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Socio-Cultural Context and Bulling Others in Childhood

Carmen Morcillo,
Department of Psychiatry, Columbia University/New York State Psychiatric Institute, New York, NY, USA, Division of Child and Adolescent Psychiatry, Columbia University. 1051 Riverside Drive. Unit #43, Room 5219. New York, NY 10032

Maria A. Ramos-Olazagasti,
Department of Psychiatry, Columbia University/New York State Psychiatric Institute, New York, NY, USA, Division of Child and Adolescent Psychiatry, Columbia University. 1051 Riverside Drive. Unit #43, Room 5219. New York, NY 10032

Carlos Blanco,
Department of Psychiatry, Columbia University/New York State Psychiatric Institute, New York, NY, USA, Division of Child and Adolescent Psychiatry, Columbia University. 1051 Riverside Drive. Unit #43, Room 5219. New York, NY 10032

Regina Sala,
Department of Psychiatry, Columbia University/New York State Psychiatric Institute, New York, NY, USA, Division of Child and Adolescent Psychiatry, Columbia University. 1051 Riverside Drive. Unit #43, Room 5219. New York, NY 10032

Glorisa Canino,
Behavioral Sciences Research Institute, University of Puerto Rico, San Juan, Puerto Rico

Hector Bird, and
Department of Psychiatry, Columbia University/New York State Psychiatric Institute, New York, NY, USA, Division of Child and Adolescent Psychiatry, Columbia University. 1051 Riverside Drive. Unit #43, Room 5219. New York, NY 10032

Cristiane S. Duarte
Department of Psychiatry, Columbia University/New York State Psychiatric Institute, New York, NY, USA, Division of Child and Adolescent Psychiatry, Columbia University. 1051 Riverside Drive. Unit #43, Room 5219. New York, NY 10032

Cristiane S. Duarte: Duartec@nyspi.columbia.edu

Abstract

The objective of this epidemiological study was to examine, using an ecological perspective, which individual and distal contextual factors (familial, social and cultural) are associated with bullying other children across two different sites. Our sample included 1,271 Puerto Rican children 10 and older years of age at baseline residing in the South Bronx in New York and in the Standard Metropolitan Area in San Juan and Caguas, Puerto Rico. Bullying others was assessed through parents' and children's response to one item in the conduct disorder section of the Diagnostic Interview Schedule for Children Version IV (DISC IV). Child, family, social and cultural factors were examined as independent variables with bullying others as dependent variable in hierarchical models adjusting for gender, maternal education, poverty, single parent

household and site. Prevalence of bullying others was 15.2% in South Bronx versus 4.6% in Puerto Rico ($p<0.0001$). Poor social adjustment and academic achievement, parental harsh discipline, negative school environment, exposure to violence, peer delinquency and level of acculturation in the child were all risk factors for bullying others. Child acculturation accounted for site differences in rates of bullying others. We conclude that, besides the school context, specific aspects of the community, family, and culture influence the development of bullying perpetration and should be targets for interventions and prevention programs. Minority youth living in at-risk contexts may benefit from contextually sensitive preventive interventions that address how assimilation into a high-risk context may increase involvement in bullying perpetration.

Keywords

Bullying; perpetration; context; culture; Puerto Rican

Introduction

Bullying is defined as a specific form of aggression that involves intentional and repeated hurtful actions among peers where there is an imbalance of power (Olweus 1994). Between 10–25% of children worldwide report having bullied others at some point in their lives (Nansel et al 2001, Wolke et al 2001, Jansen et al 2011). Bullying behaviors, although ubiquitous, seem not to be equally distributed across different contexts or groups. Clear variation across countries (ranging from around 8% in Sweden to over 35% in Lithuania) has been reported (Craig et al 2009). Additionally, in a US national survey Hispanic adolescents reported bullying others more frequently (10.4%) than Whites (8.3%) and African-Americans (8.5%) (Nansel et al 2001).

Children who bully others are a potential risk not only to other children but also to themselves. Bullying perpetration is predictive of poor academic achievement (Nansel et al 2001, Nansel et al 2004), antisocial personality and other psychiatric disorders, substance use, and suicidal ideation in adulthood (Sourander et al 2010, Klomek et al 2009, Sourander et al 2007, Ttofi et al 2011, Sourander et al 2009). Understanding specific factors that may lead children to bully others is essential to prevent negative outcomes among bullying perpetrators and victims.

