

Article

Deterring Teen Bullying: Assessing the Impact of Perceived Punishment From Police, Schools, and Parents

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Abstract

While decades of criminological research have returned mixed results when it comes to deterrence theory, deterrence-informed policies continue to proliferate unabated. Specific to bullying among adolescents, many U.S. states have recently passed new laws — or updated old ones — increasing potential punishment for youth who abuse others. Police are becoming involved in bullying incidents more than ever before, and schools across the country are implementing new policies and procedures as a result of statewide mandates to crack down on the problem. Parents, too, are being pressured to respond to bullying or risk being prosecuted themselves. To assess whether youth are actually being deterred by these methods and messages, data were collected from approximately 1,000 students from two middle schools on their perceptions of punishment from various sources, as well as their bullying and cyberbullying participation.

Keywords

deterrence theory, bullying, cyberbullying, school safety, school violence

With adolescent bullying a prominent issue both nationally and internationally, many public stake-holders and well-meaning adults have clamored for increased formal prohibitions and penalties as the best response to reduce peer harassment among teens (Furniss, 2000; Thurau & Wald, 2009). The pressure to pursue these provisions seems to come from the idea that the threat of harsher penalties will deter kids from being cruel toward others. But will they? Deterrence theory has remained a very popular paradigm within the criminal justice system for decades and as such serves as the basis for many policies (e.g., mandatory sentences and "three strikes" laws; Paternoster, 1987, 2010). The basic premise is simple: Humans are rational beings who weigh the costs and benefits of any behavior and will ultimately act in a way that maximizes pleasure and minimizes pain (Cornish & Clarke, 2014). Rational people refrain from deviance when the potential costs (perceived or actual) are sufficiently high.

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It can be argued, however, that the threat of formal sanction—for example, via potential punishment by the police—is simply not the most productive method of addressing bullying. While law enforcement should be involved in bullying incidents that involve behaviors which constitute a crime (e.g., physical assault), it may be more prudent to prioritize informal methods of social control to shape and direct adolescent behavior. When it comes to a youthful population, this primarily involves efforts by schools and families. Indeed, it appears reasonable to conclude that the influence of the latter is much more potent in shaping and guiding the behavioral choices of youth than the former when considering peer harassment (see e.g., Apel, Pogarsky, & Bates, 2009; Sampson & Laub, 1993).

Despite significant scholarly interest in bullying (especially in the last decade), relatively few studies have sought to apply criminological theory to explain why youth engage in bullying behaviors. Among those that have, Patchin and Hinduja (2011) found that students who participated in bullying and cyberbullying reported higher levels of strain and anger, consistent with Agnew's (1992) general strain theory. Hay, Meldrum, and Mann (2010) examined strain as well and illuminated the importance of its effect on both external acts (e.g., delinquency) but also internalized forms of deviance (e.g., self-harm and suicidal ideation). Moon, Hwang, and McCluskey (2011) also tested general strain theory, along with the general theory of crime (Gottfredson & Hirschi, 1990) and differential association theory (Sutherland, 1947) but found little support for each among a sample of Korean middle school students. Finally, Navarro and Jasinski (2012) sought to measure the applicability of routine activities theory on cyberbullying and found that the suitability and availability of targets were most strongly correlated to victimization. In the current study, we further contribute to theoretical explorations related to bullying by testing whether the tenets of deterrence theory are related to middle schoolers' self-reported online and school-based bullying behaviors.

In the current article, we examine the influence of the police, the school, and the parents on deterring bullying behaviors that occur at school and online. We begin by summarizing the state of research on adolescent experiences with bullying. Next, we discuss deterrence theory and its early emphasis on formal social control institutions. We then expand on this literature by examining the ways informal social control institutions like the school and family can deter unwanted teen behaviors. It is hypothesized that informal institutions, particularly parents within the family, will prove to be a stronger deterrent to teen bullying behaviors than the threat of punishment by the police. Finally, we offer implications that stem from the findings, with particular emphasis on future efforts to combat all forms of adolescent bullying.

