Abstract

This study explored the association between parental arrest and two functions of aggression (i.e., reactive and proactive aggression) among 797 Singaporean adolescents. The moderating effects of psychopathic traits and gender were also investigated in the parental arrest-reactive/proactive aggression link. Parental arrest was found to be significantly and positively related to both reactive and proactive aggression, especially proactive aggression. Psychopathic traits strengthened the link between parental arrest and proactive aggression in adolescents with stronger effects for girls in this Singaporean sample. These findings point to the importance of early intervention with respect to girls who display high levels of psychopathic traits, especially when they also have parents with a prior arrest history, so as to reduce their levels of proactive aggression.

Keywords

parental arrest, psychopathic traits, reactive aggression, proactive aggression, gender differences

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Psychopathic Traits and Gender as Moderators of the Parental Arrest-Proactive Aggression Link

Introduction

Negative parent-child transactions and a disruptive family environment increase the risk of setting the child off on an aggressive and antisocial trajectory that may persist into adulthood. Beyond risks conferred by negative parenting and a disruptive family environment, children and adolescents with psychopathic traits have the additional risks including problems with aggression and the consequences could include persistent delinquency as well as a criminality (DeLisi & Vaughn, 2015; Marsee, Silverthorn, & Frick, 2005). The goal of the present study is twofold: (1) examining the relationship between history of parental arrest and the youth's display of reactive and proactive aggressive tendencies; (2) testing the possible moderating effects of psychopathic traits and gender on this relation. We will review the relevant literature on functions of aggression, parental arrest in relation to functions of aggression, as well as psychopathic traits and gender in relation to functions of aggression.

Reactive and Proactive Aggression

Dodge and Coie (1987) distinguished between reactive and proactive aggression, which describes functions of aggression. Reactive aggression has been described as an emotional and uncontrolled response, while proactive aggression refers to unprovoked, deliberate, and goal-oriented acts (Dodge, 2006; Raine et al., 2006). Reactive aggression has been theorized as a product of frustration, and is viewed as a defensive and temperament-based reaction to provocation (Dodge, 1991). On the other hand, proactive aggression has been theorized as a product of social learning, an acquired and calculated behavior governed by reinforcement which serves to help one attain a desired goal (Bandura, 1983). It is acknowledged that most behaviors

are a product of gene x environment interactions and that there is some overlap between both functions of aggression. However, there is theoretical and empirical evidence that there are meaningful differences across both functions of aggression (Baker, Raine, Liu, & Jacobsen, 2008).

Reactive and proactive aggression have varying genetic and environmental etiologies (Baker et al., 2008) and differential correlates (Card & Little, 2006; Fite, Colder, Lochman, & Wells, 2008). For example, Colins (2016) studied detained boys from the Netherlands and the findings showed that proactive aggression is more likely to be related to alcohol and substance use than reactive aggression, and that only proactive aggression was related to violence and theft. Proactive aggression has been linked to exposure to aggressive models in the family that value aggression to further their own personal interests or to resolve conflict. The family-social environment fails to curb or even encourages the use of aggression as a planned behavior to obtain a desired goal (Vitaro & Brendgen, 2012). Reactive aggression on the other hand, may be more strongly associated with anxiety and other internalizing problems, peer problems and social maladjustment (Card & Little, 2006). Additionally, some researchers argue that proactive aggression may reflect a more severe kind of aggression because studies clustering children's functions of aggression have found that while there are reactive-aggressive only clusters of children, quite often they have found combined reactive and proactive clusters in which the latter presents with more pathology (Crapanzano, Frick, & Terranova, 2010; Pang, Ang, Kom, Tan, & Chiang, 2013).

