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MASTERTHESIS

**The role of delinquent peer context and parenting in minor adolescent  
delinquency**

Clinical Child and Adolescent Psychology Master

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### **Abstract**

Adolescent delinquency is a serious societal problem and often takes place in the presence of peers. The roles that parents play in adolescent delinquency particularly in mitigating the effects of peers on adolescent delinquency has received little research attention. The current 2-wave longitudinal study examined whether parental support and control moderates the effects of peer processes on adolescent delinquency among an understudied high risk population from the Dutch Caribbean island of St. Maarten. Data was drawn from 350 first and third year high school students. Adolescents filled in a digital questionnaire on delinquency, peer pressure, delinquent peer norms, mother's support, father's support, and parental control. With regression analyses the current research found no direct association between peer and parent factors measured at wave 1 and adolescent delinquency assessed at wave 2. However, there was a significant moderation effect of parental control on the association between peer norms and adolescent delinquency. Result showed that at high parental control the association between nondelinquent peer norms and adolescent delinquency were the strongest. When parental control was low, peer norms were unrelated to adolescent delinquency.

**Keywords:** delinquency, peer pressure, peer norms, adolescence, parenting

### **The role of delinquent peer context and parenting in minor adolescent delinquency**

Adolescent delinquency not only affects society negatively, but also causes personal distress and damage to victims and perpetrators (Defoe, Dubas, & van Aken, 2018; Nas, Orobio de Castro, & Koops, 2005). Delinquent behavior mostly first appears during adolescence, peaks at age 17 or 18 and decreases into adulthood (Cauffman, Cavanagh, Donley, & Thomas, 2016; Rhoades, Leve, Eddy, & Chamberlain, 2016) for the majority of young offenders (Moffitt, 1993). For adolescence-limited offending the type of crimes mostly involves minor delinquent acts which are non-violent (Moffitt, 1993; Moffitt & Caspi, 2001). Nonetheless, minor delinquency in childhood and adolescence can also foretell more serious problems in adulthood (Loeber & Farrington, 2000). Therefore it is important to look at factors which could predict criminal behavior during the adolescent period. The current study aims to investigate adolescent delinquency from a social perspective (Moffitt, 1993; Piquero & Buka, 2002) with a focus on both the peer and the family context.

Adolescent delinquent behavior is associated strongly with the extent of other peers' criminal behavior (Warr & Stafford, 1991). Social learning theory states that through modeling, social influences are among the most important factors correlated with adolescent delinquency (Akers, 1988; Dishion, Patterson, & Griesler, 1994; Moffitt, 1993). Social influence is the effect which by an individual's opinions, beliefs, or behavior can be altered or controlled by someone or a group (Colman, 2009). Processes underlying this association between peer influences and adolescent delinquency include peer norms and peer pressure (Brown, Clasen, & Eicher, 1986; Simons-Morton & Farhat, 2010).

While social learning theory examines what can predict delinquency, social control theory investigates factors which can prevent adolescents from criminality (Hirschi, 1969).

Control theory argues that delinquency is more likely if adolescents lack social bonds and positive social interactions with parents (Hirschi, 1969). A meta-analysis found parental practices such as, parental support and parental control to be important factors to prevent adolescent delinquency (Hoeve et al., 2009).

Many previous studies have investigated the independent contributions of the peer and parenting context, and lesser to a lesser extent explored the interplay between these factors. To our knowledge, only one study has examined if parental support impacts the effect of peer pressure and delinquent peer norms on adolescent delinquency (Defoe et al., 2018). Therefore, the present research aims to further address this gap and expand the literature by investigating the relationship between these factors while also including parental control.

### **Peer context**

Being part of a community is vital for most people and peer group affiliations are becoming more important during adolescence years as teenagers are trying to separate themselves from their parents (Erikson, 1968). As early adolescents are more easily influenced by their friends (Brown et al., 1986) this need for resemblance is especially common in peer groups (Simons-Morton & Farhat, 2010). Thus, in groups where antisocial behavior is more popular among members, delinquency is higher as these acts are more rewarding and easier to accomplish in the presence of others (Osgood, Wilson, O'Malley, Bachman, & Johnston, 1996). This influence also exists on an individual level, with those teenagers who associate with delinquent peers also showing higher levels of criminal behavior themselves (e.g., Hoeben & Weerman, 2016; Thomas, 2015; Thornberry, Lizotte, Krohn, Farnworth, & Jang, 1994). A recent systematic review found that associating with delinquent peers predicts adolescent criminality (Brumley & Jaffee, 2016).

While several studies have investigated the association between peer delinquency and adolescent delinquency (e.g., Agnew, 1991; Fergusson, Woodward, & Horwood, 1999; Hoeben & Weerman, 2016; Moffitt, 1993) fewer examined the specific processes underlying this association, such as peer pressure and peer norms (e.g., Brown et al., 1986).