Adolescent Bullying and Cyberbullying

Bullying has remained ensconced as one of the foremost social problems of our time, and consequently a mainstay priority area for parents, educators, politicians, and others concerned with the well-being of youth. While it has been conceptualized and operationalized differently across various academic inquiries, certain consistent themes do emerge when considering commonly-accepted elements of the phenomenon (Patchin & Hinduja, 2016). First, bullying is intentional rather than accidental. Second, articulable harm (physical, emotional, or relational) has to occur—and it is generally the target's viewpoint that is most important in this determination. Third, one instance of hurtful behavior does not generally constitute bullying, and so it must occur (or be threatened to occur) on a repetitive basis. Fourth, inherent in any conception of bullying is the demonstration (or interpretation) of power by the aggressor over the target (Olweus, 1978, 1993).

Online forms of bullying have attracted and received the lion's share of attention and scrutiny (by the media, politicians, and researchers) in recent years, perhaps due to certain high-profile cases specifically involving youth and young adults (Hinduja & Patchin, 2010). Cyberbullying—as it has been termed—has been conceptually defined as "willful and repeated harm inflicted through computers, cell phones, and other electronic devices" (Hinduja & Patchin, 2015, p. 11). This definition

was informed by, and includes elements common to, long-standing definitions of traditional bullying, focusing on behaviors that are deliberate, occur over time, and result in harm. Broadly speaking, cyberbullying includes incidents where adolescents use technology (such as Internet-enabled devices) to harass, threaten, humiliate, or otherwise hassle their peers.

A number of notable national and international studies have been conducted over the years to clarify how often bullying and cyberbullying occurs, although the prevalence picture of traditional bullying *offending* is more limited simply due to a greater emphasis on measuring *victimization*. One study assessing rates across 40 countries found that approximately 26% of youth are involved, 10.7% as aggressors, 12.6% as targets, and 3.6% as both (Craig et al., 2009). Another study involving nationally representative data found that 13% of students in Grades 6–10 had bullied others, 11% had been bullied, and 6% had done both (Nansel et al., 2001). Finally, these figures can be compared with findings from a recent review of 74 published articles that included cyberbullying prevalence rates in the United States and abroad (Hinduja & Patchin, 2015). Across all studies, an average of 21.6% of respondents had been the victim of cyberbullying, while 15.2% reported that they had cyberbullied others (Hinduja & Patchin, 2015).

The consequences of traditional bullying victimization identified in previous research clearly demonstrate significant negative outcomes for youth (Cook, Williams, Guerra, Kim, & Sadek, 2010; Copeland et al., 2014; Reijntjes et al., 2011; Ttofi, Farrington, Lösel, & Loeber, 2011). These include lower academic achievement (Glew, Fan, Katon, Rivara, & Kernic, 2005; Juvonen, Nishina, & Graham, 2000); absenteeism (Kochenderfer & Ladd, 1996); tardiness and truancy (Ericson, 2001; Rigby & Slee, 1999); eating disorders, chronic illness, suicidal ideation (Borg, 1998; Kaltiala-Heino, Rimpelä, Marttunen, Rimpelä, & Rantanen, 1999; Roland, 2002); depression (Hawker & Boulton, 2000; Olweus, 1994; Roland, 2002); and interpersonal violence and delinquency (Arseneault et al., 2006; Barker, Arseneault, Brendgen, Fontaine, & Maughan, 2008). As might be expected, the growing literature on the consequences of *cyberbullying* underscores many of the real-world ramifications long linked to traditional bullying (Brighi et al., 2012; Kowalski & Limber, 2013).

