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Parental arrest and adolescent delinquency in Singapore: The moderating roles of
narcissism, callous-unemotional traits, and impulsivity

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Conflict of Interest

Xiang Li declares that she has no conflict of interest. Rebecca P. Ang declares that she has no conflict of interest.

Ethical approval

This study was approved by the Institutional Review Board at Nanyang Technological University. The Ministry of Education of Singapore and the school principals also approved the data collection at the schools.

Informed consent

Informed consent was obtained from all individual participants included in the study.

Abstract

Objectives: Adolescent delinquency is an important issue, and of universal concern. Parental arrest history has been recognized to have negative impacts on children's delinquent behavior. This study focused on the predictors of adolescent delinquency, including parental influences and adolescents' own personal traits.

Methods: We explored the relationship between parental arrest and children's delinquency among 1,027 Singaporean secondary school students aged between 12 and 19 years ($M_{age} = 14.10$). Specifically, we used hierarchical multiple regression to examine the moderating effects that different dimensions of psychopathic traits, including narcissism, callous-unemotional (CU) traits, and impulsivity, have on the relation between parental arrest and adolescent delinquency.

Results: Findings suggested that parental arrest significantly and positively predicted the delinquent behavior of their children. Although narcissism, CU traits, and impulsivity showed significant main effects on delinquency, only narcissism and CU traits, but not impulsivity, were found to significantly interact with parental arrest in predicting adolescent delinquency. With a high level of narcissism and CU traits, adolescents whose parents have had a prior arrest history were more likely to display higher levels of delinquent behavior.

Conclusions: These findings shed light on the importance of reducing adolescents' narcissism and CU traits when developing prevention and intervention strategies to combat delinquency of adolescents with arrested parents in an Asian context.

Keywords: parental arrest; delinquency; narcissism; callous-unemotional traits; impulsivity

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PARENTAL ARREST AND ADOLESCENT DELINQUENCY

Parents are primary caregivers and the most influential figures in children's lives. Being the first behavioral models for children in the socialization process, parents' direct influence on their children has been well documented. The intergenerational continuity in antisocial behavior is an example. Farrington, Jolliffe, Loeber, Stouthamer-Loeber, and Kalb (2001) found that parental arrest disrupts the parent-child attachment in various ways, and could increase the likelihood of children's involvement in delinquency through profound and long-lasting parental influence. Parental arrest history may affect children negatively (e.g., stigma, mental health problems, and adjustment difficulties), and is correlated with aggressive and delinquent behavior in children (Roberts et al., 2014). In Farrington et al.'s study (2001), 25.1% of boys whose fathers have had a prior arrest history were themselves arrested compared to 6.7% of boys whose fathers have not had an arrest history. In a 14-year longitudinal study, Kinner, Alati, Najman, and Williams (2007) also found that boys who had fathers with a prior arrest history tended to commit more delinquent behaviors than those with parents without an arrest record.

Parents' negative role modeling may also influence adolescents' beliefs towards deviant acts as adolescents witness and imitate parental attitudes and behaviors towards delinquency. For example, parents who participate in delinquent acts themselves may not actively discourage delinquent behavior in their children, as children's delinquency will likely not conflict with their own deviant/lawbreaking norms and values (Nijhof, de Kemp, & Engels, 2009). Furthermore, parents may not be able to fulfill their parenting responsibilities if they are arrested, and this may increase the risk of their children committing delinquent acts because of less care and inadequate supervision from parents (Nijhof et al., 2009). Overall, parental arrest puts adolescents at risk of behavioral problems such as aggression and increases their likelihood of committing delinquent activities because parental deviant behavior not only directly influences adolescents' delinquency

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

through exposure to parents' delinquent values and behaviors, but also indirectly influences adolescents via poor parenting practices and negative family interaction (Dong & Krohn, 2015).