Consistent with an ecological perspective (Bronfenbrenner 1995, Jimerson et al 2010), besides individual characteristics (Nansel et al 2004, Barboza et al 2009), more distal contextual factors (related to family (Espelage et al 2000, Pepler et al 2008), peers (Espelage and Holt 2001, Cook et al 2010), schools (Wolke et al 2001, Barboza et al 2009, Natvig et al 2001), and neighborhoods) (Espelage et al 2000, Fite et al 2010, Veenstra et al 2005) have also been related to bullying others (Jimerson et al 2010). Given contextual and subgroup variation, a clear gap in the literature is the lack of studies focused on determining how the socio-cultural context may be relevant for bullying perpetration (Nansel et al 2001). Furthermore, published studies have had limited information regarding children's social-cultural environment, impeding intervention development progress in these crucial aspects

(Nansel et al 2001, Nansel et al 2004, Sourander et al 2010, Klomek et al 2009, Sourander et al 2007, Ttofi et al 2011, Sourander et al 2009, Swearer et al 2010).

In the current analysis we seek to address these gaps in knowledge. We examine a sample of 1,271 Puerto Rican children living in two different contexts: the San Juan metropolitan area in Puerto Rico and the poorest congressional district in the US, the South Bronx in New York City. We hypothesized that bullying others would be a behavior more prevalent among youth raised in the high-risk context of the South Bronx in comparison with those raised in San Juan. Further, we expected proximal and distal characteristics within the socio-cultural context to be related to the likelihood of children bullying others.

Method

Participants

Detailed information about the sample and methods of a broader study from which these data are drawn are provided in previous reports (Bird et al 2006, Bird et al 2006). Briefly, the Boricua Youth Study (BYS) involved 2,491 Puerto Rican children aged 5–13 years residing in the South Bronx in New York and in the Standard Metropolitan Area in San Juan and Caguas, Puerto Rico. Each sample was a multistage probability sample of households of the target population. Eligibility criteria included two main conditions: (a) at least one child in the household aged 5–13 years identified as being of PR background; (b) at least one primary caretaker also identified as being of PR background. Up to three eligible children per household were included. In households with more than three eligible children, three were selected at random. Interviews were administered in either English or Spanish. The participation rate was 84.7% and 89% of the adult informants were biological mothers. The present analysis focuses on a sub-sample of children who were 10 years and older (n=1,271) the age group for whom children and parents were asked questions about bullying.

The study was approved by the Institutional Review Boards of the New York State Psychiatric Institute and the University of Puerto Rico Medical School.

Measures

Bullying Behavior—Embedded in the conduct disorder section of the Diagnostic Interview Schedule for Children Version IV (DISC IV) (Bravo et al 2001, Shaffer et al 2000) was the following question: "*Now I want to ask you about bullying; you know, hitting or threatening or scaring someone who is younger or smaller than you or somebody who won't fight back. Have you ever bullied someone in this way?/ Has your child ever bullied someone in this way?"*. Parents and children were asked this question and children with an affirmative answer (according to parent or child report) were defined in this article as having bullied others.

Ecological Factors—Consistent with an ecological model, child, family, social and cultural factors were examined.

Child Factors—*Child's social adjustment* (2 items), Cronbach's alpha: 0.73 (Bird et al 2006); *academic performance* (10 items), Chronbach's alpha: 0.90 (Bird et al 2006); *early*

aggression (6 items), Chronbach's alpha: 0.77 (Bird et al 2006) and *child's attitudes toward delinquency (39 items), Cronbach's alpha:0.93* (Bird et al 2006).

Family Factors—*(a) Parental Psychopathology: Lifetime parental substance use disorder, depression and antisocial behaviors* assessed with the Family History Screen for Epidemiologic Studies (FHE) (Lish et al 1995) (b) *Family Processes: Parental discipline* (9 items), Chronbach's alpha: 0.54 (Goodman et al 1998); *parental monitoring* (9 items), Chronbach's alpha: 0.55 (Patterson et al 1988); *family functioning* (5 items), Chronbach's alpha: 0.91 (Good et al 1979); *parent-child relationship (12-items)*, Chronbach's alpha: 0.75(Loeber et al 1998) *and maternal warmth* (13 items), Chronbach's alpha: 0.68 (Hudson 1982).