Given concerns about the known consequences of experience with bullying, efforts have been made by parents, educators, and policy makers to reduce its occurrence. One common approach is to pass a law or otherwise increase the perceived threat of formal involvement with—and sanction by—the civil or criminal justice system (Gillespie, 2006). All 50 U.S. states now have a law to address bullying, and at least 18 specifically provide for a criminal sanction for bullying (Hinduja & Patchin, 2016). At the same time, schools have sought to reduce bullying by offering comprehensive curricular enhancements, school climate initiatives, or other programming to prevent or more effectively respond to bullying (Espelage, 2013). Parents have no doubt also been persuaded by increased media attention to high-profile and tragic incidents to talk with their children about bullying (Geis & Binder, 1990; Tyler & Segady, 2000). The question is whether any of these efforts work to curtail bullying. Deterrence theory is one paradigm that can help to frame the likelihood of success of these initiatives.

The Evolution of Deterrence Theory

At its core, deterrence theory purports that individuals are self-interested and rational and will avoid participating in criminal behavior if the threat of apprehension and punishment is greater than the perceived benefits that might be derived. The theory is grounded in the pleasure/pain principle, which holds that individuals aim to maximize pleasure and minimize pain (Gibbs, 1968; Nagin, 1998). Historically, deterrence theory emphasized the influence of *formal* sanctions (e.g., imprisonment or probation) and how perceptions of punishment certainty, severity, and celerity dissuade individuals from unlawful actions.

While evidence collected for a deterrent effect based on perceptions of *punishment certainty* have been blurred by methodological uncertainties, the impact of *punishment severity* has been all but

dismissed as a viable explanation of a decrease in offending behavior (Paternoster, Saltzman, Waldo, & Chiricos, 1983). Indeed, Paternoster (1987, p. 191) summarizes this view by concluding rather confidently that perceived severity "...plays virtually no role in explaining deviant/criminal conduct." Overall, when considering its constituent components, the greatest support has been found for certainty as compared to severity, while very little research has been done on the third prong of deterrence: the swiftness of the sanction (Nagin, 2013; Nagin & Pogarsky, 2001).

Police as a salient source of deterrence. Many schools incorporate formal social control strategies that utilize law enforcement officers on campus (Addington, 2009; Raymond, 2010). Much of their efforts are couched in deterrence theory, for example, by enforcing zero-tolerance policies for possession of weapons or drugs and by providing a visible security presence in the wake of several highly publicized school shootings (Eisenbraun, 2007; Petteruti, 2011). Schools are also where most law-abiding youth are first introduced to the police as public servants in place to keep the peace and help in times of trouble. That school resource or liaison officer is many times the only officer with whom students will have a chance to interact (Jackson, 2002).

Research on the effectiveness of school-based law enforcement officers' efforts to curb behavioral problems at school has been decidedly mixed (Jackson, 2002; Na & Gottfredson, 2013; Nance, 2015). While the presence of law enforcement at schools may increase perceptions of safety overall by staff and students (Brown, 2006; Goggins, 1994), some research has shown that the use of school resource officers does not change students' perceptions of being identified if they offended or offending in general (Jackson, 2002). When this is the case, it typically results from negative experiences that the latter have had with the former (e.g., the police usually initiate and therefore control the outcome of the contact and the relational power imbalance therein; Hopkins, Hewstone, & Hantzi, 1992). Instead of accomplishing clear, far-reaching deterrent goals through their presence and interactions, it is argued that

police in schools may provide a psychological benefit for administrators, staff, parents, and the adult public; however, their presence may pose a psychological threat to students, who may view police as a threat to their freedom to move about, have open conversations, and experiment in legal activities that may be socially unacceptable to police and administrators. (Jackson, 2002, p. 647)

In addition, some studies have demonstrated that the presence of police officers on campus may lead to an overreliance on arrests to deal with student misconduct (Rimer, 2004), and a net-widening phenomenon unnecessarily introducing youth into the justice system (Nance, 2015; Wiley & Esbensen, 2016). Their presence also arguably may lead to a distrust of police when they get involved in relatively minor offenses that could have been handled by the school (Theriot, 2009), sometimes fosters an "adversarial relationship" between students and staff (Beger, 2003), and may actually lead to more school disorder (Mayer & Leone, 1999), although the relationship is complex and may depend on the number and kind of interactions (Theriot, 2016). Instead of having a strong, positive deterrent effect, then, distrust and uneasiness may manifest in disrespect and the challenging of authority, decreased connectedness/bonding, and youth cut off from the positives of school involvement because arrests also likely mean that a student will be suspended or expelled (Petteruti, 2011; Theriot, 2016).