Adolescents are at risk of displaying various forms of delinquent behaviors (Seals, Sharp, Ha, & Michonski, 2012) as adolescence is a turbulent and sensitive period of transition in which the adolescent is shaped by parental influences and also develops his/her own personal traits. As antisocial behavior is an inherent part of psychopathy (DeLisi & Vaughn, 2015), psychopathic traits are important in identifying individuals who display delinquent, aggressive, and violent behaviors (Marsee, Silverthorn, & Frick, 2005). Psychopathy is a multidimensional construct, comprising a variety of personality features and behavioral characteristics. A broad general consensus in the literature suggests that psychopathic traits have three distinct yet related dimensions including narcissism, callous-unemotional (CU) traits, and impulsivity (Frick, Bodin, & Barry, 2000; Li, Chan, Ang, & Huan, 2017), although the exact number of dimensions can be debated (Marsee et al., 2005).

Narcissism is an interpersonal dimension of psychopathy that is characterized by arrogance and deceitfulness, grandiosity and superiority, manipulateness and exploitativeness for personal gain, excessive need for admiration, and inflated self-appraisal (Marsee et al., 2005; Muñoz, Kimonis, Frick, & Aucoin, 2013). Dysfunctional parenting (e.g., neglecting the emotional needs of children) and a low level of parental monitoring significantly predicts a high level of narcissism (Muñoz et al., 2013), and narcissism is related to delinquency (Barry, Grafeman, Adler, & Pickard, 2007). As most children are aware of the stigma surrounding their parents being arrested, children feel embarrassed and ashamed, and this contributes to vulnerable self-views in children (Roberts et al., 2014). Grandiose but simultaneously vulnerable self-views

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

make narcissistic adolescents behave aggressively once their egos are threatened (Thomaes, Bushman, Orobio de Castro, & Stegge, 2009).

As the affective dimension of psychopathy (Muñoz et al., 2013), CU traits reflect deficits in empathy and affective processing (Fontaine, McCrory, Boivin, Moffitt, & Viding, 2011). The defining features of CU traits include shallow/blunted affect, lack of empathy, absence of guilt, uncaring attitudes, and irresponsibility (Frick et al., 2003). CU traits are associated with antisocial and delinquent behaviors (Fontaine et al., 2011), and in particular, they serve as the most important predictor of identifying the most severe antisocial and delinquent groups (Frick et al., 2003). Pardini, Lochman, and Frick (2003) found that CU traits were related to high expectations of positive consequences of aggression and low expectations of punishment for delinquency. This makes adolescents with CU traits lack concern about their delinquent behaviors and may not consider the negative consequences of their delinquency (e.g., harm to others and punishment for themselves). Besides a very high heritability estimate for CU traits in children (Bezdjian, Raine, Baker, & Lynam, 2011), problematic parent-child communication, poor parental supervision, and a low level of parental warmth would also lead to high levels of CU traits (Waller, Gardner, & Hyde, 2013).

Impulsivity as the behavioral dimension of psychopathic traits is marked by irresponsibility, poor behavioral control, and an inability to delay gratification (Marsee et al., 2005). Impulsivity is associated with a low level of social competence and a high level of internal and external problems (Bush, Lengua, & Colder, 2010). Being unable or unwilling to control immediate impulses is a type of self-regulatory failure (Leith & Baumeister, 1996), which is an important determinant of delinquent behaviors (Carroll et al., 2006). Children who have fewer self-control skills were more likely to engage in delinquent and criminal activities

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

(Babinski, Hartsough, & Lambert, 1999; Vitulano, Fite, & Rathert, 2010), as impulsivity may cause lack of planning and consideration of possible consequences in the context of high emotional arousal (Frick et al., 2003). Children who are impulsive are more vulnerable to negative parenting, while good parenting is beneficial to impulsive children (Rioux et al., 2016). For example, coercive parental practices have a more negative impact on alcohol use in adolescents with impulsive characteristics (Rioux et al., 2016); and supportive parenting can reduce problem behaviors in adolescents with high levels of impulsivity (Stice & Gonzales, 1998).