Social Factors—*Peer delinquency* (16 items), Chronbach's alpha: 0.85 (Loeber et al 1998); *child's stressful life events* (21 items) (Goodman et al 1998, Hudson 1982); *neighborhood characteristics*, Chronbach's alpha: 0.95 (Bird et al 2006); *school environment* (8 items), Chronbach'a alpha: 0.55 (Bird et al 2006) and *exposure to violence* (11 items) (Bird et al 2006).

Cultural Factors—*Acculturation*: Adaptation of the Cultural Life Style Inventory (CLSI) (parents: 9 items, Chronbach's alpha: 0.88; youth: 6 items, Chronbach's alpha:0.86) (Magana et al 1996, Mendoza et al 1989). *Cultural stress:* 4 items from the Hispanic Stress Inventory which were comparable across sites, Chronbach's alpha: 0.88 (Cervantes et al 1990). *Familism*: adaptation from Sabogal's Familism Scale (10 items for parental version, Chronbach's alpha: 0.76; 9 for youth version, Chronbach's alpha:0.44) (Sabogal et al 1987).

Statistical analyses

We compared demographic characteristics of children who bullied others and those who never bullied using t-tests and chi-squares for continuous and categorical variables, respectively (Table 1). We built our models in several steps using bullying others as the dependent variable and ecological factors as independent variables. First, we conducted a series of logistic regressions relating presence of bullying others with each specific ecological factor in a separate model, always adjusting for gender, maternal education, poverty, single parent household, age, and site. Second, we selected ecological factors with p-values ≤.20 (Hosmer and Lemeshow 2004) in the prior step to build a series of hierarchical models, each adding to the previous model (only variables with p-values ≤.20 were kept in subsequent models): Model A included our main indicator of socio-cultural context (site) as independent variable; Model B added child factors; Model C added the first domain of family factors, i.e., parental psychopathology; Model D added family processes; Model E added social factors; and Model F added cultural factors (Table 2). Third, variables with p-values ≤.05 in Model F were included in the final model (Table 3). Fourth, we added interactions between site and each socio-ecological factor included in Model F to test whether the relationship between each factor and bullying behaviors varied by site.

Because site differences in the behavior of bullying others were of primary interest, and because youth in the South Bronx and in San Juan live in contexts with different

sociodemographic characteristics, we used propensity scores to adjust for selection into place of residence in all of our models (Rosenbaum and Rubin 1985, Rubin 1997). Propensity scores were estimated using logistic regressions, in which place of residence (dependent variable) was predicted by a broad range of background variables (maternal education, maternal age and family income). The estimated probabilities of living in a given site were then used to create five roughly equal sized strata that were included as covariates in models displayed in Tables 2, 3 and 4. Additionally, we continued to adjust for gender, maternal education, poverty, single parent household, and age, as combining propensity score and covariance adjustment yields more reliable results than either method alone (Rubin and Thomas 2000). All analyses were conducted using SUDAAN software (Research Triangle Institute 2007) to adjust for the clustered sampling design.

Results

Of 1,271 youth, 127 (13.61%, SE=1.19) had ever bullied other children. Children who bullied others had a mean age at baseline of 11.8 (0.12) years compared to 11.5 (0.05) years among those not displaying such behaviors (t-test=2.33, p=0.02). Table 1 shows that the prevalence of bullying others was significantly higher in the South Bronx compared to Puerto Rico. Compared to children living with two parents, those from single-parent families were also more likely to bully others.