Perceived peer pressure is a direct pressure to match the behavior of a specific peer group (Santor, Messervey, & Kusumakar, 2000). A cross-sectional and a longitudinal study with ethnically diverse samples found peer pressure to be the strongest predictor of adolescent delinquency among other societal and individual factors (Santor et al., 2000; Sullivan, 2006). Another longitudinal study found peer pressure to mediate the relationship between early risk factors and delinquency (Walters, 2014). A recent cross-sectional study with a Caribbean sample found that peer pressure mediates the relation among negative parenting and delinquency (Chadee, Ali, & Burke, 2019). While a longitudinal study with a relatively high-risk Dutch sample found peer pressure to be less important compared with time spend with peers and bond with peers (Weerman & Hoeve, 2012). Thus, overall research suggests that peer pressure can predict delinquency or mediate the relationship between risk factors, negative parenting and adolescent delinquency.

Peer injunctive norms are perceived beliefs, attitudes, and behaviors which are acceptable in a peer group (Borsari & Carey, 2003; Simons-Morton & Farhat, 2010). A longitudinal study analyzed how peers attitudes can impact adolescent behavior and found that adolescent own attitudes are influenced by their peers' norms and these norms affected delinquency. They also stated that norms are mediated by one's own attitudes and thus might not have a direct effect on delinquency but are still important indirectly in determining the delinquent behavior of adolescents (Warr & Stafford, 1991).

Most studies which includes both peer pressure and peer norms have focused on adolescent substance use or smoking (e.g., Santor et al., 2000). While peer pressure can be a way to apply peer group norms, peer norms can also work without direct peer pressure (Defoe et al., 2018). Thus, adolescents can still feel indirect pressure to conform to peer norms without their peers directly pressuring them. A review suggests that the influence of peers on externalizing problems manifest mostly through indirect pressure to adapt to peer norms (Simons-Morton & Farhat, 2010). Given the lack of research, and due to the mixed results differentiation between peer pressure and peer norms would be important to understand more of the relationship between these peer influences and adolescent delinquency.

### **Parenting**

Besides peer influence, social theories also emphasize the importance of parents (Hirschi, 1969). Regarding parental practices which can buffer adolescent delinquency, two main constructs are parental support and parental control (Barnes & Farrell, 1992; Hovee et al., 2009).

Parental support is defined as those behaviors which help the child to be comfortable, accepted and approved (Rollins & Thomas, 1979). Parental support is characterized by behaviors such as, nurturing, accepting, loving the child (Barnes & Farrell, 1992) and being sensitive, supportive, and responsive towards them (Hovee et al., 2009). Support from parents is mostly negatively associated with adolescent delinquency (e.g., Barnes & Farrell, 1992; Hovee et al., 2009). In a longitudinal research comparing two ethnic groups; European Americans and African Americans, lower maternal support predicted higher levels of delinquency in both groups (Deutsch, Crockett, Wolff, & Russell, 2012). In a cross-sectional study having a large ethnic minority (African American) sample support from mothers was found to be negatively associated with externalizing symptoms (Barrera et al., 2002). While most research only measured maternal

support (e.g., Barrera et al., 2002; Deutsch, Crockett, Wolff, & Russell, 2012; Wright & Cullen, 2001) a meta-analysis found that father's support is also an important factor (Hoeve et al., 2009). While, a recent cross-cultural study found that mother's support prevents externalizing problem behavior, while father's support buffer internalizing problems (Weitkamp & Seiffge-Krenke, 2019).

Parental control refers to those acts which aim to set limits and control the child's behavior, through guidance, supervision, and monitoring (Walters, 2020). It is important to state that different dimensions of parental control exist in the literature (Hoeve et al., 2009). The current study measured behavioral control (some scholars call it monitoring) classified by Hoeve et al. (2009). Behavior control includes rules and monitoring from parent's which aims to control and regulate their children's behavior (Hoeve et al., 2009). Longitudinal studies and a meta-analysis found parental control is negatively associated with adolescent delinquency (Harris-Mckoy & Cui, 2012; Hoeve et al., 2009; Rai et al., 2003). Cross-sectional studies with samples of African American youth from low-income families also found parental control to negatively correlated with externalizing behavior (Bean, Barber, & Crane, 2006) or negatively associated with delinquency (Rai et al., 2003). More recently among a mixed-ethnicity sample, adolescent low parental monitoring was associated with higher levels of delinquency (Mann, Kretsch, Tackett, Harden, & Tucker-Drob, 2015). However, another cross-sectional study found that parental control is positively associated with externalizing problems (Barber, Olsen, & Shagle, 1994). It could be that parental control could reflect two different parental strategies: to prevent delinquency from occurring or as a reaction to a child who is engaging in delinquency (Keijers et al., 2012). The current study controls for prior delinquency and therefore can further investigate the relationship between parental control and adolescent delinquency.

### **Parenting-Peer Relationship**

Studies including both peer and parenting factors have examined: (1) whether delinquent peer affiliation mediates the association between parenting and delinquency and (2) whether parenting moderates the effects of peer processes on adolescent delinquency.

