

EFFECT OF PERCEIVED FRIEND INTERVENTION ON INDIVIDUAL-
LEVEL BULLYING AND INTERVENTION

A Thesis
Submitted to the Graduate Faculty
of the
North Dakota State University
of Agriculture and Applied Science

By

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In Partial Fulfillment of the Requirements
for the Degree of
MASTER OF SCIENCE

Major Department:
Human Development and Family Science

April 2010

Fargo, North Dakota

North Dakota State University
Graduate School

Title

Effect of Friend Intervention on Individual Level Bullying and Intervention

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MASTER OF SCIENCE

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ABSTRACT

Serdiouk, Marina, M.S., Department of Human Development and Family Science, College of Human Development and Education, North Dakota State University, April 2010. Effect of Perceived Friend Intervention on Individual-level Bullying and Intervention. Major Professor: Dr. Joel Hektner.

The main aim of this study was to examine the relation between perceived friend intervention and individual-level bullying and intervention. The mediating role of beliefs about aggression and attitudes toward victims was also investigated. One hundred eighteen students (49 boys and 69 girls) in grades 6 to 8 completed a questionnaire that included items measuring bullying, intervention, beliefs about aggression, and attitudes toward victims. The results of the multilevel analysis revealed that children in friendship groups with low levels of perceived friend intervention were less likely to intervene, but were not more likely to bully. Attitudes toward victims and normative beliefs about aggression did not mediate a relation between perceived friend intervention and individual intervention and bullying. Self-reported bullying had a moderate negative correlation with positive attitudes toward victims and a positive correlation with beliefs about aggression. Propensity to intervene had a moderate positive correlation with positive attitudes toward victims and a small negative correlation with positive beliefs about aggression.

Although the mediation model tested in the current study was not supported, this study provides a foundation for studying group-level processes that may influence children's intervention in bullying situations.

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INTRODUCTION

Bullying is a wide-spread problem among school age children. One longitudinal study conducted in the United States in 1998 with 15,686 students in grades 6 through 10 showed that about 29.9% of the students were involved in moderate or frequent bullying, either as a victim, a bully, or both (Nansel et al., 2001). Although there are many definitions of bullying, they all suggest that bullying entails intentional infliction of or an attempt to inflict harm to another person, which can be verbal (e.g. teasing, threatening, or ostracizing) or physical (e.g. hitting, pushing, or kicking) (Olweus, 1993). Bullying happens repeatedly over time (Leff, Power, & Goldstein, 2004). It can be carried out by a single person or a group of people whose purpose is to gain power, prestige, or other things (Olweus, 1993). Bullying involves a power differential, where the bully is often stronger or perceived as stronger than the victim (Ross, 2003). There is evidence that bullying is associated with various negative outcomes for both a victim and a bully, such as poor psychosocial adjustment for victims and bullies (Nansel et al., 2001) and internalizing problems for victims (Abada, Hou, & Ram, 2008; Craig, 1998; O'Brennan, Bradshaw, & Sawyer, 2009). Considering the prevalence of bullying and the negative effects bullying has on both victims and bullies, this issue has received much attention from researchers in industrialized countries.

Bullying is a complex process that occurs in a social context. It is intertwined with a variety of contextual factors: school, teacher, peer, family influence, culture, and community (Espelage & Swearer, 2004). As such, bullying at school often occurs in the presence of peers, teachers, and school staff. This study will focus specifically on peers as a contributing factor to bullying behaviors at school. Because bullying peaks during early

adolescence (Nansel et al., 2001; Scheithauer et al., 2006) and declines in late adolescence (Frisen et al., 2007; Nansel et al., 2001; Scheithauer et al., 2006), the target age group in this study will be early adolescence. This is also the age period when the role of peers becomes more salient (Parker et al., 2006).