Table 2 presents the results of the logistic regressions of relevant predictors at the individual, family, social and cultural levels. Among child characteristics, better social adjustment and academic performance were associated with lower odds of bullying others, while deviant attitudes towards delinquency and early aggression were associated with higher odds of bullying others. Significant associations were also found between parental psychopathology and bullying others. Specifically, screening positive for lifetime maternal depression, substance use, and antisocial behaviors was associated with higher odds of bullying. Among parental processes, greater parental warmth, monitoring, better family functioning and positive parent-child relationships reduced the likelihood of bullying others, while excessive/harsh parental discipline was significantly associated with bullying others. Among social factors, peer delinquency and school environment, followed by stressful life events and exposure to violence all significantly increased the likelihood of bullying others. Considering cultural variables, higher degree of acculturation both in the parent and child were positively associated with bullying others.

Table 3 shows the multivariable hierarchical logistic regression models (models A to F) progressively incorporating domains of the ecological model. Several variables remained significantly associated with bullying others throughout models A to E. In particular, living in the South Bronx, parental antisocial behaviors, parental harsh discipline, peer delinquency, school environment and exposure to violence remained significantly and directly associated with bullying others in model E. Interestingly, when cultural factors were added to the model (Model F) the association between living in the South Bronx (site) and bullying others was no longer significant. Of the cultural factors examined, only child acculturation was directly associated with bullying others (OR: 2.29, p= 0.008), possibly explaining the site differences. In Table 4, we present the final model including all the

variables that were significant at the 0.05 level in the final model in Table 3. When considering all ecological variables simultaneously (site, individual, family, social and cultural characteristics), differences across the South Bronx and the San Juan contexts were no longer statistically significant. Child acculturation remained significantly associated with bullying others as in our previous model, likely accounting for the site effect. Child's social adjustment, parental discipline and social factors (peer delinquency, school environment and exposure to violence) were also significantly associated with the behavior of bullying others.

In the final model presented in Table 4, we tested whether any of the associations found differed by site, but none of the interaction terms were statistically significant (results available upon request).

Discussion

Our study, based on a sample of 1,271 Puerto Rican children (ages 10 to 13) at two sites (South Bronx, NY, and San Juan, PR), investigated a broad range of individual, family, social and cultural factors in relation to the behavior of bullying others. Our results indicate the relevance of considering, beyond individual characteristics, the role of social factors, certain family processes and cultural factors. More specifically, our study produced three main findings. First, there were significant differences in rates of bullying others according to the socio-cultural context in with children develop, with Puerto Rican children living in a context where they are part of a minority group (the South Bronx), more often bullying others than those living in their home culture of San Juan. Second, consistent with an ecological model, specific factors beyond proximal individual characteristics were associated with bullying others. In particular, these risk factors included poor social adjustment and academic achievement, and other distal factors pertaining to the family (parental harsh discipline), social environment (school environment, exposure to violence, peer delinquency) and cultural context (level of child acculturation). Third, cultural factors, specifically, child acculturation, accounted for site differences in rates of bullying others between the South Bronx and San Juan.

Overall, our study highlights the relevance of considering the broader socio-cultural context in which children develop when studying factors related to bullying others. This is particularly supported by the fact that when we assessed one homogeneous Latino subgroup (Puerto Ricans) in two settings, considerably higher levels of bullying others were found among children living in the highest risk context (South Bronx in comparison to San Juan). Other epidemiological studies, using similar sampling and bullying definitions have also reported significant differences across contexts (countries) in prevalence of bullying perpetration (Wolke et al 2001, Craig et al 2009). These studies however, did not include enough information about specific contextual factors in each country where bullying prevalence was measured, precluding the determination of specific factors that could be linked to bullying perpetration and being, therefore, limited to inform intervention development.

The ecological model represents a comprehensive approach to examine factors at different levels that may influence bullying perpetration. Culture, an important aspect of our