A cross-sectional research investigated how deviant peers can mediate the relationship between parental monitoring and delinquency (Dynes, Domoff, Hassan, Tompsett, & Amrhein, 2015). They found that monitoring affects delinquency both directly by limiting unsupervised activities and indirectly through peer delinquency (Dynes et al., 2015). In another a cross sectional study parental control was also found to be indirectly affecting criminal behavior through antisocial peer involvement (Alboukordi, Nazari, Nouri, & Sangdeh, 2012). When examining the nature and direction of how parenting and peer effects could predict adolescent delinquency, a longitudinal study found that parental support, but not parental control prevented associating with delinquent peers in relation with adolescent delinquency (Walters, 2020). Moreover, a cross-sectional study found that low parental support makes adolescent more susceptible to delinquent peer influences than high parental support (Poole & Regoli, 1979). Another longitudinal study involving both African American and European American adolescent's from high and low-risk neighborhoods, higher parental control predicted lower delinquency through delinquent peers, while higher maternal support directly affected criminal behavior (Deutsch et al., 2012). Thus, the majority of these studies stated that parental support and parental control associates with adolescent delinquency when peers are mediating this relationship.

When examining the moderation effect of parenting, longitudinal study found parental monitoring and attachment had no main effects of boy's delinquent behavior (Vitaro, Brendgen,



& Tremblay, 2000). However, they indicated that delinquent friend's can impact adolescent delinquency more when parental monitoring is high and attachment is low. Whereas when only parental attachment was high there was no interaction between friend's deviancy and delinquent behavior (Vitaro et al., 2000). Nevertheless, parental monitoring had an indirect effect on later delinquency through the mediating role of the association with delinquent friends (Vitaro et al., 2000). They concluded that parental control could be effective for preventing the association with delinquent peers only before association with peers has been established, after that they found parental attachment to be able to reduce influence of deviant peers (Vitaro et al., 2000). In contrast, a longitudinal study reported that higher levels of peer deviancy related to higher levels of externalizing problems and this increases over time but this increase halted in the group where parental control is high, while parental support was not related to externalizing problems (Galambos, Barker, & Almeida, 2003). Yet, another longitudinal study did not find any significant main effects of positive parenting or interaction effects between positive parenting (measured by the Positive Parenting Scale) and peer delinquency (Henneberger, Tolan, Hipwell, & Keenan, 2014). Thus, while some study indicates parental support outweighs parental control, others found the opposite effect on the relationship between delinquent social affiliations and adolescent delinquency.

To the best of our knowledge, only one research examined if parenting impacts the effect of both peer pressure and peer norms on adolescent delinquency (Defoe et al., 2018). This longitudinal study investigated if mother-adolescent relationship quality can moderate the hypothesized association between delinquent peer norms, peer pressure, and adolescent delinquency in a Dutch sample of mixed socioeconomic status and ethnicity (Defoe et al., 2018). Results indicated that for adolescent boys, the association between perceived peer pressure and

delinquency was moderated by a negative mother-adolescent relationship quality. For boys with negative relationship with their mothers, the association between peer pressure and delinquency was strongest, indicating that low negative mother-adolescent relationship may be a protective factor against peer pressure to engage in delinquency (Defoe et al., 2018). Due to the mixed results of the effect of parental support and parental control on the relationship between delinquent peer context and adolescent delinquency more investigation is needed.

### **Current study**

The present study aims to broaden the literature by further investigating the role of parenting and peers in adolescent delinquency. We also interested to see if our results differ from the previous similar research since it was carried out in an ethnic Dutch sample (Defoe et al., 2018) while the current study focuses on a Dutch Caribbean sample, an understudied, high risk population as children in the Caribbean Netherlands are more vulnerable due to lower social economic status, and they also receive poorer child benefits and supports (The Ombudsman for Children, 2019).

This two-wave study longitudinal study has two aims: First, to investigate whether peer pressure, peer norms, mother's support, father's support, and parental control in wave 1 predict adolescent delinquency 1 year later controlling for prior delinquency; Second, to investigate whether parenting (mother's support, father's support, and parental control separately) can moderate the link between peer contexts (peer pressure and peer norms) and delinquency. Based on the literature reviewed above, the current study predicts that parenting practices (monitoring and support) will be negatively related to adolescent delinquency while delinquent peer context (peer pressure and peer norms) will be positively related to delinquency. Although, our moderating analyses are largely exploratory, if an effect is found, positive parenting behaviors (high support and control) should weaken the association between the peer context and adolescent delinquency.

## Method

### Participants

Data for the current study is from a large longitudinal study, called *Adolescent Risk Taking* (ART) project (Defoe, Dubas, Somerville, Lugtig, & van Aken, 2016). The current research uses a 2-wave longitudinal data, collected from adolescents living in the Dutch Caribbean island of St. Maarten. The first wave of data was collected in January 2013 and the second wave was a year later in 2014. The first wave included 350 first and third year high school students with 165 males (47.10%) and 185 (52.90%) females. The mean age was 14.19 year (min=11; max=19; SD= 1.67). In the second year from 281 adolescents there was 113 male (40.20%) and 168 female (59.80%) with the mean age of 15.05 year (min=13; max=24; SD=1.65). Most adolescents identified themselves as a St. Maartener (68.20%) while the rest, identified as either Caribbean (20.20%), Dutch (6.50%), or something else (5.10%). Regarding their parent's marital status, most were married (40.90%) or living together (8.90%), however, a large part was divorced or separated (30.00%) with another 20.20% categorized as something else (e.g.: never been married)

### Procedure

Adolescents were recruited from two high schools in St. Maarten which used a Dutch-education curriculum. Schools were first contacted by email and then by phone, both schools agreed to participate in project. Parents were informed by letter and also received a dissent letter which they could send back to the school if they wished their child not to participate in the research.