The three dimensions of psychopathic traits have been found to be predictive of adolescent delinquency (Muñoz & Frick, 2007). Compared to impulsivity that has a more direct association to delinquency, narcissism and CU traits exert influences on delinquency in both direct and indirect ways. For example, narcissistic traits not only make adolescents prone to act aggressively once their inflated egos were threatened, but it also could strengthen the negative impact of a fragile self-concept on aggressive behavior (Fanti & Henrich, 2015). Barry et al. (2007) found that narcissism has both main effects and interaction effects with self-esteem on proactive aggression. Oxford, Cavell, and Hughes (2003) found that CU traits contributed to a high level of behavioral problems through its main effects and interaction effects with ineffective parenting (i.e., poor monitoring and supervision). Kroneman, Hipwell, Loeber, Koot, and Pardini (2011) also found that the negative influences of a low level of parental warmth on adolescents' oppositional defiant disorder/conduct disorder were stronger for adolescents presenting with CU features.

Skeem, Scott, and Mulvey (2014) found that population base rates of crime were highest in adolescents, and juveniles with records of delinquency committed a disproportionate number

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

of violent and other criminal behaviors when they entered adulthood. Against this background, a better understanding of the underlying mechanisms affecting adolescent delinquency is timely so as to target appropriate variables for more effective intervention. To the best of our knowledge, although some Western studies have reported the influence of parental arrest on children's delinquent behavior, there is little knowledge available concerning the effects of parental arrest on adolescent delinquency in Asia. For example, in Yau and Chung's study (2014), based on mothers' narratives in Hong Kong, the authors found that father imprisonment was associated with an increase in children's conduct problems (e.g., fighting). Chng, Chu, Zeng, Li, and Ting (2016) found that youth offenders who have families with criminality are more likely to conduct early offending and have a quicker rate of recidivism compared to their counterparts from intact families in Singapore. These limited studies were conducted in recent years, and more explorations in Asian adolescents are necessary to demonstrate the generalizability of existing findings from Western societies and enhance the literature concerning adolescent delinquency. Furthermore, the understanding of the moderating mechanisms of the link between parental arrest and adolescent delinquency is also limited. To fill these research gaps, two research questions were raised in present study. First, we aimed to examine the relation between parental arrest and adolescent delinquency in a large sample of Singapore adolescents. Second, we aimed to explore how the three dimensions of psychopathic traits such as narcissism, CU traits, and impulsivity moderate the relation between parental arrest and adolescent delinquency.

Method

Participants

A total of 1,027 students (56.1% males, 40.3% females, and 3.6% unreported) aged between 12 and 19 years ($M = 14.10$, $SD = 1.15$) participated in this study. The participants were

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

in Grade 7 ($n = 377$), Grade 8 ($n = 312$), and Grade 9 ($n = 338$) at three randomly selected government secondary schools which are the most common types of schools in Singapore. All these schools are situated in neighborhood residential estates and under the governance of the Ministry of Education, Singapore. The self-reported ethnic identification of the participants was as follows: 65.4% were Chinese ($n = 668$), 20.8% were Malay ($n = 212$), 6.7% were Indian ($n = 68$), 1.1% were Eurasian ($n = 11$), and 6% belonged to other ethnic groups ($n = 62$).

Procedure

This study was approved by the Institutional Review Board at Nanyang Technological University. The Ministry of Education of Singapore and the school principals also approved the data collection at the schools. The data was collected in 2013. Student participation in this anonymous study was voluntary, and the participants were informed that they could refuse to answer any questions without penalty. The questionnaire was administered in an organized classroom setting. As English is the language of instruction for all schools in Singapore, the questionnaire was administered in English in this study.