Parental Arrest and Functions of Aggression

Parents and the family environment exert important socialization influences on children and adolescents. Exposure to poor role models such as parents' antisocial and criminal conduct or

disruptive family environmental circumstances are associated with an increased likelihood of children's subsequent involvement in delinquent behavior, and proactive and reactive aggression (Murray & Farrington, 2005; Nijhof, de Kemp, & Engels, 2009). This literature review draws largely from the parental incarceration literature. The literature in this area is diverse and varied; the term ''incarcerated parent'' has been used in the literature to refer to a heterogeneous group of individuals across different studies. In some studies, these are parents involved with the U.S. criminal justice system or parents involved in other countries' systems, and in other studies, the same term could mean parental arrest only or in other studies, incarceration at the state or federal level or at the local level (e.g., Cho, 2009; Dallaire & Wilson, 2010; Murray, Farrington, & Sekol, 2012). Some studies examined current involvement with the criminal justice system while other studies examined past involvement. Collectively, this body of work encompasses studies that examine different levels of children's awareness of and exposure to parental involvement in the criminal justice system and impact on children's adjustment and behavior. As a summary, findings from Murray, Farrington, and Sekol's (2012) meta-analysis of 50 samples in 40 studies suggest that parental incarceration predicted an increased risk for antisocial behavior in children. Furthermore, Dallaire and Wilson (2010) found converging evidence from parent, child, and caregiver's reports that in a high risk population of adolescents, the experience of and exposure to parental criminal activity, arrest, and sentencing has contributed to children's maladjustment and emotional difficulties.

Therefore, when children and adolescents experience family disruption due to police arrest or other forms of parental involvement with the criminal justice system, these are stressful experiences which put children at risk of antisocial behavior including aggression. Parental arrest for example, could disrupt parent-child relationships and/or alter the network of familial support

(Roberts et al., 2014). Broadly, children at various developmental stages can be differentially impacted by parental arrest and this could range from disruptions in attachment, to shame, loss of face, trauma, and a host of emotional and behavioral adjustment problems including proactive and reactive aggression (Osofsky, 1999; Phillips & Erkanli, 2008). Culture is an important consideration (Afolabi, Bunce, Lusher, & Banbury, in press) and in the Asian cultural context, shame and loss of face can be felt even more acutely (Yeh & Huang, 1996). Shame and loss of face is a painful social emotion felt when individuals experience the threat of social exclusion. From multiple theoretical perspectives including evolutionary and psychobiological perspectives, Elison, Garofalo, and Velotti (2014) argue that anger and aggression are defensive responses to shame and loss of face.

In Murray et al.'s (2012) meta-analysis, they explained that if children watch their parents respond with antisocial behavior to stressful events they may be socialized into responding in a similar antisocial manner. A family environment that actively promotes the use of purposeful aggression to reach a goal or does nothing to inhibit aggression may propel children towards proactive aggression (Vitaro & Brendgen, 2012) especially since this particular function of aggression has often been linked to exposure to aggressive models in the family. Therefore, it is plausible to posit a stronger link between parental arrest and proactive aggression.

Psychopathic Traits and its Relation to Functions of Aggression

Both functions of aggression have been shown to be associated with psychopathy to varying degrees. Psychopathy comprises affective (e.g., lack of remorse), interpersonal (e.g., superficial charm), and behavioral characteristics (e.g., impulsiveness) (Cleckley (1976). It was first applied to adults but has been extended downwards for use with children (Frick, Kimonis, Dandreaux, & Farell, 2003). López-Romero, Romero, and Andershed (2015) studied three

groups of children with varied patterns of developmental patterns of conduct problems. They found that the group with stable and high levels of problem behaviors over time comprised children with psychopathic traits, higher levels of callous unemotional traits and both proactive and reactive aggression, among other characteristics. However, some researchers argue that between the two functions of aggression, there is closer theoretical alignment between psychopathy and proactive aggression and this has been demonstrated via empirical research. Psychopaths tend to engage in violent behaviors for a goal-oriented, calculated and proactive purpose, due to their insensitivity and disregard for social and emotional prohibitions against violence (Cornell et al., 1996). Additionally, the genetic relation between psychopathic traits and aggression has been shown to be significantly stronger for proactive aggression (Bezdjian, Tuvblad, Raine, & Baker, 2011; Raine et al., 2006). In a separate study of 1158 preadolescent children, findings showed that children high on psychopathic traits had relatively more stable levels of reactive aggression regardless of levels of parental affect, whether positive or negative. However, child psychopathic traits if present, made the situation worse under the condition of high levels of negative parental affect on proactive aggression (Yeh, Chen, Raine, Baker, & Jacobson, 2011).