Data was collected at the schools during regular school hours. Digital questionnaires were used, requiring about 45 to 60 minutes to complete. The questionnaires were written in English. A trained research assistant gave verbal and written instructions to the participants. For participation, adolescents could win lunch vouchers and movie tickets.

## Measures

*Adolescent delinquency* was measured in waves 1 and 2 using 5-items adapted from the International Self-Reported Delinquency questionnaire (ISRD) (Junger-Tas, Terlouw, & Klein, 1994) and 2 items from (Baerveldt, Rossem, & Vermande, 2003). Six items focused on non-violent delinquency including vandalism, stealing, and purchasing stolen goods whereas 1 focused on arrest history. Sample item is: *Have you ever deliberately (on purpose) destroyed/vandalized something, for example a bus stop, a window, a seating in a tram/train/bus, or a car? Have you ever done anything for which you were arrested by the police?* For all 7 items the possible responses were: 0= *Never*; 1= *Yes, but that was longer than 12 months ago*; 2= *Yes, once in the past 12 months*; 3= *Yes, twice in the past 12 months*. An overall mean score was calculated and higher mean referred to higher levels of delinquency. Chronbach's alpha for the whole sample in wave one was  $\alpha = .75$  and for wave two was  $\alpha = .76$ , which shows an adequate reliability.

*Perceived peer pressure* was measured at wave 1 with 2 selected items from the Peer Pressure Inventory questionnaire (Clasen & Brown, 1985) involving stealing and vandalism. Adolescents were asked to rate on a 7-point scale the extent which they felt pressure to not engage in the specific behavior or to engage in the specific behavior. Possible responses ranged from being pressured to not engage a *lot* (= -3), *somewhat* (= -2), *a little* (= -1) to *no pressure* (= 0) to pressure to engage in the behavior *a little* (=1), *somewhat* (=2), or *a lot* (=3). For stealing, participants were asked how much they felt pressure by their friends *to not shoplift or steal anything* versus *to steal something (shoplift, raid a locker, etc.)*. For vandalism participants were asked how much they felt pressure by their friends *not "trash" things or vandalize property* versus *to "trash" or vandalize things (write on walls, break windows, etc.)*. An overall mean

score was calculated, higher mean scores demonstrated more peer pressure over delinquency.

Chronbach's alpha for the whole sample was  $\alpha = .71$ , which indicates an adequate reliability.

*Delinquent peer norms* in wave 1 was measured by the question: *How would the majority of your friends react if you would steal something, or buy something that was stolen?*

Participants were asked to indicate an answer from *1 = Fully approve it*, to *5 = Strongly disapprove it*. Scores were reverse coded for the current study, thus, higher scores indicated more approval of delinquency. This question was adapted from a previous study (i.e., Van Keulen et al. (submitted)). Reliability was not calculated for this scale.

*Parental support* in wave 1 was measured with the 5-item support subscale of the Network of Relationships Inventory questionnaire (NRI; Furman & Buhrmester, 1985). This scale was filled in by adolescents separately for mothers and fathers but the questions were the same for both parents. An example of an item from the scale for fathers: *How much do you turn to your father/mother for comfort and support when you are troubled about something?* Answer categories ranged from *1 = Little or none*, to *5 = Could not be more*. An overall mean score was calculated with higher mean scores indicating higher levels of parental support. A high level of reliability was found for both mother support and father support with Cronbach's  $\alpha = .89$  for mother support and  $\alpha = .82$  for father support.

*Parental control* in wave 1 was measured by the 6-item parental control subscale from the Parenting Practices questionnaire (Kerr & Stattin, 2000). Adolescents had to fill in this questionnaire regarding at least one parent. An example item of the measure of parental control: *Must you have at least one of your parents' permission before you go out during the weeknights?* Answer categories ranged from *1 = Never*, to *5 = (Almost) always*. An overall mean score was

calculated; higher mean scores indicated higher parental control. Chronbach's alpha for the whole sample was  $\alpha = .88$ , indicating good reliability.

### **Strategy of analyses**

Data was analyzed with the software 'IBM SPSS Statistics 20'. Six separate multiple regression analysis were conducted using delinquent behavior in wave 2 as dependent variable. The first goal was to estimate the degree to which parenting practices and delinquent peer contexts relates to adolescent delinquency. And the second was to assess the degree to which parenting practices can moderate the hypothesized association between delinquent peer contexts and adolescent delinquency. Before the analysis predictors were mean centered to facilitate the interpretation of the hypothesized interaction effects (Cohen, Cohen, West, & Aiken, 2003). Moreover, because of the skewed distribution of scores, adolescent delinquency in wave 1 and wave 2 was  $\text{Log}_{10}$  transformed in order to facilitate the interpretation of the data and to meet the assumptions of inferential statistics.