psychosocial environment, has rarely been studied in empirical investigations and preventive intervention models. Integrating cultural aspects of children's experiences into the ecological model of bullying perpetration may be important, particularly where majority and ethnically diverse populations meet, and being a minority may posit specific adaptation challenges. Consistent with an ecological approach and with previous research (Nansel et al 2004, Barboza et al 2009, Espelage et al 2000, Espelage and Holt 2001), our study shows that factors associated with bullying belong to multiple contexts: the individual, family, social and cultural contexts. The individual characteristics associated with bullying others (child's positive social adjustment and academic achievement) suggest that children who feel the acceptance of peers and teachers may be more motivated to perform well in school, which may act as a protective factor against engaging in aggressive behaviors (Stepp et al 2011). In line with previous research, the exposure to negative environments within the family and school contexts, in particular the exposure to harsh parenting (Veenstra et al 2005), negative school climate (Nansel et al 2001, Barboza et al 2009), violence (Fite and Colder 2007) and association with deviant peers (Fite and Colder 2007) was significantly related with bullying others (Haynie et al 2006). In accordance with the social learning theory (Bandura 1978), our findings suggest that exposure to a harsh and aggressive behavior in "model contexts" such as home and school, may have a strong impact on children's emotional and behavioral development, making these children more likely to display aggressive behaviors. These learned behaviors and relational patterns would then be reproduced with other vulnerable peers, with whom aggression and perceived domination of power could be conceived as an acceptable way of conflict resolution (Bandura 1978).

With the exception of culture, none of the aforementioned factors in our sample explained differences in the behavior of bullying others across the South Bronx and San Juan. Beyond individual, family and social factors, our study showed that cultural experiences of Puerto Rican children can constitute a risk factor for bullying others. Furthermore, greater child acculturation levels were associated with greater bullying perpetration, and in fact, child acculturation explained differences found between the South Bronx and San Juan. Acculturation refers to the changes that occur as a result of the direct and continuous contact of individuals with a culture different from their own (Redfield 1936). This dynamic process is known to involve individual changes with consequences at the psychological and socio-cultural levels (Ward et al 2001). The relationship between cultural experiences and bullying is certainly not well understood. It is possible that the exposure of Puerto Rican minority children to mainstream American culture and the need to cope and navigate cross-cultural worlds, may lead to some degree of distress which may, in turn, be externalized as bullying behaviors. According to the social identity theory, bullying others could represent a maladaptive way of identity formation, in which minority children could seek to distinguish themselves from other groups by engaging in an in-group bias, perceived as comparatively superior and distinctive (Duffy and Nesdale 2009). However, the fact that cultural stress (which includes perceived discrimination) was not related to bullying others suggests that the distress related to the acculturation experience may not be perceived as related to one's cultural experiences. It is also possible that the relationship between acculturation and bullying others is only present within particular contexts or segments of a culture (Portes

and Zhou 1993, Portes and Rivas 2011) like the South Bronx, where other risks are abundant.

Overall, our study provides a broad, comprehensive perspective of how different contexts and cultural experiences can have an impact on bullying perpetration. Our findings carry clinical and public health implications. Current anti-bullying programs aim to reduce opportunities and rewards for bullying engagement, by building a sense of community among children and school staff. However, school preventive programs have yielded modest positive results (Swearer et al 2010, Merrel et al 2008). Addressing school environment and influencing knowledge and teacher-student relationships may not be sufficient to prevent bullying. Our study suggests that other specific aspects of the community, family, and culture play a role in the development of bullying perpetration and should be targets for prevention programs. Further, our results indicate that programs with a specific focus towards children living at high-risk contexts (Olweus 1994, Olweus and Limber 2010) may be warranted. Pediatricians and general practitioners may be the main initial care providers to those children living at high-risk contexts, where early identification of the risk factors involved at multiple levels may be crucial for bullying prevention. Once risks are identified, interventions should be adapted to the contextual factors that children live with. For instance, parents may be strategic positioned to, (through for example parent training), address aspects of the child individual, family and socio-cultural factors that could lead to bullying.

Our findings should be interpreted in light of study limitations. First, bullying others was assessed through a single question, answered by children and parents, that measured lifetime bullying, including from a single bullying episode to a chronic pattern of behavior. Second, this question did not specifically assessed common forms of bullying, such as name calling or cyberbullying (Kowalski and Limber 2013). Third, the cross-sectional design of our analysis precludes the interpretation of sequence of events, as reverse causation could still explain our results. For instance, children who bully others could influence parenting behavior and school environment. Also, bullying others could favor acculturation, so that in order to acculturate to a specific context Puerto Rican children could tend to affiliate with those who are perceived as more aggressive and dominant in an attempt to feel less of a minority (Espelage and Holt 2001). Fouth, there might be other factors, not considered in this study, which may explain the relationship between context and bullying others. For instance, we were not able to measure how many of the children with bullying behaviors were actually bullied by peers. There is evidence showing that minority children can be common targets of bullying (Wolke et al 2001), and that, in turn, being a bully-victim increases the risks of bullying others (Nansel et al 2001, Olweus et al 1978, Perren et al 2006, Perren et al 2013). Notwithstanding these limitations, this is the first study to use a population-based homogeneous Latino subgroup sample to investigate determinants of bullying perpetration in two sites. By expanding understanding about the role of context in bullying perpetration, our findings have relevant implications from a clinical and public health standpoint. In addition, the novel focus on Puerto Rican children indicates that prevention programs among minority youth living in at-risk contexts may benefit from contextually sensitive interventions that address the extent to which assimilation into a high-risk context may increase likelihood of bullying perpetration.