Gender Differences in Relation to Functions of Aggression and Psychopathy

There is evidence for gender differences in psychopathy and gender differences in how psychopathy affects aggressive behavior. Many scholars found that males generally reported higher scores on psychopathic traits compared to females (e.g., Marsee et al., 2005; Perenc & Radochonski, 2014) but psychopathic traits may play a different role in predicting different types of aggression. Marsee et al. (2005) found that while the association between psychopathic traits and overt aggression was similar for both males and females, the association between

psychopathic traits and relational aggression was identified only in females. Furthermore, males generally exhibit higher levels of both reactive and proactive aggression compared to females (Perenc & Radochonski, 2014; Skripkauskaite et al., 2015). Hay (2007) in a critical review of the literature on gender differences related to aggression, highlighted that gender differences on aggression are not obvious early on in life, however, males and females become increasingly differentiated in the extent and nature of aggression from middle childhood through adolescence. Males and females may be differentially affected by various adverse family environmental influences (Cadoret, 1980). Compared to males, females appear more susceptible to family stressors like parental negativity (Crick & Zahn-Waxler, 2003) and are more sensitive to the relational dynamics inherent in family processes (Jacobvitz & Bush, 1996). For example, girls who lack parental supervision at home have more smoking problems than boys (Griffin, Botvin, Scheier, Diaz, & Miller, 2000). Consistent with this line of reasoning, with respect to aggression specifically, Moffitt and colleagues (2001) pointed out that females display their most violent actions within the domain of close, interpersonal relationships. On the other hand, Gudjonsson et al. (2009) found reported false confessions in boys rather than girls, to be most strongly linked with witnessing or being involved in physical abuse at home for example. In sum, given these mixed findings, these nuances in relation to gender differences in how psychopathy affects aggressive behavior, remain to be explored.

The Present Study and Hypotheses

In the current study, we specifically examined the relationship between parental arrest on functions of aggression in children. While psychopathic traits are predictive of various dimensions of antisocial behavior and aggression (Vaughn, Howard & DeLisi, 2008), the existing research gap is that moderating mechanisms of psychopathic traits and gender in the link

between parental arrest and reactive/proactive aggression have yet to be examined. We tested two hypotheses. The conceptual diagram of the hypothesized moderated moderation relationship is presented in Figure 1 (Jaccard & Jacoby, 2010).

H1: Parental arrest is correlated with both functions of aggression, with parental arrest having stronger associations with proactive aggression.

H2: Psychopathic traits have main effects on both functions of aggression, but psychopathic traits have a moderating effect only in the link between parental arrest and proactive aggression. Furthermore, the moderating effect of psychopathic traits on the relationship between parental arrest and proactive aggression is itself moderated by gender.

Method

Participants

Seven hundred and ninety seven (797) students (445 males, 325 females, 27 of unreported gender) aged between 12 and 18 years (M = 14.07, SD = 1.12) participated in this study. The participants were evenly distributed across three grade levels, Grade 7 (37.1%), Grade 8 (30.4%), and Grade 9 (32.5%) at two government secondary schools, which are the most common school type in Singapore. The self-reported ethnic identification of the participants was as follows: 71.6% Chinese, 13.6% Malay, 6.8% Indian, 1.1% Eurasian, and 6.3% other ethnic groups, while 0.6% did not report their ethnicity.

Measures

Parental Arrest. The participants were asked to report their parents' prior arrests if any. They answered *yes* or *no* to the following question for each parent: “Has your father (or mother)

ever been arrested by the police for an offense?" Perceived parental arrest was coded *yes* if a participant responded with *yes* to either of these two questions.

Antisocial Process Screening Device (APSD). The APSD (Frick & Hare, 2001) with 20 items was employed to measure psychopathic traits (e.g., "You use or 'con' other people to get what you want"). Responses were given on a 3-point scale ranging from 0 (*not true at all*) to 2 (*definitely true*), with higher scores suggesting higher levels of psychopathic traits. Only the total APSD score was used in this study because of low Cronbach alpha estimates for the subscale scores. The Cronbach alpha was .71 for the total APSD score for this sample.

Reactive-Proactive Aggression Questionnaire (RPQ). The 23-item RPQ (Raine et al., 2006) was used to measure reactive aggression (11 items; e.g., "I damage things when I am mad") and proactive aggression (12 items; e.g., "I fight with others to show who is on top"). The items were rated on a 3-point scale (0 = *never*, 1 = *sometimes*, and 2 = *often*), with higher scores indicating higher levels of aggression. In this study, the Cronbach alphas were .82 and .86 for reactive and proactive aggression, respectively.