As the first step, control variables; age and gender were entered. Secondly, the variables of perceived peer pressure, delinquent peer norms, parental control, father's support and mother's support. Thirdly, six separate multiple regression analysis were conducted as interactions between (A.) perceived peer pressure and mother's support, (B.) perceived peer pressure and father's support, (C.) perceived peer pressure and parental control, (D.) delinquent peer norms and mother's support, (E.) delinquent peer norms father's support, (F.) delinquent peer norms and parental control were added (Cohen et al., 2003). As the fourth step, in order to understand the moderation effect of parenting practices on the association between delinquent peer context and adolescent delinquency a program for SPSS, PROCESS macro was used (Hayes, 2013). This program divides variables into 3 levels in order to analyze the interactions

between them. While peer context was added as an independent variable, delinquency in wave 2 was the dependent variable and parenting practices were added as the moderator variable.

## **Results**

### **Descriptive statistics**

Descriptive statistics and correlations for the dependent variables (delinquent behavior W1 and W2) before mean centering and  $\log_{10}$  transformation and for the independent variables in W1 (peer pressure, peer norms, mother's support, father's support, and parental control) before mean centering are presented in Table 1. A moderate significant relationship was found between delinquent behavior at wave one and wave two. There was also a significant low negative correlation between peer norms and delinquent behavior in wave one. All relevant assumptions were investigated before performing the analyses. Since, the residuals did not meet the normal distribution assumptions, delinquency at wave 1 and wave 2 was  $\text{Log}_{10}$  transformed before executing the analyses. No outliers or influential cases were found. The assumptions of homoscedasticity and multicollinearity were met. Finally, linearity between the dependent and independent variables were met.

**Table 1.**

*Correlations, means, and standard deviations of all variables before centering and log<sub>10</sub> transformation*

	1	2	3	4	5	6	7	M	SD
1. W1 Delinquent behavior	-							.34	.52
2. W2 Delinquent behavior	.59**	-						.30	.49
3. Peer Pressure	.05	.08	-					-.63	1.42
4. Peer Norms	.27**	.16**	.07	-				3.49	1.07
5. Mother's support	-.09	-.04	.02	-.04	-			2.67	1.08
6. Fathers' support	.06	.10	-.03	.09	.26**	-		2.16	.92
7. Parental control	-.15*	-.17*	-.13*	.07	.29**	.03	-	3.28	1.15

\* $p < .05$ ; \*\* $p < .01$ .

### **Peer contexts, parenting practices and delinquency**

In order to examine the degree to which parenting practices and delinquent peer context relates to adolescent delinquency, multiple regression analysis was conducted. Results of the main effects and the significant moderation analyses are presented in Table 3.

*Main Effects.* As reflected in Table 3, delinquent behavior at wave one was significantly associated with delinquent behavior at wave two which shows a high relative stability (step 1) in all 6 regression analyses. Age and gender were not related to wave 2 delinquency. In step 2 of the analyses, no significant direct associations were found between peer norms, peer pressure, parental support and parental control.

*Moderation effect of parenting on the relationship between delinquent peer context and delinquent behavior.* As presented in Table 3, a significant interaction between parental control



and delinquent peer norms was found ( $p = .01$ ). No other significant associations were found regarding the moderation effect.