Measures

Parental Arrest. The participants were asked to report their parents' encounters with law enforcement with respect to police arrests. Participants answered *Yes* or *No* to the following two questions: "Has your father ever been arrested by the police for an offence?" and "Has your mother ever been arrested by the police for an offence?" Parental arrest was considered as *Yes* if a participant responded with *Yes* to either of the two questions.

Self-Reported Delinquency Scale (SRDS). The SRDS (adapted from Elliott, Huizinga, & Ageton, 1985) with 18 items was adopted to measure a series of different types of adolescent delinquent behaviors, from minor acts of delinquency to more serious ones. Each item (e.g., "I

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

hit, slapped, or punched another kid”) was rated using a dichotomous *Yes/No* response. The delinquency score was calculated by summing the total number of affirmative responses (i.e., *Yes*) to the 18 items, with a possible score ranging from 0 to 18. A higher score indicated more delinquent acts had been committed. The Cronbach alpha of the SRDS was .90 in this study.

Antisocial Process Screening Device (APSD). The 20-item APSD (Frick et al., 2000) was used to measure psychopathic traits. It includes three subscales: narcissism (e.g., “You think you are better or more important than other people”), callous-unemotional traits (e.g., “You care about the feelings of others” reverse scored), and impulsivity (e.g., “You act without thinking of the consequences”). The items were rated on a 3-point scale (0 = *Not true at all*, 1 = *Sometimes true*, and 2 = *Definitely true*), with a higher score suggesting a higher level of psychopathic traits. In the present study, the Cronbach alpha reliability estimates for narcissism, CU traits, and impulsivity were .68, .56, and .54, respectively.

Data Analyses

Regression analysis was conducted to examine the relation between parental arrest and adolescent delinquency. Subsequently, hierarchical multiple regression analyses were performed to further analyze the moderating effects of narcissism, CU traits, and impulsivity on the parental arrest-adolescent delinquency link. Parental arrest as a dichotomous independent variable was dummy coded (0 = *No* and 1 = *Yes*). The moderators including narcissism, CU traits, and impulsivity were mean centered prior to calculating the interaction terms. Both the independent variable and the moderators were entered in Step 1, and all the interaction terms (i.e., Parental arrest \times Narcissism, Parental arrest \times CU traits, and Parental arrest \times Impulsivity) were entered in Step 2. As recommended by Aiken and West (1991), significant interaction effects were

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

probed at low (one standard deviation below the mean) and high (one standard deviation above the mean) levels of the moderators.

Results

The means, standard deviations, and correlations between parental arrest, narcissism, CU traits, impulsivity, and delinquency are reported in Table 1. We found that parental arrest was significantly predictive of delinquency ($r = .32, p < .001$). Narcissism, CU traits, and impulsivity were also positively related to delinquency ($r = .31, p < .001$; $r = .14, p < .001$; $r = .38, p < .001$; respectively).

Subsequently, a hierarchical regression analysis was performed to test the moderating effects of narcissism, CU traits, and impulsivity on the relation between parental arrest and adolescent delinquency (see Table 2). It was found that parental arrest ($b = 3.90, p < .001$) and each of the three moderators including narcissism, CU traits, and impulsivity ($b = .22, p < .001$; $b = .22, p < .01$; and $b = .54, p < .001$; respectively) had significant and positive main effects on adolescent delinquency. The increase in the amount of variance explained by the interaction terms at Step 2 was significant: $\Delta R^2 = .026, \Delta F(3, 985) = 11.812, p < .001$. Both the interaction effect between parental arrest and narcissism ($b = .62, p < .001$) and the interaction effect between parental arrest and CU traits ($b = .95, p < .001$) were significant in predicting adolescent delinquency, but the interaction effect between parental arrest and impulsivity was not statistically significant ($b = -.14, p > .05$). It suggests that impulsivity did not function as a moderator in the link between parental arrest and adolescent delinquency.

