend's arrest over all grades (*Friend's Arrest* _{i}) and the effect of the time-stable control variables, x_i (race, sex, socioeconomic status, network, and treatment condition). α_i is the unobserved individual random effect.

For the second research question, the equation is modified such that π_{2i} represents the coefficient for the mean-centered value of whether an individual dropped their arrested friend. *Dropped Arrested Friend* _{ij} represents the mean value for whether an individual dropped their

arrested friend across grades. All other elements of equations 1–6 stay the same.

$$\eta_{ij} = \pi_{0i} + \pi_{1i}\text{Grade} + \pi_{2i}(\text{Dropped Arrested Friend}_{ij}) + \pi_{3i}x_{ij} + e_{ij} \quad (7)$$

$$\pi_{0i} = \beta_{00}\text{Dropped Arrested Friend}_{ij} + \beta_{01\dots k}x_i + \alpha_i \quad (8)$$

The first model restricts the sample to observations in which a youth had a friend arrested the prior year ($n = 6,854$ person-years) and uses whether their friends were dropped as the primary independent variable. The second model compares youth who had a friend arrested and dropped those friends the next year with those who did not have friends arrested. The third model compares youth who had friends arrested but did not drop them the next year with youth who did not have friends arrested. Those who did not nominate friends the next year were considered to have dropped their arrested friends. I applied Bonferroni corrections when multiple models are compared to reduce type 1 error. Directly comparing coefficients between two logistic regressions using methods such as Paternoster tests can lead to biased results (Long & Mustillo, 2018). Therefore, to compare models across groups, I test the statistical significance of the difference in the predicted probability of arrest for each group using a z test.

These analyses restrict the sample to only those youth who had not been previously arrested during the study period. I choose to do this over controlling for prior arrest because of the interdependence that can occur when using a lagged dependent variable as a control (Sampson et al., 2006). Given that arrest more than once during the study period was rare (for youth who had been arrested at least once during the study period, the average number of arrests was 1.5), removing the observations after someone has been arrested does not significantly reduce the sample size.

4 | RESULTS

4.1 | Descriptive Statistics

Table 1 shows the pooled descriptive statistics for the dependent, independent, and control variables across all years. Fewer than 5 percent of values are missing for each variable. The arrest variable differs by race, gender, and socioeconomic status. A greater percentage of non-White youth were arrested compared with White youth, which matches the pattern of disproportionate arrests among youth of color (e.g., Tapia, 2010). A higher percentage of youth of low socioeconomic status and boys were arrested compared with youth of higher socioeconomic status and girls. The difference between the number of individuals who had been arrested and the number of those who had friends who were arrested is a result of repeated nominations of the same individuals as friends.

4.2 | First Research Question: Guilt by Association

Table 2 displays the results for the first set of analyses that assesses the relationship between a friend's arrest and one's likelihood of a first arrest the next year. The first model estimates the association between a friend's arrest and the likelihood of one's own with no covariates. Youth who had a friend arrested the prior year had more than two times greater odds of arrest compared with those who do not have a friend arrested. The between-individual association is not statistically significant in the bivariate model.

TABLE 1 Descriptive Statistics (N = 46,494)

Variable	Mean	SD	Min	Max
Arrested	.049	.217	0	1
Friend arrested prior wave	.134	.341	0	1
Delinquency	.950	1.705	0	9
Friends' delinquency	.968	1.137	0	9
Substance use	.310	.462	0	1
Male	.434	.496	0	1
White	.862	.345	0	1
Low SES	.332	.471	0	1
Deviant attitudes	1.677	.713	1	3
School bonds	3.765	.713	1	5
Absence (>7 days)	.286	.452	0	1
Sensation seeking	2.148	.966	1	5
Parental supervision	4.250	.743	1	5
No friends prior wave	.220	.414	0	1
Assigned treatment	.479	.500	0	1

Note. Obs = observations; SD = standard deviation; SES = socioeconomic status.