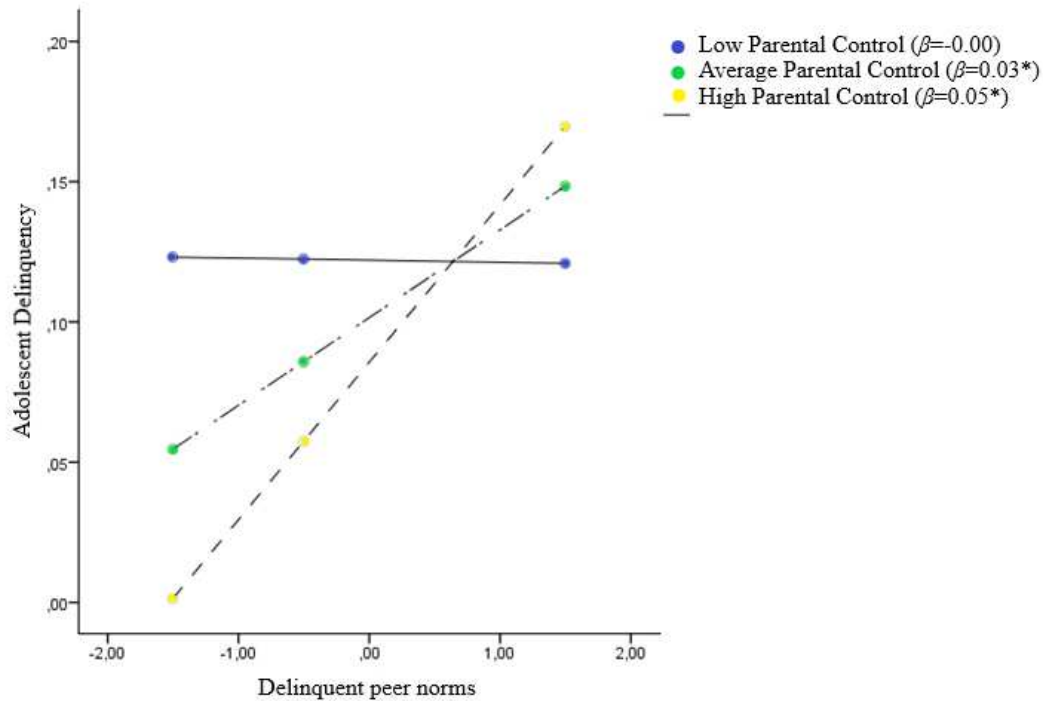
**Table 2.**

*Unstandardized (B) and standardized ( $\beta$ ) regression coefficients, standard errors (SE), and P-values (p) for each predictor variable on each step of hierarchical multiple regression analysis*

W2 Delinquent behavior					
Predictor	$R^2$	B	SE	$\beta$	p
<b>Step 1</b>					
	.42				
Constant		.15	.07		.02
Age		-.00	.00	-.10	.13
Gender		-.03	.01	-.12	.07
W1 Delinquent behavior		.57	.06	.60	.00
<b>Step 2</b>					
	.43				
Constant		.16	.07		.03
Age		-.00	.00	-.10	.12
Gender		-.02	.01	-.11	.11
W1 Delinquent behavior		.57	.07	.60	.00
Peer Pressure		.00	.00	.07	.27
Peer Norms		-.00	.00	-.02	.67
Mother's support		.00	.00	.01	.81
Father's support		.00	.01	.03	.65
Parental control		-.00	.00	-.07	.33
<b>Step 3<sup>1</sup></b>					
	.46				
Constant		.15	.07		.03
Age		-.00	.00	-.09	.16
Gender		-.02	.01	-.11	.12
W1 Delinquent behavior		.55	.06	.58	.00
Peer Pressure		.00	.00	.06	.31
Peer Norms		.00	.00	-.00	.96
Mother's support		.00	.00	.00	.97
Father's support		.00	.01	.06	.37
Parental control		-.00	.00	-.05	.41
Peer norms $\times$ Parental control		.01	.00	.17	.01

<sup>1</sup> Interaction effects were entered separately within step 3.

In order to investigate the significant interaction between delinquent peer norms and parental control, simple slope analysis was conducted that estimated the relation between adolescent delinquency and delinquent peer norms at values of parental control at the mean and one standard deviation above or below the mean. The model was significant overall ( $p < .001$ ). As shown in Figure 1, when parental control was low, the relationship between peer norms and adolescent delinquency was not significant ( $\beta = -.00, p = .95$ ) and noteworthy is the fact that adolescent delinquency was high regardless of peer norms. At average levels of parental control the relationship between delinquent peer norms and adolescent delinquency was significantly and positively associated ( $\beta = .03, p < .001$ ). Therefore, when there was an average level of parental control, the more peers disapproved delinquency, the lower the delinquency at wave 2 (with wave 1 controlled). At high levels of parental control the significant positive association between peer norms and adolescent delinquency was slightly stronger ( $\beta = .05, p < .001$ ). Thus, the lowest level of delinquency was found for adolescents whose parents were the most controlling and whose peers showed the highest level of disapproving delinquent peer norms. Therefore, parental control matters most for adolescents whose peers highly disapprove delinquency. Moreover, parental control was found to be highly important in the current sample as when it was low, adolescent delinquency was high, regardless of peer norms.



**Figure 1.** Linear relation between delinquent peer norms and adolescent delinquency (Wave 2 with wave 1 controlled), computed at one standard deviation below the mean (low), the mean (average) and one standard deviation above the mean (high) of parental control.

\*p < 0.05.

### Discussion

The current longitudinal study aimed to examine the role of delinquent peer context and parenting practices in delinquent behavior of adolescents from St. Maarten. Firstly, it analyzed the main effect of peers and parenting in relation to adolescent delinquency. Previous studies found that specific peer influences, such as delinquent peer norms and peer pressure can impact adolescent behavior and can predict adolescent delinquency (Sullivan, 2006; Warr & Stafford, 1991), while, certain parental approaches, like parental support and parental control were

associated negatively with youth's delinquent behavior (Hoeve et al., 2009). Thus, the present study hypothesized that delinquent peer norms and perceived peer pressure are related to heightened levels of adolescent delinquency, whereas parental support and parental control is associated with lower levels of adolescent delinquency. Moreover, previous research also found that certain parental approaches, namely parental support and parental control can buffer the relationship between delinquent peer context and delinquency (Dynes et al., 2015; Poole & Regoli, 1979). Therefore, the current study investigated if parental support and parental control could weaken the association between delinquent peer context (in this case assessed by peer pressure and peer norms) and adolescent delinquency a year later. The only significant result showed that parental control moderates the association between peer norms and adolescent delinquency.