Over the years, the focus of deterrence has been broadened beyond the influence of formal punishment from the police to include consideration of the risk and nature of *informal* sanctions (Nagin, 1998; Pratt et al., 2006). Those who have strong prosocial ties to parents, educators, and the community, for instance, will not want to jeopardize those relationships by acting in an unconventional manner (Hirschi, 1969; Toby, 1957). Deviating from accepted norms would invite public shame, condemnation, disapproval, ridicule, ostracism, judgment, embarrassment, and similar social costs. Indeed, fear of stigmatization and disapproval of close family and friends may have a greater deterrent effect for some potential offenders than formal sanctions such as incarceration (Apel et al., 2009; Matsueda, 2006).

Parents and educators as salient sources of deterrence. The role of parents and educators in delinquency prevention remains critical (Harris-McKoy & Cui, 2013; Hoeve et al., 2009; Simons, Simons, Burt, Brody, & Cutrona, 2005). Much research involving developmental inquiries of adolescence has underscored the protective capacity of positive parenting strategies (Baumrind, 1965, 1991a, 1991b). Although conceptualized in various ways, constituent elements of parenting that have been analyzed include support, involvement, shared activities, communication, discipline, and control (Hoeve et al., 2009; Kerr & Stattin, 2000; Simons-Morton, Hartos, & Haynie, 2004; Stattin & Kerr, 2000). All of these are important in conveying to children that deviant behavior will not be tolerated and that such behaviors will result in punishment. However, any expectations must be made within a supportive, nurturing context (Hoeve et al., 2009). Parenting techniques that emphasize harsh punishment and the withdrawal of love—and are characterized by inflexibility, control, and callousness—tend to exacerbate rather than reduce delinquent and violent tendencies (Farrington, Loeber, & Stouthamer-Loeber, 2003; Loeber & Stouthamer-Loeber, 1986).

Furthermore, the research in this area strongly demonstrates that parenting which involves structure, high standards, and constant emotional support can lead to additional positive effects on youth decision-making through the formative years and beyond. Behavioral guidelines, rule setting, clear expectations, structure, discussions and explanations, and the transmission of prosocial values from parents to children in this context are all relevant practices inversely related to deviant tendencies—including but not limited to participation in bullying (Espelage & Swearer, 2003; Unnever, 2005; Wright, Cullen, & Miller, 2001).

Another major social control institution is the school, which seeks to educate while also striving to induce social conformity among students. Educators have the platform, position, and presence not only to teach their academic subject matter but also to encourage appropriate behaviors and prosocial attitudes through instruction, modeling, policies, reminders, and reinforcement. Research has shown that schools with clear, detailed rules which clarify appropriate and inappropriate conduct have helped to accomplish numerous goals, such as the reduction of bullying and delinquency (Battistich, Solomon, Kim, Watson, & Schaps, 1995; Catalano, Oxford, Harachi, Abbott, & Haggerty, 1999; Youniss, Yates, & Su, 1997). This testifies to the importance of policies that outline behavioral expectations as a primary protective factor for youth conformity to antibullying standards in place (Smith et al., 2012; Smith, Smith, Osborn, & Samara, 2008), especially if shared within a culture that provides relational support and positive adult-student interactions (Cernkovich & Giordano, 1992; Glover, Cartwright, Gough, & Johnson, 1998; Resnick, Harris, & Blum, 1993). To be based on a deterrence model, such rules contribute to a person's knowledge of what constitutes bullying, increase the perceived probability of being caught if one participates in bullying behaviors, and outline the potential consequences that will follow (Potter & Krider, 2000).