The next model adds the measures for delinquency and substance use. The size of the within-individual effect reduced but remained significant. After controlling for deviant behavior, a friend's arrest was associated with slightly less than two times greater odds of one's arrest compared with the years in which they did not have a friend arrested. Once all covariates were added into the model, the effect size remains statistically significant. After accounting for all observed covariates, the odds ratio of an arrest was 2.1 when compared with the years in which they did not have a friend arrested. The negative between-individual association is not surprising given that individuals who were arrested were subsequently removed from the sample. Thus, youth who were arrested in multiple waves would not be represented after the first arrest, but those who were never arrested remained in the sample across all waves. Most coefficients for the control variables were statistically significant except for race and deviant attitudes. These results then suggest that even when accounting for other covariates, a friend's arrest may impact one's own above and beyond changes to delinquent behavior. The within-individual coefficient being significant while the between-individual is not (or is in the unexpected direction) suggests that perhaps this impact of a friend's arrest is more influential in increasing one's likelihood of arrest compared with their intrinsic likelihood rather than compared with others.

One interesting result was that having no friends was positively associated with the likelihood of a first-time arrest. This finding is curious as those who do not have friends may be less likely to engage in unstructured socializing, which would reduce both individual and peer delinquency and visibility to police. Prior evidence exists, however, that some youth who are not part of any social networks at school may turn to deviant behavior (Kreager, 2004). This finding may have also occurred because these youth may have friends outside of their school who engage in delinquency, or youth engaged in delinquency may lose friends at school (Jacobsen et al., 2021). Unsurprisingly, strong bonds to school and supervision are associated with a decrease in the likelihood of arrest. The cohort, grade, and treatment variables were included in the models but are not displayed in table 2 for parsimony.

TABLE 2 First Research Question: Effect of Friends' Arrests on Likelihood of Arrest (N = 46,494)

Variable	No Covariates	Delinquency	All Covariates
Friends' police contact (within)	2.096 (.141)***	1.986 (.160)***	2.055 (.172)***
Friends' police contact (between)	1.032 (.147)	.432 (.067)***	.431 (.070)***
Delinquency		1.649 (.025)***	1.538 (.026)***
Friends' delinquency		1.175 (.022)***	1.134 (.022)***
Substance use		2.928 (.170)***	2.384 (.147)***
Male			1.352 (.077)***
White			.972 (.075)
Low SES			1.262 (.073)***
Deviant attitudes			1.054 (.039)
Sensation seeking			1.128 (.033)***
School bonds			.767 (.032)***
Supervision			.810 (.028)***
School absence			1.175** (.066)
Had no friends			1.485 (.092)***
Treatment group			2.717** (1.034)
Constant	.043 (.003)***	.008 (.001)***	.014 (.005)***

Note. Exponentiated coefficients; Standard errors in parentheses. PROSPER Study. The samples for models 1 and 2 were reduced to the sample for model 3 using listwise deletion.

* $p < .050$; ** $p < .010$; *** $p < .001$.

4.3 | Second Research Question: Dropping Friendship Ties

The second research question asks whether dissolving a friendship tie with someone who has been arrested mitigates the effect of a friend's arrest on one's own (table 3). This analysis was conducted in two steps. The first step uses whether youth dropped their arrested friends as the primary independent variable to assess its direct impact on the likelihood of a first arrest for those who had friends arrested. Model 1 in table 3 shows the results for this first step ($n = 6,854$ person-years). Approximately 54 percent of those who had friends arrested the prior year dropped all those friendships. As shown in table 3, no significant relationship existed between dropping one's friends and arrest in the next year among those who had a friend arrested the year prior. Although I acknowledge that this null finding may in part be a result of the lower statistical power of this model compared with the ones presented in table 2, this finding suggests that dropping one's arrested friends may not make a significant difference in the likelihood of arrest among those who had a friend arrested the prior year.