The Role of Peers in the Bullying Process

Peers play a big role in the lives of children and adolescents. They are important sources of companionship, support, and stimulation (O'Brien & Bierman, 1988). With age, the role of peers becomes even more significant as the amount of time spent with peers increases (Parker et al., 2006). When asked about peer influence, adolescents are more likely than preadolescents to consider peer group influence to be far-reaching, affecting dress code, illicit acts, attitudes, and values (O'Brien & Bierman, 1988). Adolescents increasingly use peer groups as social reference groups, which may affect their self-evaluation (O'Brien & Bierman, 1988). For instance, adolescents are more likely to view peer rejection as a sign of their social and personal unworthiness (O'Brien & Bierman, 1988). Given the importance of peer acceptance for adolescents' self-esteem and the increasing peer pressure (Devereux, 1970), conformity to peers becomes essential in adolescence. Adolescents' conformity to peers increases with age and reaches its peak at ninth grade, especially conformity in regard to antisocial behavior (Berndt, 1979).

Due to the concern for adolescent problem behaviors, the vast majority of research into peer influence has focused on the role of peers in the development of problem behaviors (Brown, Bakken, Ameringer, & Mahon, 2008). For example, peers have been often implicated in the development of deviant behaviors, such as substance use (Duncan, Boisjoly, Kremer, Levy, & Eccles, 2005; Prinstein & Wang, 2005). Attempting to

understand how peer influence unfolds, several mechanisms of peer influence have been proposed. For the purpose of this study, only three processes of peer influence will be described. “Peer pressure”, defined as “direct attempts to affect certain attitudes or behavior in another person” is a commonly discussed mechanism of peer influence (Brown et al., 2008, p. 24). Although this term has often been used to describe negative peer influence, it can also be used to describe positive influence, with the peer group demanding conformity to its norms for positive behavior (Brown et al., 2008). Some researchers claim that “peer pressure” is not the primary means of peer influence (Mitchell & West, 1996; Ungar, 2000).

Another mechanism through which peer influence can occur is through modeling (Gibbons, Pomery, & Gerrard, 2008). The concept of modeling stems from the social learning theory by Bandura (1977), which posits that behaviors, beliefs, and attitudes can be learned by observing and modeling what others do. Thus, from the social learning perspective, children may learn to behave aggressively by observing and mimicking the behavior of their peers. Likewise, they may learn to behave prosocially (e.g. helping a victimized child) when they observe their peers engage in prosocial behaviors. A classic study (Bandura, Ross, & Ross, 1961) revealed that children who observed adults engage in aggressive behavior (aggressive model) displayed more aggressive behavior compared to children who observed a non-aggressive model and children who observed no model. Further, children who observed nonaggressive adults displayed less aggression than children who observed no one. According to the social learning theory, the likelihood that the observed behavior will be learned is higher when a person performing the behavior has power, the viewer is similar to and identifies with the person, and when there is some type

of reward for engaging in the behavior (Bandura, 1977). In the case of bullying, these conditions are often met; bullies are powerful figures whose behaviors are reinforced by others (O'Connell, Pepler, & Craig, 1999).

Another explanation of how peer influence works comes from a recent theory of deviancy training developed by Dishion and colleagues (Dishion, Spracklen, Andrews, & Patterson, 1996). Deviancy training refers to a process by which peers receive positive reinforcement and social support for antisocial behavior (Dodge, Dishion, & Lansford, 2006). Reinforcement can take many forms, including verbal approval, smiling, or simply paying attention (Dishion & Piehler, 2009). Other children who observe these behaviors later engage in similar behavior, thus creating deviant peer culture (Dodge, Dishion, & Lansford, 2006). Deviancy training among friends was shown to increase the probability of future initiation of substance use (Dishion, Capaldi, Spracklen, & Li, 1995), delinquency (Dishion et al., 1996), and violent behavior (Dishion, Eddy, Haas, Li, & Spracklen, 1997).