Research has also repeatedly demonstrated that a positive school climate will help schools achieve what administrators and teachers prioritize on a daily basis: higher academic achievement, lower absenteeism and truancy, and lower behavioral problems among youth (Potter & Krider, 2000; Sprott, 2004; Stewart, 2003; Tableman, 2004; Welsh, 2000). More specifically, the creation and maintenance of a school-based culture marked by social support from supervisory adults as well as instruction and modeling on how to engage in healthy relationships can insulate youth from the negative effects of bullying (Eliot, Cornell, Gregory, & Fan, 2010; Kasen, Berenson, Cohen, & Johnson, 2004; Orpinas & Horne, 2006) and cyberbullying (Hinduja & Patchin, 2012). Testifying to its potency and influence in the lives of students, those who learn to respect and accept the validity of rules and regulation at school and beyond—and become connected to the representatives of those rules (teachers, counselors, administrators, coaches, etc.) and committed to the value systems that undergird them—are less likely to engage in maladaptive behaviors (Cunningham, 2007; Hirschi, 1969; Laundra, Kiger, & Bahr, 2002; Popp & Peguero, 2012).

To summarize, the extant research consistently acknowledges the relative limitations of police-only approaches to prevent youthful misbehaviors. Additionally, it underscores the comparative importance of exerting a healthy level of control, rule setting, and engagement in the lives of students (at school) and children (at home) to promote and maintain prosocial attitudes and actions by more stakeholders than simply the law and its representatives. It stands to reason, then, that when considering the problems of bullying, the role of the school and family and their ability to informally induce compliance to behavioral norms should be more influential than the role of the police and their ability to formally induce compliance. The veracity of this supposition can be assessed by measuring the perceived deterrent effect of those three primary social control agents in relation to the decisions by youth to engage in bullying and cyberbullying.

Method

Participants and Procedure

Data for the current study came from a survey distributed to students in two middle schools in different regions of the United States. The first school, located in the northeastern United States, included 654 students from Grades 6 to 8, which made up 87.2% of their total population of 750. Students were surveyed in January 2014 (mean age = 12.24). The second school is located in the Midwestern United States and included 442 students from Grades 5 to 8, which comprised 62% of their population of 716. They were surveyed in February 2015 (mean age = 12.19). Principals in both schools attempted to administer the survey to all students, but some were omitted because a few teachers were not willing to devote time to the survey. A small (but not precisely known) number chose not to take the survey or were absent on the days it was conducted. While there is no reason to believe that those who were surveyed differed significantly from those who were not, caution must always be used when interpreting results from samples obtained in less than ideal situations.

To increase statistical power, we combined respondents from these two schools to create a total sample of 1,096. Due to some missing data, the valid sample size for analyses varies from 1,039 to 1,091. The two school samples were statistically equivalent on age and gender, but a control variable representing the school were included in the models to account for any other possible school-level differences. The two samples were also relatively equal to their schoolwide demographic makeup. The northeastern school was the more racially diverse location, with 57% White, 17% Hispanic, 9% Black, and 3% Asian. The gender breakdown here was relatively even, with 49% indicating they were female. The Midwestern school was much more homogeneous when considering race; Whites made up 90% of the population while Hispanics (3%), Blacks (1%), and Asian (1%) students made up the rest. This school had 49% who classified themselves as female.

Passive consent was obtained from parents of the students involved, and student assent was obtained at the start of the survey. This has been an appropriate and successful method in other studies seeking to explore interpersonal violence and bullying among students (see e.g., Kowalski & Limber, 2007; Smith et al., 2008). Students completed the online survey at computer workstations that had a link to the questionnaire. Teachers provided some basic information about the research project and its goals for the school as well as clear oral instructions on the anonymous and voluntary nature of participation. They were also advised to give students privacy while they answered the questions and were asked to ensure that other students focused on their own survey and not that of the peers next to them in the computer lab.