The second step compares the impact of a friend's arrest on one's arrest among those who dropped their arrested friends and those who did not drop their arrested friends. The purpose of this second step was to provide another way of assessing the impact of dropping one's friends on the likelihood of arrest. Model 2 in table 3 compares those who maintained friendships with arrested peers ($n = 3,121$ person-years) with those who did not have friends arrested the prior year. The within-individual analysis indicates that the odds of arrest for youth who had not dropped these friendships after arrest were 2.6 times higher than the odds of arrest for waves in which they did not have a friend arrested. Model 3 in table 3 compares those who dropped the ties with arrested friends ($n = 3,733$ person-years) with those who did not have arrested friends. Those who

TABLE 3 Effect of Dropping Arrested Friends on Likelihood of Arrest

Variable	Friends Arrested	Did Not Drop Friends	Dropped Friends
Dropped arrested friends (between)	.861 (.125)	—	—
Dropped arrested friends (within)	1.267 (.263)	—	—
Friends' arrest (within)	—	2.596 (.286)***	2.170 (.200)***
Friends' arrest (between)	—	.278 (.048)***	.361 (.059)***
Delinquency	1.683 (.075)***	1.601 (.027)***	1.620 (.027)***
Substance use	2.184 (.315)***	2.629 (.162)***	2.684 (.162)***
Male	1.172 (.149)	1.448 (.084)***	1.476 (.084)***
White	1.149 (.212)	.948 (.070)	.921 (.068)
SES	1.280 (.164)	1.304 (.075)***	1.278 (.073)***
Sensation seeking	1.025 (.066)	1.151 (.032)***	1.137 (.031)***
School bonds	.850 (.081)	.740 (.030)***	.741 (.030)***
Did not have friends	—	1.540 (.086)***	1.559 (.088)***
Constant	—	2.270e-17 (1.810e-14)	.465 (—)
Observations	6,854	49,218	50,820

Note. Exponentiated coefficients; Standard errors in parentheses. PROSPER Study. For the second and third models, the alpha level of .05 was reduced to .025 using a Bonferroni correction for comparing two models (.05/2). The first model is restricted to those who have had friends with police contact. Treatment, grade, and network control variables removed for parsimony.

* $p < .025$; ** $p < .010$; *** $p < .001$.

dropped these friends experienced a smaller magnitude of the impact of those friends' arrests; these adolescents had 2.2 times greater odds of arrest compared with waves in which they did not have arrested friends.

I then ran a z test comparing the predicted probabilities of arrest between models 2 and 3. With less than a 1 percent difference in the predicted probabilities of arrest between those who kept and dropped their arrested friends, the difference between the two groups was not statistically significant. Thus, when compared with youth who have not had friends arrested, no significant difference in the likelihood of arrest occurs between youth who did and did not drop their arrested friends. Despite a slightly lower risk of arrest for those who dropped their arrested friends, the relationship between a friend's arrest and one's own remains for these youth. If stigma drives the effect of a friend's arrest on one's own, this result suggests that the impact of a friend's arrest is sticky even if friendships with arrested youth end. The covariates maintained the same significance from the models shown in table 2.

4.4 | Additional Analyses

I ran two additional analyses to further elucidate the relationship between a friend's arrest and one's own. First, I examined the potential difference that the arrests of one's best versus close friends could have on the likelihood of one's own. Second, I investigated a potential

TABLE 4 Effect of Best Friends' and Close Friends' Police Contacts on Likelihood of Contact

Variable	Best Friends	Close Friends
Friends' police contact (within)	2.317 (.235)***	2.316 (.206)***
Friends' police contact (between)	.365 (.068)***	.393 (.068)***
Delinquency	1.603 (.027)***	1.599 (.026)***
Substance use	2.623 (.157)***	2.607 (.152)***
Male	1.442 (.082)***	1.427 (.079)***
White	.965 (.071)	.953 (.069)
SES	1.572 (.145)***	1.503 (.135)***
Deviant attitudes	1.052 (.037)	1.029 (.036)
Sensation seeking	1.144 (.032)***	1.141 (.031)***
School bonds	.751 (.030)***	.749 (.029)***
Supervision	.835 (.027)***	.829 (.026)***
School absence	1.183 (.064)**	1.203 (.064)***
Had no friends	1.551 (.087)***	1.545 (.086)***
Treatment group	2.786 (1.144)*	2.908 (1.158)**
Constant	.010 (.003)***	.011 (.004)***
Observations	49,752	51,388

Note. Exponentiated coefficients; Standard errors in parentheses. PROSPER Study. The samples for models 1 and 2 were reduced to the sample for model 3 using listwise deletion.