The deviancy training theory can be also applied to understand the role of peers in the persistence of bullying. In most cases bullying occurs in the presence of peers (Salmivalli, Lagerspetz, Björqvist, Österman, & Kaukiainen, 1996). In fact, one study showed that peers were present during 88% of bullying episodes (Hawkins & Pepler, 2001). The presence of observers and their behaviors in bullying situations can reinforce peer harassment. Observers may provide subtle social support to the bully by simply watching or encourage bullying by laughing. The bully may interpret such behaviors as peer approval, thus continuing bullying (O'Connell et al., 1999). Children who observe bullying accompanied by positive reactions may begin to believe bullying is acceptable. Even discussion of the bullying episode (e.g. how ridiculous the bullied child looked) can

promote beliefs among students that it is okay to bully (Salmivalli, 2009). By engaging in deviant talk about bullying and reinforcing each other's bullying behavior, children create a peer culture that maintains pro-bullying norms and behavior.

Studies have shown that peers indeed often behave in ways that reinforce bullying behaviors. For example, O'Connell et al. (1999) examined peer involvement in bullying among 5-12 year old children and found that peer presence was positively related to the persistence of bullying episodes. About 54% of the time peers simply watched without helping the victim, 21% of the time they joined the bully, and only 25% of the time they intervened to try to stop the bullying. Bradshaw, Sawyer, and Brennan (2007) surveyed a total of 15,185 elementary, middle school, and high school students in a large Maryland public school district. Their results revealed that 35.42% of middle school and 40.32% of high school students ignored bullying or did nothing to help the victim. Furthermore, 11.90% of middle school and 13.40% of high school students reported joining in when they witnessed bullying. Very few students said they reported a bullying event to an adult in school (10.73% of middle school and 6.45% of high school students). Similarly, in another study only 20% of children defended victims, 20-29% assisted the bully, and about 30% did not take sides with anyone (Salmivalli, Lappalainen, & Lagerspetz, 1998).

Beliefs about Aggression and Involvement in Bullying

Despite the awareness of peers' role in bullying situations, little is known about how peers contribute to bullying. There is evidence that classroom beliefs and norms can affect individual aggressive behavior. Henry et al. (2000) used samples of 614 and 427 urban elementary school students to examine the relation among individual and classroom normative influences and children's aggressive behavior. They examined three types of

classroom influences: descriptive norms, injunctive norms, and norm salience. Descriptive norms refer to the mean level of aggression of other children in the classroom. Injunctive norms have been defined as classmates' beliefs about the acceptability of aggressive behavior. Norm salience has to do with what students and teachers do and say in response to bullying as well as sanctions and rewards related to aggressive behaviors. The results of the study revealed that descriptive norms in a classroom did not affect aggressive behavior. However, injunctive norms did affect aggressive behavior directly and indirectly (through changing personal beliefs about aggression). This finding suggests that students do not just model behaviors of their classmates, but rather their behavior is mediated by their beliefs about the acceptability of the behavior. These beliefs in turn are influenced by the classroom norms. Students in those classrooms where peers had salient norms against aggressive behavior were less likely to show aggression. Overall, this study reveals the importance of considering peer beliefs about aggression and their responses to it when looking at aggressive behaviors.

The role of cognitive structures in learning and regulation of aggressive behavior in children is emphasized by the social cognitive theory (Bandura, 1986). The theory posits that human behavior is influenced by many cognitive factors, including self-regulatory beliefs. Huesmann and Guerra (1997) identified one type of such beliefs – normative beliefs, defined as “individualistic cognitive standards about the acceptability of behavior” (Huesmann & Guerra, 1997, p. 409). Normative beliefs regulate behavior regardless of whether they are supported by internal or external sanctions (Huesmann & Guerra, 1997). Thus, it can be expected that children with normative beliefs that support aggression should display more aggression.