Data Analytic Plan

Correlations were performed to investigate the relationships between parental arrest and both functions of aggression, and a *t*-test (Chen & Popovich, 2002) was used to compare the two dependent correlations. Hierarchical multiple regression analyses were used to explore the moderating role of psychopathic traits and gender in the links between parental arrest and both functions of aggression. Prior to calculating the interaction terms, the two dichotomous variables including parental arrest (0 = *no* and 1 = *yes*) and gender (0 = *female* and 1 = *male*) were dummy coded, and the continuous variable, psychopathy traits, was mean centered in accordance with established procedures. The independent variable, the primary and secondary moderators were

entered in Step 1, all two-way interaction terms were entered in Step 2, and the three-way interaction term was entered in Step 3. Interaction effects were probed and interpreted (Aiken & West, 1991).

Procedures and Consent

All study protocols were approved by the Institutional Review Board of Nanyang Technological University, Singapore. The Ministry of Education in Singapore and the school principals approved the data collection at the two schools. Parental consent was obtained and adolescent assent was also obtained prior to students' participation in the study. Participation in this anonymous survey was completely voluntary, and students could discontinue their involvement or refuse to answer any questions without penalty. The survey was administered in an organized classroom setting, and administered in English which is the language of instruction for all Singapore schools. All information provided by participants was kept strictly confidential.

Results

The Cronbach alphas, means, standard deviations, and the correlations between parental arrest, gender, psychopathic traits, reactive aggression, and proactive aggression are reported in Table 1. Parental arrest was significantly associated with both reactive ($r = .15$, $p < .001$) and proactive aggression ($r = .22$, $p < .001$), but was more strongly related to the latter ($t(794) = 2.13$, $p < .05$). There was empirical support for H1.

To test H2, two hierarchical regression analyses were performed (see Table 2 and Table 3). In predicting reactive aggression (see Table 2), results showed that psychopathic traits ($b = .41$, $p < .001$) had a significant main effect but both the two-way interaction ($b = .19$, $p > .05$) and three-way interaction ($b = .16$, $p > .05$) effects were not statistically significant.

In predicting proactive aggression (see Table 3), results showed that psychopathic traits ($b = .33$, $p < .001$) had a significant main effect. The interaction effect between parental arrest and psychopathic traits significantly predicted adolescent proactive aggression ($b = .43$, $p < .001$). The three-way interaction of Parental Arrest x Psychopathic traits x Gender ($b = -.36$, $p < .01$) on proactive aggression was also significant: $\Delta R^2 = .006$, $\Delta F(1,733) = 6.840$, $p < .01$. The conditional effect of Parental Arrest × Psychopathic traits interaction was significant in both boys ($b = .26$, $p < .01$) and girls ($b = .61$, $p < .001$), but stronger for girls. There was empirical support for H2.

The significant three-way interaction was plotted and slope differences tested (Dawson & Richter, 2006) among all six pairs of slopes (see Figure 2). Regardless of the status of parental arrest, boys and girls with low levels of psychopathic traits displayed significantly less proactive aggression than their counterparts with high levels of psychopathic traits: the slope differences between (1) and (3) ($t = 2.73$, $p < .01$) and between (2) and (4) ($t = 6.23$, $p < .001$) were statistically significant. Boys and girls showed similar levels of proactive aggression at low levels of psychopathic traits: there was no statistical significance in the slope difference between (3) and (4), ($t = 1.14$, $p > .05$). In contrast, at a high level of psychopathic traits, girls exhibited more proactive aggression than boys if their parents have an arrest history, and boys exhibited more proactive aggression if their parents have not had an arrest history: the slope difference between (1) and (2) was statistically significant ($t = -2.34$, $p < .05$).

Discussion

The objective of this study was to examine psychopathic traits and gender as moderators of the relationship between parental arrest and aggression in adolescents. While parental arrest was significantly associated with both functions of aggression, it was more strongly related to

proactive aggression. Psychopathic traits moderated the relationship between parental arrest and proactive aggression, and this relationship was further moderated by gender with the effect being stronger for girls.