* $p < .050$; ** $p < .010$; *** $p < .001$.

dose-responsive relationship through the number of arrested friends an adolescent has within a given year.

4.4.1 | Best versus close friends

Students nominated up to two best friends and five close friends during each wave. A stronger relationship between a friend's arrest and one's own may occur between best friends compared with close friends because they may spend more time with one another. Table 4 shows the sensitivity analysis that separates youth who have had only best friends and only close friends arrested. The impact size is slightly larger for those whose best friends were arrested versus one's close friends. Therefore, stigma may be slightly more impactful from one's best friends because they may spend more time with them compared with close friends. The impact of a friend's arrest, however, is still significant for close friends as well.

4.4.2 | Dose-responsive effects

These analyses tested whether the impact of a friend's arrest is dose responsive by assessing whether the likelihood of police contact depends on the number of friends arrested the prior year. An individual could have between zero and seven friends who experienced police contact during the prior year. This analysis was conducted with the sample of those who had at least one friend arrested the prior year ($n = 6,854$ person-years) and used whether the youth had more

TABLE 5 Dose-Responsive Effect of Friends' Arrests on Likelihood of Arrest (n = 6,854)

Variables	More Than One Friend Arrested
More than one friend arrested (within)	1.315 (.322)
More than one friend arrested (between)	1.119 (.207)
Delinquency	1.684 (.076)***
Substance use	2.170 (.313)***
Male	1.177 (.150)
White	1.141 (.211)
SES	1.278 (.164)
Deviant attitudes	1.021 (.083)
Sensation seeking	1.024 (.066)
School bonds	.852 (.082)
Supervision	.839 (.066)
School absence	1.438 (.184)**
Treatment group	10.340 (8.181)**
Constant	.005 (.005)***

Note. Exponentiated coefficients; Standard errors in parentheses. PROSPER Study. For the second and third models, the alpha level of .05 was reduced to .025 using a Bonferroni correction for comparing two models (.05/2). The samples were limited to those who have at least one friend with police contact the prior year.

* $p < .025$; ** $p < .010$; *** $p < .001$.

than one friend arrested as the independent variable. As shown in table 5, having more than one friend arrested is not associated with an increase in the likelihood of police contact. Two possible reasons for this finding exist. First, having more than one friend picked up by police is not common in this sample (approximately 16 percent of those who had at least one friend with police contact had more than one friend picked up by police the prior year). Second, one friend's arrest may be sufficient in inducing stigma transfer and the subsequent increase in the likelihood of arrest.

5 | DISCUSSION AND CONCLUSION

The goal of the current study was to investigate whether a friend's arrest is associated with an increase in the likelihood of one's first arrest and whether dropping ties with a friend who has been arrested mitigates this association. Even when controlling for other covariates that predict one's likelihood of arrest including delinquency, substance use, demographic characteristics, and other behavior, a friend's arrest was still significantly and positively related to the likelihood of arrest the next year. In focusing on youth without prior police contact, I examined a way in which adolescents may be introduced to the justice system. In addition, youth who did not have friends also reported an increased likelihood of arrest, which is consistent with prior research on delinquency and isolation (Kreager, 2004).