To interpret both interaction effects, between parental arrest and narcissism, and between parental arrest and CU traits, the simple slopes of parental arrest on adolescent delinquency were examined at low (-1 SD) and high (1 SD) levels of narcissism and CU traits respectively (see

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

Figures 1 and 2). It was found that parental arrest significantly predicted adolescent delinquency for both adolescents with high levels of narcissism ($b = 4.85, p < .001$) and adolescents with low levels of narcissism ($b = 1.82, p < .01$), but the association between parental arrest and delinquency was stronger for the former. The effect of parental arrest on delinquency was found to be stronger for adolescents with a higher level of CU traits ($b = 4.87, p < .001$) than for those with a lower level of CU traits ($b = 1.80, p < .01$).

Discussion

Two research questions concerning the relation between parental arrest and adolescent delinquency were addressed in this study. First, the association between parental arrest and adolescent delinquency was examined. Second, the interaction effects between parental arrest and different dimensions of psychopathic traits (i.e., narcissism, CU traits, and impulsivity) in predicting adolescent delinquency were examined.

In line with prior studies in Western context (e.g., Farrington et al., 2001), our findings from an Asian sample also revealed the significantly negative impact of parental arrest on adolescent delinquency. Parents who have been arrested for various criminal offenses may serve as negative behavioral role models for their children. Parental arrest also has the potential to disrupt parent-child attachment, bonding and other family dynamics. With disrupted parent-child and family relationships, parents may either neglect to or choose not to intervene and correct delinquent behaviors in their adolescents resulting in a higher likelihood of these adolescents repeating and engaging in further delinquent behaviors (Nijhof et al., 2009). Additionally, parents who have been arrested or who have had convictions may demonstrate poor parental monitoring, guidance and supervision which increases the likelihood of adolescents' engagement in problem behaviors such as delinquency (Oxford et al., 2003). Overall, adolescents whose

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

parents have had previous arrests are more likely to commit acts of delinquency than their counterparts whose parents do not have criminal/arrest records (Farrington et al., 2001).

As expected, all the three dimensions of psychopathic traits including narcissism, CU traits, and impulsivity showed positive main effects on adolescent delinquency. It was noted that impulsivity only demonstrated main effects on adolescent delinquency, whereas narcissism and CU traits showed main effects as well as interactive effects with parental arrest in predicting delinquency.

Narcissistic individuals are prone to react aggressively when insulted or when their egos are threatened (Bushman & Baumeister, 2002), and parental arrest might place children in such vulnerable positions. Children who have parents with an arrest record may be treated differently (e.g., experiencing social discrimination and exclusion) or negatively labeled (Roberts et al., 2014). This results in these adolescents, possibly consciously or unconsciously, inflating their self-views to help them maintain a sense of superiority (Fanti & Henrich, 2015) as narcissistic self-views can protect individuals against feelings of rejection and worthlessness (Thomaes et al., 2009). Also, most narcissistic individuals are sensitive to negative stimuli and have a chronic need for admiration and positive attention to maintain their vulnerable self-views (Muñoz et al., 2013; Thomaes et al., 2009). However, children who have parents with an arrest history often struggle to gain positive attention from adults and narcissistic traits may contribute to them engaging in more delinquent behavior to gain attention and enhance their desired social status (Barry et al., 2007; Fanti & Henrich, 2015). Overall, the interaction effect between parental arrest and narcissism was found to significantly predict adolescent delinquency.

CU traits were another moderator that strengthened the relation between parental arrest and adolescent delinquency. Research has shown that callousness, low empathy, and poor social

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

skills are typical features of offenders (Jolliffe & Farrington, 2004). Because of the intergenerational transmission of CU traits, children with high levels of CU traits under the influence of parents with deviant conduct may engage in more delinquent acts (Waller et al., 2013). Additionally, parents with a prior arrest history are less likely to be involved in their children's lives and growth, and researchers have also posited that such parental neglect might contribute towards the development of CU traits in families that can be characterized as lacking warmth (Ometto et al., 2016).