Measures

School bullying and cyberbullying. Students were instructed that bullying is "When someone intentionally and *repeatedly* harasses, mistreats, or makes fun of another person. But we don't call it bullying

when the teasing is done in a friendly and playful way." The dependent measure of *school bullying offending* represented participation in the previous 30 days as an offender of any of seven different forms of bullying. The varieties of these specific bullying behaviors were informed by Olweus (1996, 2007) and are reported in Table 1. The response set for these questions was "*never*," "*once*," "*a few times*," "*many times*," and "*every day*" (and ranged from 0 to 4). We combined these experiences into a binary variable with students who reported that they participated in one or more of the seven behaviors ("a few times," or more) coded as 1 while those who had no experience with bullying (or only one experience) were coded as 0 (mean = 0.266; standard deviation = 0.44; Cronbach's $\alpha = .85$).

The second dependent variable, *cyberbullying offending*, represented the respondent's participation in the previous 30 days as an offender of nine different forms of online bullying. The varieties of these specific cyberbullying behaviors were developed during several studies over the previous decade (Hinduja & Patchin, 2015) and are reported in Table 1. The response set for these questions was the same as the school bullying questions. Here again, we combined these experiences into a binary variable; students who reported participation in one or more of the nine behaviors ("a few times," or more) were coded as 1 while those who had no experience with cyberbullying (or only one experience) were coded as 0 (mean = 0.06; standard deviation = 0.23; Cronbach's $\alpha = .88$).

Deterrence. Six single-item deterrence variables were included in this analysis, three each for school bullying and cyberbullying. *Punished by school* represented how likely someone would be sanctioned by the school; *punished by parent* represented how likely someone would be disciplined by their parent(s); and *punished by police* represented how likely someone would be punished by the police. The response set for these questions was a 4-point Likert-type scale ranging from *very likely* to *very unlikely*, which led to the creation of six binary measures where *very unlikely and unlikely* were coded as "0" and *likely and very likely* were coded as "1."

Other demographic control variables. In addition to the aforementioned, the analyses also included demographic measures to control for some potentially important spurious relationships. Male was a dichotomous item where 1 = male and 0 = female. As reported in Table 2, the sample was evenly divided across gender. White was a dichotomous variable where 1 = White and 0 = non-White. Approximately 70% of respondents were White. Age was included as a continuous variable representing the respondents age in years (range 10-15; mean = 12.2). And as referenced earlier, one last control variable was included for the school, with 1 = the Midwestern school and 0 = the Northeastern school to account for any unknown school-level influences.

Data Analysis

Statistical analyses were conducted using SPSS (Version 18.0). We first computed descriptive statistics to understand the characteristics of the sample and nature of school bullying and cyberbullying perpetrated by the students in this population. We next compared mean scores for the likelihood of punishment by the school, the parents, and the police for both school bullying and cyberbullying. Here, paired-samples *t*-tests were employed to determine statistical differences between the means. Finally, a series of binary logistic regression models (four for school bullying and four for cyberbullying) were run to estimate the effect of perceived punishment certainty (from parents, the school, and the police) on bullying behaviors. The control variables were first entered separately from the independent variables of theoretical interest to assess their unique influence. Logistic regression as an analytic technique was deemed appropriate for the research questions given the dichotomous dependent variables and because it is also relatively easy to interpret results. In all models, statistical significance was determined using a 95% confidence interval (two-tailed tests).

Table 1. Prevalence and Type of School Bullying and Cyberbullying Offending.

Type of Bullying	% (n)
School bullying	
I have taken part in bullying another student or students at school	20.3 (219)
I called another student mean names, made fun of, or teased him or her in a hurtful way	27.0 (291)
I kept another student out of things on purpose, excluded him or her from my group of friends, or completely ignored him or her	
I spread false rumors about another student and tried to make others dislike him or her	7.4 (79)
I bullied another student with mean names or comments about his or her race or color	6.7 (72)
I bullied another student with mean names, comments, or gestures with a sexual meaning	5.8 (62)
I threatened or forced another student to do things he or she didn't want to do	4.0 (43)
One or more of the above behaviors, 2 or more times	26.6 (29 ¹)
Cyberbullying	
l cyberbullied others	4.9 (53)
I posted mean or hurtful comments about someone online	4.3 (45)
I spread rumors about someone online or through text messages	3.9 (41)
I threatened to hurt someone through a cell phone text message	2.7 (28)
I posted a mean or hurtful picture online of someone	2.5 (26)
I pretended to be someone else online and acted in a way that was mean or hurtful to them	2.0 (20)
I threatened to hurt someone online	1.9 (19)
I posted a mean or hurtful video online of someone	1.6 (17)
l created a mean or hurtful web page about someone	1.5 (15)
One or more of the above behaviors, 2 or more times	5.8 (62)

 $\it Note.$ Reflects experiences within the previous 30 days.