The second research question asked whether dropping ties with friends who have been arrested mitigates the effect of a friend's arrest on one's own. The difference in the probability of arrest between those who dropped their friends with police contact and those who did not, however, was not statistically significant. In addition, no significant association was found between dropping one's arrested friends and the likelihood of a first arrest among those who had a friend

arrested the year prior. Thus, rejecting friends who have been punished, of which the prior literature has explored the prevalence (Jacobsen, 2020; Zhang, 1994), may not mitigate the relationship between a friend's punishment and one's own. Thus, this study also contributes to the literature on friendship dynamics after punishment by showing that rejecting friends who have been arrested may not be a successful mechanism by which to avoid sanctioning.

If guilt by association is the mechanism that underlies the relationship between a friend's arrest and one's own, then the results of this study suggest that the stigma of police contact is sticky in two ways. First, the stigma of arrest moves from an adolescent to their friend and increases the likelihood that the friend experiences a first arrest independent of changes in delinquent behavior. Second, this stigma stays with the individual even if they end their friendship with an arrested friend. This study contributes to the current literature on youth-police contact by demonstrating the detrimental effects of a friend's arrest on an individual and how the social rejection that may occur with punishment may not reduce these detrimental effects. A friend's arrest may have the most significant impact within the individual in that it may induce police contact that they would not have experienced had their friend not been arrested. This study also contributes to labeling and stigma theories by expanding on the concept of "stickiness" as it pertains to stigma, even without directly testing it. In addition, based on my findings, guilt by association may be another negative consequence of police contact in adolescence that should be further investigated. Greater exposure to the justice system from increased police presence in schools and neighborhoods may affect not only the one who directly experiences police contact but also their peers. Furthermore, this study proposes that one possible mechanism of the transitory nature of Warr's (1993) sticky friends is stigma. Youth could dissolve ties with friends they have co-offended with or who have been arrested to avoid further scrutiny by the police, but this may not be effective.

5.1 | Limitations

As mentioned, the current study presents a few limitations. First, even though the rural setting provides an important context in which to study guilt by association because of the ties between the police and the communities in which they work (e.g., Chambers, 2001; Weisheit et al., 1994), focusing on these areas means that these results may not be generalizable to youth in urban or suburban areas. This limitation is especially significant when considering the differences in guilt by association experienced by youth of different racial identities. Because of these data limitations, I had to group all youth who were non-White into one category, which masks the unique effects of the societal responses to youth who identify as different races. Police contact may differ across youth who identify with Black, Hispanic, Asian, and other non-White identities, so this non-White group may include both youth expected to have a higher or lower likelihood of arrest when compared with White youth. This possibility may explain why the race variable was insignificant in the final model. This study would need to be repeated with a more racially diverse sample to assess the true effects of racialization on guilt by association. Youth who are marginalized are also more likely to drop out of school than their peers (Rumberger, 2006), so they may be underrepresented in the study. These youth are also more likely to be involved in delinquency and experience police contact (Staff & Kreager, 2008), so more youth may be impacted by guilt by association and not represented in the sample.

Although the "picked up by police" measure may include more informal police contact than one solely indicating an official arrest, future studies should use a measure of arrest exclusive to

official arrest to assess how more formal instances of police contact impact guilt by association. In the context of rural youth, being picked up by the police may still have a stigmatizing effect like an arrest would, however. First, if police stopped the adolescent and drove them home, the officer most likely would still have a negative impression of them and their behavior. Second, being picked up by police may still be a public event that carries stigma, regardless of whether the adolescent is driven to the police station. In addition, because low-level police contact is included in the measure, I predict that my estimates may be slightly conservative. In rural areas especially, police may be more involved in youth's lives (as coaches, teachers, friends' parents, etc.), leading to more information about an adolescent and their friendships being known to police. Thus, whether they have an official juvenile record may not be what drives stigma in these areas. Thus, guilt by association is still possibly stronger after a formal arrest.