*Main Effects.* The current findings showed a direct relation only between first year and second year delinquency. In other words, higher levels of delinquency associated with higher levels of criminal acts a year later. However, there was no direct significant association between wave 1 perceived peer pressure, delinquent peer norms, mother's support, father's support and parental control and delinquent behavior at wave 2 with prior levels of delinquency controlled. Thus, our first two hypotheses were not supported as parenting and the peer context were unrelated to adolescent delinquency.

These results are congruent with a previous research highly similar to the current study conducted in the Netherlands, which found no significant direct effect between mother's support, peer pressure, peer norms on adolescent delinquency (Defoe et al., 2018). Moreover, current findings are also congruent with other similar research which found no direct effect of parental control on delinquency (Alboukordi et al., 2012; Vitaro et al., 2000). However, current results

are in contrast to most other studies which found that parenting (Deutsch et al., 2012; Dynes et al., 2015; Galambos et al., 2003; Mann et al., 2015) and peers (Alboukordi et al., 2012; Galambos et al., 2003) can directly affect adolescent delinquency. These differences can be explained in several ways.

Firstly, differences could arise from the measurement of delinquency (Hoeve et al., 2009). The current study measured minor delinquency while the studies in question measured more serious delinquent acts, such as gun use (Deutsch et al., 2012; Dynes et al., 2015; Galambos et al., 2003; Mann et al., 2015). Moreover, these studies also examined problem behaviors which the current research did not include, for example physical violence, disobedience to parents, substance use, and school misconduct (Vitaro et al., 2000; Galambos et al., 2003).

Secondly, the operationalization and therefore the measurement of parental control could also cause differences. Two of the above mentioned studies measured knowledge of the youth whereabouts and activities (Dynes et al., 2015; Mann et al., 2015), while the current study measured specific acts which aimed to set limits and control the child's behavior. Therefore, the measures of control used in the present study can be considered as only one aspect of parental control while other aspects may be having other role in adolescent delinquency.

Thirdly, measurement of delinquent peer affiliation also differed in previous studies. While past research examined delinquent behavior of peers (Alboukordi et al., 2012; Galambos et al., 2003), the current study measured peer attitudes towards delinquency. Empirical findings suggest that peer attitudes and behavior may be associated with adolescent delinquency in different degrees (Warr & Stafford, 1991). Thus, the distinction between peer behavior and peer

attitudes is important and different findings may arise from the measurement of these different peer variables.

*Moderation effect of parental control on the relationship between delinquent peer context and delinquent behavior.* The current study only had one significant result, which showed that parental control moderated the association between peer norms and adolescent delinquency. Contrary to expectations, findings revealed that the higher parental control was, the stronger was the relationship between peer norms and delinquency, rather than the weaker the association. In general, when peer norms were highly delinquent and parental control was average or high, adolescent delinquency was high. While, when peers highly disapproved delinquency and parental control was also average or high, adolescent delinquency was low. Moreover, when parental control was low, peer norms was not associated with adolescent delinquency. Thus, high parental control works the most when peers are highly disapproving criminality.

As just noted these findings are in contrast to our hypothesis, that parental control can reduce the effect of delinquent peers on peer delinquency. Since, previous studies found no moderation effect of parental control (Galambos et al., 2003; Henneberger et al., 2014; Vitaro et al., 2000), the current findings were not incongruent with them. However, our research was highly exploratory since earlier research investigated antisocial and violent behavior, disobedience to parents, substance use, and school misconduct together with minor delinquency (Galambos et al., 2003; Henneberger et al., 2014; Vitaro et al., 2000) whereas the current research only focused on minor delinquency. Thus, the above mentioned externalizing behaviors can be one explanation for the different findings.

Current findings showed, that the higher parental control was, the stronger was the association between peer disapproval of delinquent behavior and low youth delinquency.

Previous research also found positive peer behavior and norms to be important in adolescent delinquency. A longitudinal study found that prosocial peers may have as much impact in preventing delinquency as antisocial peers found to be risk factors (Walters, 2020). Another longitudinal study found that positive peer norms are associated with less problem behavior (McKeown & Taylor, 2018). These findings suggest that positive peer factors, such as peer disapproval is important to take into account when investigating adolescent delinquency. But parental control also plays an important role, as with low parental control there was no association between positive peer context and delinquency.

Delinquent peer norms were also associated with adolescent delinquency when parental control was average or high. It could be explained from two perspectives: (1) parents high controlling attempts could be a reaction for their child's delinquent behavior or (2) parents are prohibiting adolescents from delinquent friends through parental control and by that they actually pushing their children into the company of delinquent peers (Keijsers et al., 2012). Since, adolescent can perceive their parents controlling attempts to be too over-controlling; their parents monitoring rules can increase the chance of selecting delinquent friends (Tilton-Weaver, Burk, Kerr, & Stattin, 2013). These findings propose the importance to consider multiple domains, such as to investigate how adolescent delinquency affects parenting practices and how adolescent perceive parental control.