Although behaviors are shaped and influenced by multiple sources and factors, proactive aggression has been posited in the literature as goal-oriented and primarily learned by observing and imitating the behavior of others (Dodge, 2006), while reactive aggression is mostly an emotion-driven behavior triggered by a provocative situation (Dodge, 1991). Present findings suggest that parental arrest is related to children's aggression and in particular, the relation with proactive aggression appears to be stronger. It is plausible that knowledge of parental arrest or experience of parental arrest has the potential to impact children negatively, and perhaps more so for the kind of aggression like proactive aggression which has been shown to be empirically associated with violence and an environment that is conducive to the use of aggression to obtain a desired goal (Vitaro & Brendgen, 2012). Literature has suggested that children who have experienced parental arrest are more likely to have been victims of or witnesses to a larger range of violent and non-violent crimes in their homes (Phillips & Zhao, 2010). In a more collectivistic society like Singapore, loss of face and shame associated with parental arrest may be felt at an even deeper level. Tangney, Wagner, Hill-Barlow, Marschall, and Gramzow (1996)'s early but classic work demonstrated that shame-proneness and loss of face was related to destructive responses such as aggression including malevolent intentions. Loss of face is a very powerful mechanism for Asians because when one loses face, one feels tremendous shame, as well as feelings of inferiority for failing to meet expectations and norms (Ho, 1976; Toupin, 1980). Therefore, Asian children are socialized to be sensitive to the judgment of others and external influences feature very strongly in their feelings, and behavior (Yeh & Huang, 1996).

Psychopathic traits demonstrated main effects on both reactive and proactive aggression, in line with previous research (e.g., Perenc & Radochonski, 2014). Furthermore, those who had high psychopathic traits and reported that their parents had a prior arrest history fared much worse on proactive aggression. Youths with psychopathic traits are at the highest risk of committing violent offenses and show high rates of violent recidivism (Kiehl & Hoffman, 2011). Arguably, adolescents with high levels of psychopathic traits are less sensitive to punishment cues and are more likely to display aggressive behavior than their counterparts with low levels of psychopathic traits (Yeh et al., 2011). Mahmut, Homewood, and Stevenson's (2008) research further highlight that criminal psychopaths get into trouble with the law because of key factors such as a lack of parental supervision arising due to deprivation or having an arrested or convicted parent. Additionally, those with psychopathic traits engage in aggressive acts for the purpose of benefiting themselves and such behaviors tend to be proactive-aggressively oriented rather than reactive-aggressively oriented and this is one crucial way by which those with psychopathic traits gain advantage over others (Glenn & Raine, 2009). Taken together, this could account for the moderator effect in which psychopathic traits exclusively strengthened the association between the parental arrest and proactive aggression link.

Our finding of the two-way interaction (i.e., Parental arrest × Psychopathic traits) which was further moderated by gender is one that warrants discussion. This interaction effect on proactive aggression was stronger for girls in this sample. It is generally established that boys exhibit and report higher levels of both proactive and reactive aggression, as well as psychopathic traits (e.g., Marsee et al., 2005; Skripkauskaite et al., 2015). However, these gender differences need to be considered in light of both the body of literature on family environment and adverse family events, as well as aggression and psychopathy. Girls may appear to be more

sensitive to certain types of family influences than boys (Ahlström, 2002) so it remains plausible that the experience of parental arrest might have a greater negative effect on girls. Other researchers argue that while girls continue to be influenced by their parents throughout their childhood and adolescence, boys remain relatively impervious to parental influence when they become adolescents (Matthews & Conger, 2004). Furthermore, in a study involving serious female offenders, psychopathy was found to be the strongest predictor of recidivism, and was the predominant variable in predicting all outcome variables including criminal behavior and prison misconduct (Loucks & Zamble, 2000). Therefore, although girls display less proactive aggression compared to boys generally, but under conditions where they have high levels of psychopathic traits in combination with their parents having had a prior arrest history, they displayed greater levels of proactive aggression.