 Table 2. Sample Demographic Characteristics.

Variable	Sample % (n)
Gender	
Female	49.1 (538)
Male	50.5 (553)
Missing	0.5 (5)
Age (mean $= 12.2$)	()
10	3.3 (36)
II	25.2 (27 ⁶)
12	30.7 (336)
13	28.1 (308)
14	12.2 (134)
15	0.5 (6)
Race	()
White/Caucasian	70.4 (772)
Hispanic or Latin American	II.0 (Ì2I)
Black/African American	5.7 (62)
Multiracial	4.2 (46)
Asian	2.4 (26)
American Indian or Native	I.6 (17)
Other	4.2 (42)
Missing	0.5 (6)

Note. n = 1,091.

Table 3. Perceived Likelihood of Punishment by School, Parents, or Police for Bullying and Cyberbullying (Paired Samples t-Test).

Perceived Punishment	Mean School Bullying	Mean Cyberbullying	Mean Difference	t
Punished by school	.77	.63	.131	9.072***
Punished by parents	.65	.67	028	-2.079*
Punished by police	.30	.37	071	-5.442***

^{*}p < .05. ***p < .001 (two-tailed).

Results

0.03 (0.28)
1.03
0.45 (0.13)****
1.57
0.61
0.61
0.01 (0.32) -8.11 (1.69)*** -0.15 (0.30) 0.99 Model 8 Police B (SE) Exp(B) Table 4. Binary Logistic Regression: The Effect of Perceived Punishment on School Bullying (Models 1-4) and Cyberbullying (Models 5-8) Behaviors. -7.80 (1.69)*** -7.43 (1.76)*** -0.05 (0.28) 0.95 0.42 (0.14)** 1.53 -0.56 (0.28)* 0.57 -0.53 (0.31) 0.59 0.12 (0.31) Model 7 **Parents** B (SE) Exp(B) 0.12 (0.27)
1.13
0.46 (0.13)****
1.58
-0.65 (0.30)*
0.52
0.15 (0.30)
1.16
-0.61 (0.28)*
0.54 Model 6 School B (SE) Exp(B) 0.09 (0.27) 1.09 0.46 (0.13)**** 1.59 -8.22 (1.63)*** -0.60 (0.30)* 0.55 0.09 (0.30) 1.10 Model 5 Variables Control B (SE) Exp(B) -0.23 (0.16) 0.80 -3.59 (0.82)**** 0.31 (0.14)* 1.36 0.23 (0.07)** 1.25 -0.45 (0.16)** 0.64 0.12 (0.16) 1.13 Model 4 B (SE) Exp(B) Police -3.69 (0.81)*** -2.98 (0.84)*** -3.12 (0.85)*** 0.32 (0.14)*
1.38
0.20 (0.07)**
1.22 -0.44 (0.15)** 0.65 -0.42 (0.16)* 0.66 0.12 (0.16) 1.13 Model 3 **Parents** B (SE) Exp(B) 0.20 (0.07)** 1.22 -0.47 (0.16)** 0.16 (0.16) 1.18 -0.51 (0.16)** 0.28 (0.14)* 1.33 Model 2 School B (SE) Exp(B) 0.28 (0.14)*
1.32
0.23 (0.07)**
1.25
-0.40 (0.16)*
0.67
0.08 (0.15) Model I Control Variables B (SE) Exp(B) Parents punishment School punishment Police punishment Nagelkerke R² Constant Variable School White Male Age

*p < .05. **p < .01. ***p < .001 (two-tailed)