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Table 1

"Bullying others" among Puerto Rican children (age 10 – 15) by Background Characteristic (N=1,271).

	Bullying Others		t or χ^2	*p*
	%	SE		
Site				
San Juan	4.61	0.90	38.18	<.0001
South Bronx	15.26	1.37		
Sex				
Male	13.75	1.53	0.02	0.90
Female	13.47	1.73		
Maternal Education				
≥High School	14.30	1.67	0.29	0.59
< High School	12.84	1.91		
Household Composition				
Two-parent family	11.26	1.58	3.89	0.049
Single-parent family	16.65	2.00		
Poverty Status				
Above poverty line	12.55	2.23	0.34	0.56
Below poverty line	14.13	1.45		

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Table 2

Children who bully others: Associations with child, parental, family, social and cultural factors.

	OR	95% CI	*p*
Child Characteristics			
Positive social adjustment	0.43	0.32;0.59	<.0001
Academic achievement	0.39	0.23;0.67	<.001
Early aggression	1.22	1.10;1.35	<.001
Youths' attitudes towards delinquency	1.07	1.00;1.13	.04
Parental Psychopathology			
Parental antisocial behaviors	2.13	1.29;3.51	.003
Parental substance use problems	1.85	1.10;3.12	.02
Maternal depression	2.20	1.12;4.31	.02
Family Processes			
Harsh parental discipline	2.32	1.67;3.21	<.0001
Positive parent-child relationship	0.26	0.09;0.74	.01
Maternal acceptance and warmth	0.21	0.12;0.37	<.0001
Parental monitoring	0.89	0.82;0.97	.007
Good family functioning	0.88	0.82;0.95	.002
Social Risks			
Peer delinquency	4.19	2.29;7.68	<.0001
Stressful life events	1.22	1.07;1.39	.004
Negative school environment	1.46	1.28;1.66	<.0001
Exposure to violence	1.08	1.04;1.12	<.0001
Neighborhood characteristics	1.01	0.99;1.03	.42
Cultural Factors			
Parental cultural stress	1.55	0.69;3.47	.29
Child cultural stress	2.55	0.89;7.27	.08
Parental acculturation	1.80	1.25;2.58	.002
Child acculturation	1.60	1.02;2.49	.04
Parental familism	0.76	0.47;1.21	.24
Child familism	0.74	0.17;3.28	.69

NOTES: Results of logistic regression models. Separate models were examined for each variable, with each model adjusted for gender, maternal education, poverty, single parent household, age, and site.

Table 3

Bullying Others: Hierarchical models. (Models A, B, C, D, E, and F).

	Model A		Model B		Model C	
Predictors	**OR[95% CI]**	**p**	**OR[95% CI]**	**p**	**OR[95% CI]**	**p**
Site (NY = 1)	4.62[2.70;7.91]	**0**	4.11[2.34;7.21]	**0**	3.89[2.17;6.69]	**0**
Child Characteristics						
Positive social adjustment	---		0.54[0.39;0.75]	**0.0003**	0.59[0.41;0.85]	**0.005**
Academic achievement	---		0.40[0.23;0.71]	**0.002**	0.35[0.20;0.61]	**0.0003**
Early aggression	---		1.17[1.05;1.31]	**0.007**	1.19[1.06;1.33]	**0.004**
Attitudes towards delinquency	---		1.06[0.99;1.13]	0.08	1.05[0.99;1.11]	0.09
Parental Psychopathology						
Parental antisocial behaviors	---		---		2.25[1.08;4.67]	**0.03**
Parental substance use problems	---		---		1.01[0.44;2.29]	0.99
Maternal depression	---		---		1.47[0.72;3.02]	0.29