There are potential clinical implications for intervention work arising from these findings. Girls in particular, may display emotional instability and may manipulate social networks in their manifestation of instrumental, proactive aggression (Dolan & Völlm, 2009). While it is acknowledged that intervention for youths with psychopathy remain challenging, there are promising treatments for example, which specifically focus on ameliorating callous-unemotional (CU) traits, the affective dimension of psychopathy. Two examples will be provided. Emotion recognition training (ERT) combines emotion recognition training and a parenting intervention, has been been shown to produce improvements in affective empathy and conduct problems in children with antisocial behavior and high CU traits (Dadds, Cauchi, Wamalaweera, Hawes, & Brennan, 2012). Salekin, Tippey, and Allen (2012) tested Mental Models, a positive psychological intervention, aimed at reducing behavior problems in youth with higher CU traits with promising results. Bearing in mind the profile and treatment needs of these high-risk girls,

these intervention programs would benefit from incorporating social and interpersonal relationship elements when focusing on improving emotion recognition, prosocial and empathic behavior.

Our findings should be interpreted in the light of several limitations. First, parental arrest was a dichotomous variable and reasons for the arrest were not obtained. It would be valuable for future studies to consider more detailed and nuanced information on parental arrest such as whether the child witnessed the arrest and age of the child when the parent was arrested. Additionally, because this was a school-based sample and not a specialized at-risk sample, the proportion of adolescents who reported either parents' prior arrests was low at 7% resulting in an unbalanced sample with far more reported non-parental arrests compared to reported parental arrests. Second, all measures in the present study were adolescent reports. Future studies could use parent and teacher reports in order to reduce single-reporter bias and also to tap into other sources of behavioral data such as official police records to triangulate the data collected from self-reports. Finally, we only explored psychopathic traits using the total score and gender as moderators in the present study. Other potential risk and protective factors in the association between parental arrest and aggression could be investigated in future studies.

In conclusion, there is limited research on psychopathy in youth and even more limited work among girls and examining this issue in diverse samples. Current findings are a first step in highlighting the need for researchers and practitioners to pay greater attention to girls at risk, especially those who display high psychopathic traits and who have parents with a prior arrest history. These girls have greater proactive aggression and may consequently have greater functional impairment compared to boys. These findings have the potential to inform researchers

and clinicians to develop more effective prevention and early intervention programs for at-risk girls.

Conflict of Interest Statement

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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Table 1

Reliabilities, Means, Standard Deviations, and Correlations of Study Variables

	α	*M*	*SD*	1	2	3	4	5
1. Parental arrest	-	-	-	-				
2. Gender	-	-	-	.004	-			
3. Psychopathic traits	.71	12.06	4.67	.12**	.21***	-		
4. Reactive aggression	.82	7.07	4.06	.15***	.03	.47***	-	
5. Proactive aggression	.86	1.80	3.03	.22***	.13***	.54***	.55***	-

Note. $^{**}p < .01$, $^{***}p < .001$. The proportion of adolescents who reported either parents' prior arrests was 7%.

Table 2

Moderated Moderation Analysis Predicting Reactive Aggression from Parental Arrest, Psychopathic Traits and Gender

	Model 1			Model 2			Model 3		
	b	SE	*t*	*b*	SE	*t*	*b*	SE	*t*
P-AR	1.29	.53	2.44*	2.65	.82	3.24**	2.72	.82	3.30**
Psychopathic traits	.41	.03	14.26***	.39	.04	8.95***	.40	.05	8.90***
Gender	−.57	.27	−2.12*	−.37	.28	−1.32	−.37	.28	−1.35
P-AR × Psychopathic traits				.19	.10	1.92	.10	.14	.72
P-AR × Gender				−2.93	1.09	−2.70**	−3.20	1.13	−2.83**
Psychopathic traits × Gender				−.003	.06	−.06	−.02	.06	−.31
P-AR × Psychopathic traits × Gender							.16	.19	.83
R^2	.231			.241			.242		
ΔR^2	.231			.010			.001		
ΔF	73.844***			3.218*			.689		

Note. P-AR = Parental arrest. Parental arrest (0 = *no* and 1 = *yes*) was dummy coded. Psychopathic traits was mean centered.