Unlike narcissism and CU traits that function as moderators in the parental arrest-adolescent delinquency link, impulsivity does not interact with parental arrest in predicting delinquency, suggesting that impulsivity is associated with delinquency through its main effects rather than its interaction effects with parental arrest. The key determinant of impulsive behaviors of individuals is an inability to delay gratification rather than personal predatoriness (Babinski et al., 1999). Compared to narcissism and CU traits that are related to learned and predatory aggression, impulsivity is more closely related to aggression driven by real-time emotion without careful consideration of consequences (Li et al., 2017). A high level of impulsivity leads to adolescents having less social interaction with others, and therefore, being less influenced by others (Snyder, Prichard, Schrepferman, Patrick, & Stoolmiller, 2004). For example, peer's delinquency has little impact on impulsive adolescents (Vitulano et al., 2010). Therefore, impulsivity appears to have stronger direct links with delinquency, while narcissism and CU traits have both direct and indirect pathways to delinquency.

Different socialization experiences could contribute to different developmental outcomes for adolescents. The children of adults with arrest records are a highly vulnerable group because of the devastating consequences of parents' arrest experiences on adolescents (Roberts et al.,

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

2014). Though a strong intergenerational link of problem behavior was found between parents and adolescents, the vicious cycle of intergenerational transmission of delinquency can be broken (Dong & Krohn, 2015), suggesting that having a parent who has had a brush with the law does not necessarily mean a child will exhibit delinquency. Results suggest that it would be important for parents, especially those who have been previously arrested, to disassociate their own deviant experience and to restrict or reduce negative impact on children by modeling positive behaviors, through positive parenting, and enhancing positive parent-child interaction more generally.

Furthermore, because narcissism and CU traits strengthen the impact of parental arrest on adolescents' delinquency, relevant training in reducing narcissism and CU traits should be incorporated into prevention and intervention programs. Learning how to appropriately deal with ego-threatening experiences caused by parental arrest and adaptively boost self-views would be beneficial in attempting to reduce adolescents' delinquent behavior. Giving sufficient support and emotional care to vulnerable adolescents by promoting prosocial norms and skills would be another appropriate way of reducing youth engagement in delinquent acts.

Limitations and Future Research Directions

Although our findings extend existing knowledge regarding the association between parental arrest and adolescent delinquency and its underlying moderating mechanisms via narcissism and CU traits, several limitations should be noted and addressed in future work. First, although most researchers have adopted the APSD to measure adolescents' psychopathic traits (Waller et al., 2013), the Cronbach alpha values were weak. However, the reliability of the measurements of narcissism, CU traits, and impulsivity in this study was similar to or better than that in prior published findings (e.g., Seals et al., 2012). Alternative instruments for measuring

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

the three dimensions with higher internal consistency should be employed in future work.

Second, a dichotomous variable of parental arrest (*Yes* or *No*) used in this study precluded our exploration of the influence of different levels of seriousness of these arrests and the association with adolescent delinquency. More details on the types of offenses could be analyzed in future studies. Third, self-report measures used in this study may be vulnerable to social desirability; adolescents may have concerns about reporting their parents' experience of arrest, and their own psychopathic traits, and delinquent behaviors. To address this issue, multiple sources (e.g., official arrest records, archival data, and teacher-report) could be used in future research. Finally, the impact of parental arrest on adolescent delinquency can be adjusted by both positive and risk factors. Only risk or negative elements (i.e., psychopathic traits) were investigated in this study. Future work can examine possible protective factors (e.g., resilience) that may shield adolescents from negative influences contributed by parental arrest.