The lack of measures about stigma do not allow me to test the exact mechanisms that lead to an increase in the likelihood of arrest after a friend is arrested. I hypothesize, however, that the increased surveillance of those with prior police contact and their friends is one mechanism (perhaps in part because of group hazard [Erickson, 1971]). Given the control variables included in the models and the prior research on youth–police contact, other explanations, such as changes in one's behavior and characteristics over time, are most likely not the only mechanism in this relationship. This study, however, cannot claim causal inference because changes in the likelihood of arrest might be a result of peer influence on delinquency, co-offending, or group hazard. Even though a mixed-effects model can eliminate some bias from unmeasured variables, it cannot eliminate all of it, so care must be taken when interpreting these results to not overstate the findings. Although the “stickiness” of guilt by association is the proposed mechanism of the relationship between a friend's arrest and one's own, this study does not directly test for it. Therefore, qualitative research is left with an opportunity to study individuals and the police to explore the concept of “stickiness” further.

In addition, whether the friends who were dropped after arrest were replaced with other friends (outside of one's school) also involved in delinquency or with the police is uncertain. Thus, although I might have captured some effect of current friendships with those who have been picked up by police, youth who have had police contact and are involved in delinquency are less likely to maintain friendships with those not involved in delinquency (Jacobsen et al., 2021), so I am not strongly concerned by this possibility.

Also, we have no definitive way of knowing why friendships with arrested friends are dropped. Prior research has suggested that youth reject friends punished for delinquent behavior (Jacobsen et al., 2021; Zhang, 1994). Although stigma avoidance may also be a consideration for these youth, they may also drop their friends who are arrested because they do not wish to be involved in delinquency. Furthermore, they could just no longer want to be friends with this person independent of justice system contact, or the youth who were justice involved left the school. For youth who face more severe punishments like incarceration or even expulsion from school, separation from friends may induce friendship dissolution above and beyond guilt by association (Jacobsen, 2020). The results of this study speak more to the impacts of dissolving friendship ties than to the reason why the friendships were dissolved. Given the theoretical background for this study, I propose that avoiding stigma by association is a reason for dissolving one's friendships with those who have been arrested.

5.2 | Future Research

Given the limited prior research regarding guilt by association and the transfer of stigma from punishment, we are left with many opportunities to expand on this work further. The first step would be to improve on the limitations of the current study by replicating it with larger and more diverse samples, specifically with youth in urban areas. With the rise in community policing in the past couple of decades (e.g., Reisig, 2010), guilt by association may have become more common in urban areas as officers are encouraged to know the members of the jurisdictions they patrol more intimately, which may increase surveillance (Dubal, 2012). In addition, more research into how variation in status characteristics could impact guilt by association is needed because of the disproportionate prevalence of police contact among non-White youth, particularly Black and Hispanic youth (Brunson, 2007; Epp et al., 2014; Piquero, 2008). Given the increased likelihood of police contact that already occurs among racially marginalized youth and the possibility of increased surveillance after a friend's arrest, the expansion of community policing in majority-Black or Hispanic communities may make guilt by association even more consequential. Also, those less likely to be arrested (i.e., White girls of high socioeconomic status) may experience a stronger impact from guilt by association given that labeling may be strongest for those who have a low likelihood of justice system contact (Chiricos et al., 2007). Future research should also study the extent to which *similarity* in status characteristics between friends could moderate these findings. Youth similar in certain demographic characteristics, such as race, gender, and socioeconomic status, could be perceived by police as similar in behavior because of stereotypes about group behavior (e.g., Fine et al., 2003; Stewart et al., 2009), which may further increase the guilt-by-association effect.

Future studies should also assess how guilt by association may work within different stages of the criminal legal system. This study assesses changes in the likelihood of one's first arrest, but it may impact those who already have had justice system contact differently. Guilt by association would only matter for one's first arrest because subsequent arrests would be impacted more by the individual's deviant label. Perhaps guilt by association is strongest during the initial stages of police contact but not with further justice system involvement.