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

Table 3

Moderated Moderation Analysis Predicting Proactive Aggression from Parental Arrest, Psychopathic Traits and Gender

	Model 1			Model 2			Model 3		
	b	SE	*t*	*b*	SE	*t*	*b*	SE	*t*
P-AR	1.93	.38	5.04***	1.68	.58	2.90**	1.54	.58	2.66**
Psychopathic traits	.33	.02	16.33***	.25	.03	8.20***	.23	.03	7.40***
Gender	.09	.19	.45	.20	.20	1.01	.21	.20	1.09
P-AR × Psychopathic traits				.43	.07	6.25***	.61	.10	6.22***
P-AR × Gender				−.96	.77	−1.25	−.36	.80	−.45
Psychopathic traits × Gender				.08	.04	1.92	.11	.04	2.64**
P-AR × Psychopathic traits × Gender							−.36	.14	−2.62**
R^2	.311			.348			.354		
ΔR^2	.311			.038			.006		
ΔF	110.646***			14.084***			6.840**		

Note. P-AR = Parental arrest. Parental arrest (0 = *no* and 1 = *yes*) was dummy coded. Psychopathic traits was mean centered.

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

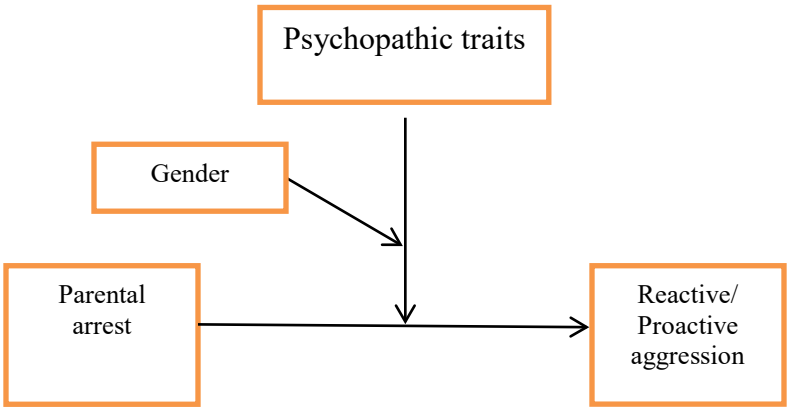

Figure 1. Conceptual diagram of the moderation effect of parental arrest on reactive/proactive aggression by psychopathic traits with itself moderated by gender

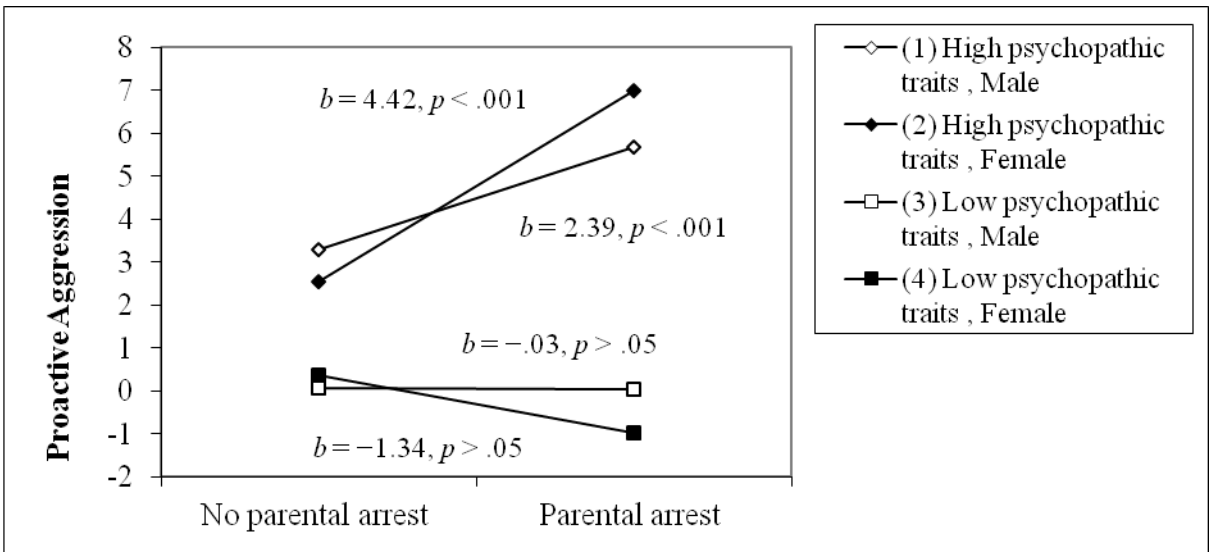

Figure 2. Moderated moderation of psychopathic traits and gender on the relationship between parental arrest and proactive aggression