	Model D		Model E		Model F	
Predictors	**OR[95% CI]**	**p**	**OR[95% CI]**	**p**	**OR[95% CI]**	**p**
Site (NY = 1)	4.66[2.41;9.01	**0**	3.46[1.80;6.64]	**0.0003**	0.68[0.21;2.23]	0.52
Child Characteristics						
Positive social adjustment	0.71[0.50;1.03]	0.07	0.68[0.47;0.98]	**0.04**	0.65[0.46;0.92]	**0.02**
Academic achievement	0.35[0.20;0.61]	**0.0003**	0.40[0.23;0.71]	**0.002**	0.37[0.21;0.65]	**0.0006**
Early aggression	1.16[1.03;1.30]	**0.01**	1.14[1.00;1.31]	**0.05**	1.13[0.99;1.29]	0.07
Attitudes towards delinquency	1.03[0.97;1.08]	0.36	---	---	---	---
Parental Psychopathology						
Parental antisocial behaviors	2.23[1.29;3.85]	**0.004**	2.09[1.13;3.86]	**0.02**	1.83[0.93;3.63]	0.08
Parental substance use problems	---	---	---	---	---	---
Maternal depression	---	---	---	---	---	---
Family Processes						
Harsh Parental discipline	1.72[1.12;2.63]	**0.01**	1.95[1.31;2.90]	**0.001**	2.13[1.38;3.29]	**0.0009**
Parent-child relationship (Youth report)	0.56[0.13;2.43]	0.44	---	---	---	---
Positive parent-child relationship (Parent report)	0.74[0.34;1.61]	0.44	---	---	---	---

	Model D		Model E		Model F	
Predictors	**OR[95% CI]**	**p**	**OR[95% CI]**	**p**	**OR[95% CI]**	**p**
Parental monitoring	1.01[0.92;1.11]	0.8	---	---	---	---
Good family functioning	0.91[0.83;1.00]	**0.05**	0.93[0.84;1.02]	0.11	0.95[0.85;1.05]	0.3
Social Risks						
Peer delinquency			3.15[1.51;6.57]	**0.003**	4.07[2.05;8.08]	**0.0001**
Stressful life events			1.07[0.88;1.29]	0.49	---	---
Negative school environment			1.33[1.12;1.58]	**0.001**	1.38[1.14;1.66]	**0.001**
Exposure to violence			1.03[1.00;1.07]	**0.08**	1.05[1.01;1.08]	**0.007**
Cultural Factors						
Parental Cultural Stress					1.35[0.37;4.97]	0.65
Youth Cultural Stress					0.68[0.13;3.65]	0.65
Parental Acculturation					1.60[0.94;2.71]	0.08
Child Acculturation					2.29[1.25;4.18]	**0.008**

Note: The following predictors are tested in models D, E, and F: Child Characteristics, Parental Psychopathology, Family Processes, Social Risks, and Cultural Factors.

NOTE: Models adjusted for gender, maternal education, poverty, single parent household, age, and propensity scores.

Variables with p's >.20 in models in Table 2b and in the preceding model were not included in the analyses.

Table 4

Children bullying others at wave 1: Final Model.

	Bullying Others	
Predictors	**OR[95% CI]**	**p**
Site (NY = 1)	1.33[0.51;3.47]	.56
Child Characteristics		
Positive social adjustment	0.59[0.42;0.81]	**.002**
Academic achievement	0.50[0.29;0.87]	**.02**
Family Processes		
Harsh Parental discipline	2.15[1.54;3.00]	**<.001**
Social Risks		
Peer delinquency	3.06[1.47;6.38]	**.003**
Negative school environment	1.30[1.09;1.55]	**.003**
Exposure to violence	1.05[1.02;1.08]	**.0006**
Cultural Factors		
Child Acculturation	1.94[1.21;3.12]	**.007**

NOTE: Models adjusted for gender, maternal education, poverty, single parent household, age, and propensity scores.