The link between normative beliefs about aggression and aggressive behaviors was tested in several studies. Huesmann and Guerra (1997) found that children who scored in the upper 25% of children on normative beliefs approving aggression scored about 0.25 SD higher than average children on aggression. Werner and Nixon (2004) also found that adolescents who believed aggression (relational and physical) was an appropriate response reported more aggressive behavior. In addition, the link between aggressive beliefs and behavior was specific to the form of aggression (relational or physical). Other studies have looked specifically at attitudes toward bullying. Boulton, Trueman, and Flemington (2002) reported a moderate but significant positive correlation between students' positive attitudes towards bullying and their self-reported bullying. Rigby (1997) found that bullying behavior was correlated with negative attitudes toward victims and positive attitudes toward bullying. Furthermore, the results were compared for two schools that had high and low levels of bullying. In a school with a higher reported level of bullying, the mean score on the provictim scale was lower and the mean probullying score was higher.

Even though the above mentioned studies found a link between students' attitudes and bullying behaviors, they tell nothing about how attitudes are related to students' responses when they witness bullying. Salmivalli and Voeten (2004) examined the relationship between students' attitudes to bullying and their peer-evaluated responses in bullying situations. Students who disapproved of bullying were more likely to defend the victim and withdraw from bullying situations; whereas those who had probullying attitudes were more likely to bully, assist the bully, or encourage the bully. This finding suggests that children's attitudes may be related to intervention in bullying episodes. Those children

who have antibullying and provictim attitudes may be more likely to intervene to stop bullying.

Students' Attitudes toward Bullying and Victims

Some studies have investigated what children think about bullying in general. For example, Bradshaw, Sawyer, and Brennan (2007) in their survey of 15,185 students found that 55% of middle school students and only 37.5% of high school students thought bullying was a “moderate” or “serious” problem at their school. Oliver, Hoover, and Hazler (1994) surveyed 207 middle and high school students in small-town midwestern schools. Their results revealed that the majority of students believed that victims brought on bullying themselves. Furthermore, approximately 45% of boys and 30% of girls believed that bullying had an educative component. For example, they believed that bullying made victims tougher and taught those students who participated in bullying about group values. The researchers suggested that such beliefs justify bullying, which may put students at risk. In another study 119 Swedish high school students were asked an open-ended question: “What do you think makes bullying stop?” (Friesen, Johnsson, & Persson, 2007). The most common answer was that a bully matures, while the second most common answer was that the victim stands up for himself or herself. Overall, 43% of the responses suggested that what was important to stop bullying had to do with the victim.

The results of other studies are more encouraging as they indicated that the majority of children oppose bullying and have provictim attitudes (Boulton, Trueman, & Flemington, 2002; Eslea & Smith, 2000; Rigby & Slee, 1991). Despite such positive attitudes, many students prefer not to get involved to help a victim (Lodge & Frydenberg, 2005; Menesini et al., 1997). The reasons for such unwillingness to get involved may vary.

One explanation of this is the bystander effect, when the presence of bystanders makes it less likely a person will be willing to help another person in an emergency situation (Thornberg, 2007). This may be due to a fear of looking embarrassed in front of others or relying on other people for help (Thornberg, 2007). Lodge and Frydenberg (2005) found that students who observed bullying episodes did not get involved because they were confused, did not know what to do, lacked confidence to intervene without the support of others, or were afraid to be the next victim. Juvonen and Galvan (2008) proposed that bystanders avoid siding with the victims in order to preserve their own social status in a group and protect themselves from being bullied.

Hypotheses

As it was shown, bullying is a group phenomenon. It often occurs in the presence of peers (Salmivalli et al., 1996) who can be important contributors to bullying. They can reinforce bullying not only by joining in bullying but also by simply watching and doing nothing to help the victim. The exact processes through which peers promote bullying by failing to intervene remain unclear though (Espelage, 2002). This study aims to fill this gap in research by examining a link between friend intervention and individual intervention and bullying. From the social learning and deviancy training perspectives, it can be expected that adolescents whose friends do nothing to help a victim will be less likely to intervene and more likely to bully themselves. This relationship is hypothesized to be both direct and indirect, affecting attitudes toward victims and beliefs about aggression. By not intervening in a bullying situation, children may convey to each other that bullied children deserve it and that bullying is acceptable. These misperceived beliefs in turn can result in lower intervention on the part of observers. While previous research has linked bullying and

defending behavior with beliefs supporting aggression and attitudes toward victims, to our knowledge no research has directly examined whether attitudes toward victims and normative beliefs about aggression mediate a relationship between friends' intervention and bullying and individual intervention.