Moreover, contrary to our hypothesis, parental control only had a moderating effect on peer norms but not on peer pressure. Since our study was exploratory, these findings need more investigation to understand better why parental control moderated only peer norms but not peer pressure.



*Moderation effect of parental support on the relationship between delinquent peer context and delinquent behavior.* Contrary to expectations, we found no moderation effect of mother's or/and father's support on the relationship between delinquent peers and adolescent delinquency. These findings also contradict previous studies which found that parental support prevents association with delinquent peers which relates to adolescent delinquency (Vitaro et al., 2000). Differences in measurement of delinquency could explain this contradiction with previous research (Vitaro et al., 2000).

However, other previous studies also reported no interaction effect of positive parenting (Galambos et al., 2003; Henneberger, et al., 2014) on the relationship between delinquent peers and externalizing problems. Moreover, a longitudinal study, similar to the current research found a moderation effect of mother's support on peer pressure and delinquency after doing phase by gender multigroup comparisons (Defoe et al., 2018) and they found that mother's support has a moderating effect only for early adolescent boys. Since the current study did not include these comparisons, different findings could arise for this reason. Moreover, the above mentioned study suggested that attachment between parents and children diminish during middle adolescence, due to that parental attachment is less influential in this phase (Defoe et al., 2018). The mean age for the adolescents was 13 in the above mentioned study, while for the current study it was 14. Thus, differences could also arise from the age difference between this study and the current study. Furthermore, there is empirical evidence for the earlier start of puberty among Caribbean youth (Biro et al., 2006; Walvoord, 2010). Therefore, the influence of parental support might be playing a stronger role at younger ages for Dutch Caribbean adolescents than for the ethnic Dutch adolescents.

**Strength and limitations**

The current research has important strengths. Firstly, this research can add some further understanding of the possible peer influences which are associated with youth delinquency, and how can parents moderate this relationship. Findings suggest that when parental control is high, the association between peer norms and adolescent delinquency is the highest. Due to the longitudinal design, the current study revealed that average and high parental control at an earlier point in time can influence the relationship between peer disapproval of delinquency and adolescent delinquent behavior which leads to a decrease in adolescent delinquency in the future. Moreover, the present study adds to the literature by investigating an understudied population, namely, Dutch Caribbean adolescents.

However, there are also some limitations of the current study. Overall delinquency was low in the current study, perhaps because we did not measure more serious and violent delinquent acts, such as fighting. Moreover, another limitation is that delinquent peer norms only measure stealing and did not involve more types of delinquent acts. Next, the current study mostly measured the negative effects of peers, while positive influences would be also important to include. It would be also interesting to examine the role not only of behavioral control but also of psychological control, since a reversed relationship found between psychological, behavioral parental control in relation to adolescent delinquency (Galambos et al., 2003; Hoeve et al., 2009). Moreover, measuring the combined effect of parental support and parental control would be also useful for further examination of the role of these parental practices in relation to youth delinquency (Vitaro et al., 2000). While, including negative parenting, such as neglecting and harsh punishment could be also important to consider instead of only focusing on positive parental practices, since a meta-analysis found that these negative effects are highly important to

adolescent delinquent behavior (Hoeve et al., 2009). Further investigation is also needed regarding the possible gender difference which exists in the literature, such as in a highly similar research, mother support only moderated the relationship between peer pressure and delinquency for boys (Defoe et al., 2018). Furthermore, for a broader examination it would be interesting to add siblings to the social network, as they could act similarly in relation to adolescent delinquency as peers (Defoe et al., 2013). Individual differences between adolescents and genetic factors might be also important to examine to understand the current results, since these factors are also influencing whom adolescent choose to socialize with (Harris, 2000; Mullineaux & DiLalla, 2015; Tarantino et al., 2014; Vitaro et al., 2000). Since the current study aimed to examine peer influence processes we did not focus on the peer selection effect, which is the tendency of similar people becoming friends with each other (Mundt, Mercken, & Zakletskaia, 2012). Thus, a broader research which involves also the effect of peers selection, could probably give more understanding of the relationship between peers and adolescent delinquency.

### **Conclusions and implications**

The current longitudinal study contributes to the literature with findings regarding the interaction between peer norms and adolescent delinquency moderated by parental control among Dutch Caribbean adolescents. The present findings show that the association between peer norms and delinquency is highest when parental control is moderate to high. More precisely, adolescent delinquency is low when peers are highly disapproving criminality and parental control is average or high. While delinquency is high when peers have highly delinquent attitudes and when parental control is average or high. But adolescent delinquency is also high when parental control is low, regardless of peer norms. Thus, with decreasing parental control, peer influence tends to decline.

The current findings could be valuable for practitioners working with delinquent adolescents. It could be important to take into account that high parental control works the best in reducing adolescent delinquency indirectly when peers are highly disapproving delinquency. Further research is needed to understand better the relationship between parental control and peer norms in order to improve interventions for reducing adolescent delinquency.

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