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

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PARENTAL ARREST AND ADOLESCENT DELINQUENCY

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PARENTAL ARREST AND ADOLESCENT DELINQUENCY

Table 1

Means, Standard Deviations, and Correlations of Study Variables in this Study

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Parental arrest	-	-	-				
2. Narcissism	3.64	2.43	.07*	-			
3. Callous-unemotional	2.08	1.60	.06	.07*	-		
4. Impulsivity	4.03	1.82	.10**	.47***	.06*	-	
5. Delinquency	2.47	3.65	.32***	.31***	.14***	.38***	-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

Table 2

Hierarchical Multiple Regression Analysis: Narcissism, Callous-unemotional Traits, and Impulsivity as Moderators of the Association between Parental Arrest and Delinquency

Predictors	<i>b</i>	<i>R</i> ²	ΔR^2	ΔF
Step 1				
Parental arrest	3.90 ^{***}			
Narcissism	.22 ^{***}			
Callous-unemotional	.22 ^{**}			
Impulsivity	.54 ^{***}	.245	.245	80.065 ^{***}
Step 2				
Parental arrest	3.34 ^{***}			
Narcissism	.16 ^{**}			
Callous-unemotional	.14 [*]			
Impulsivity	.56 ^{***}			
PA × Narcissism	.62 ^{***}			
PA × Callous-unemotional	.95 ^{***}			
PA × Impulsivity	-.14	.271	.026	11.812 ^{***}

Note. PA = Parental arrest. Parental arrest (0 = No and 1 = Yes) was dummy coded. Narcissism, callous-unemotional traits, and impulsivity were mean centered.

* $p < .05$, ** $p < .01$, *** $p < .001$.

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

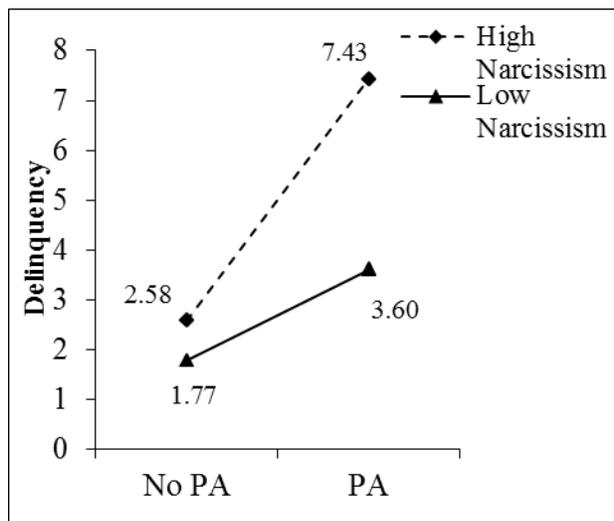


Figure 1. Regression lines for the association between parental arrest and delinquency as moderated by narcissism.

Note. PA = Parental arrest.

PARENTAL ARREST AND ADOLESCENT DELINQUENCY

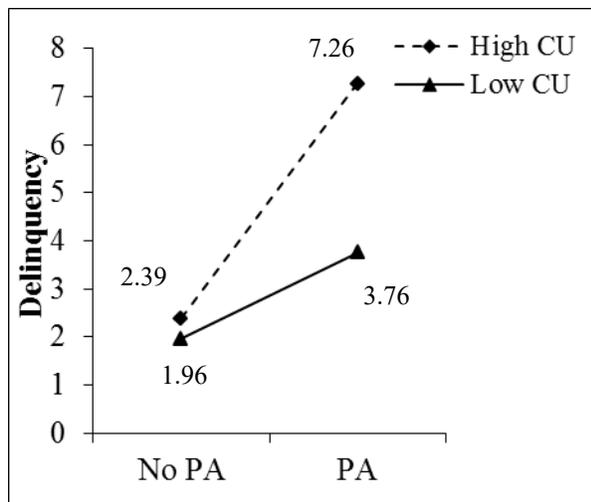


Figure 2. Regression lines for the association between parental arrest and delinquency as moderated by callous-unemotional traits.

Note. PA = Parental arrest; CU = Callous-unemotional traits.