Future research should also consider the ways in which other mechanisms could be interacting in conjunction with guilt by association to impact the likelihood of police contact. I focused on increased surveillance and stereotyping as the mechanisms by which guilt by association may influence the likelihood of arrest, but other ways exist in which guilt by association could have impacted these results. The significance of both a friend's arrest and one's delinquency in the analysis means that even with the presence of guilt by association, one's behavior has an independent relationship with the likelihood of arrest. Guilt by association could induce secondary deviance in a similar way to that in which a label from one's primary deviance does (Lemert, 1951). Guilt by association could also drive youth toward peer groups engaged in delinquency, which may subsequently increase one's delinquent behavior. This possibility would be consistent with prior studies that have suggested that labeling increases association with delinquent peer groups (e.g., Bernburg et al., 2006; Wiley et al., 2013).

Lastly, future studies can explore more ways in which guilt by association could influence the likelihood of arrest. Vicarious police contact through family members, particularly siblings, may be an important contributor to one's likelihood of arrest that was not captured by the current study. This type of study could not account for youth who may experience guilt by association through their siblings or other family members. The current study also focused on youth, so future research

should explore whether the differences in how adults engaged in criminal behavior interact with one another and the justice system impacts guilt by association. Lastly, future studies should also investigate the possible reciprocal nature of the relationship between a friend's arrest and one's own. For example, a friend's arrest may increase one's likelihood of police contact, which would, in turn, increase that friend's likelihood of contact.

5.3 | Policy Implications

In the context of existing research on arrest during adolescence, these results add to the troubling implications for the ways in which youth are policed, particularly in areas in which the police have strong familiarity with the individuals in their jurisdictions. The overpolicing of youth may lead to increases in guilt by association through the police's awareness of an adolescent's friendships. These adolescents were entering middle and high school in the height of zero-tolerance policies in schools (Skiba & Peterson, 2000) and fear of adolescents engaging in crime (i.e., the myth of the superpredator: Muschert, 2007). Therefore, police surveillance may have heightened during this time and changed the way in which police interacted with the youth they encountered. Thus, from year to year, changes in policing practices may have increased the possibility of guilt by association because of the close monitoring of adolescents. Although the exact mechanisms of the guilt-by-association effect could not be assessed from this study, the prior literature has suggested that increased surveillance after police contact may initiate stigma transfer between an arrested youth and their friend. If my proposed theoretical framework of stickiness is accurate, then directives like "no-contact" orders in which youth who are arrested are no longer allowed to associate with others engaged in delinquency may not prevent those friends from also becoming involved in the justice system. The rural setting may be a context in which police contact is shaped by high familiarity between police and citizens, which could become relevant in urban areas as community policing encourages police to know the people in their jurisdictions and involve them in police work (Gill et al., 2014). In addition, Non-white youth and youth of low socioeconomic status are more likely to be arrested (Bureau of Justice Statistics, 2014; Sampson, 1986), which may subject their friends to greater scrutiny by the police. Thus, guilt by association may contribute to the disproportionate levels of police contact experienced by these youth.

Stigma by association may increase the likelihood of future involvement with the criminal justice system because one's first contact with the system can lead to secondary sanctioning and other labeling processes (Liberman et al., 2014), which would subject them to the many negative consequences of police contact in adolescence (e.g., Kirk & Sampson, 2013; Wiley et al., 2013). The results of this study also align with other studies within the labeling and stigma literature that suggest that youth-police contact is not solely determined by an adolescent's behavior (e.g., Crutchfield et al., 2009). As shown by the results of this study, even when controlling for an adolescent's delinquency and other relevant covariates, a friend's arrest is still significantly related to one's first exposure to the justice system, which may negatively impact youth for the rest of their lives (i.e., cumulative disadvantage [Sampson & Laub, 1997]). Thus, reducing police contact during adolescence may have a widespread positive effect. Given the negative consequences of youth-police contact and the ways in which youth are exposed to the justice system other than through their behavior, policy makers should question whether police should be so heavily present in the lives of adolescents. Diverting resources to other institutions that address negative behavior may prevent youth from experiencing the negative consequences of police contact in adolescence.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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