To sum up, it is proposed that: a) lower levels of group-level friend intervention will be associated with positive beliefs about aggression and negative attitudes toward victims; b) positive beliefs about aggression and negative attitudes toward victims will be associated with higher individual levels of bullying and lower individual levels of intervention; and c) positive beliefs about aggression and negative attitudes toward victims will mediate the relationship between group-level friend intervention and individual-level intervention and bullying. See Figure 1.

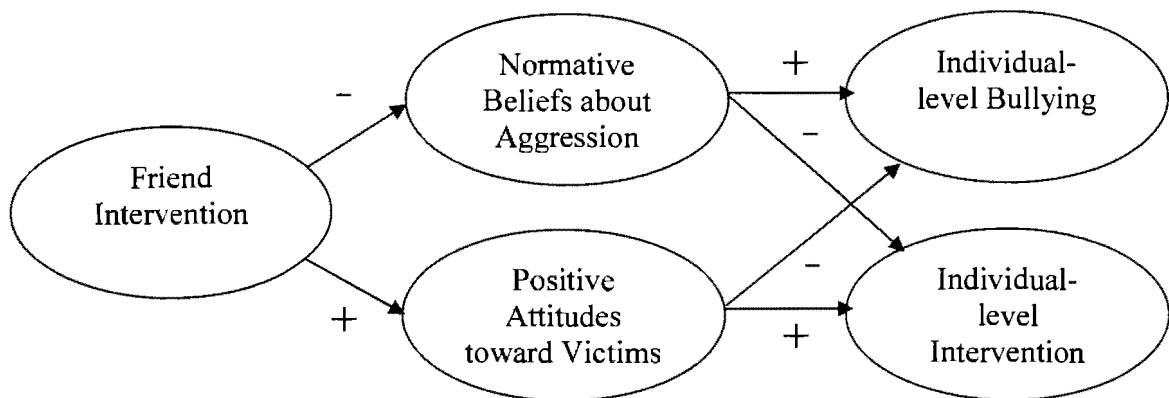


Figure 1. Hypothesized model of peer contribution to bullying

METHODS

Participants

The data for the study were collected from 118 middle school students. The students were enrolled in grades 6 through 8 in a public school in a small city in North Dakota. Students were invited to participate via an announcement made by teachers in class and letters sent to their homes. All those who provided both parental consent and youth assent were included in the study. The sample consisted of 69 females and 49 males, ranging in age from 11 to 14 with a mean age of 12.44. Approximately 31% of all students enrolled in the school participated in the study. The majority of the participants were Caucasian (91.5%). Other ethnicities included Hispanic (4.2%), Black (2.5%), Asian (2.5%), American Indian (2.5%); 1.7% chose “the other” response. Students were offered a small compensation for their participation in the form of a gift card.

Measures

The questionnaire consisted of following sections: demographic questions, bullying scale, peer and individual intervention, attitudes toward victims, and beliefs about aggression. See Appendix A.

Demographic questions. The questionnaire had demographic questions, which included students’ age, gender, race, and grade in school. Students were also asked about how many months or years they had attended their current school.

Bullying. Questions about bullying other students from the Olweus Bully/Victim Questionnaire (Olweus, 1996) were used to assess bullying. There were a total of ten questions with five response options ranging from “it hasn’t happened in the past couple of months” to “several times a week”. An example item would be “I called another student(s)

mean names, made fun of or teased him or her in a hurtful way”. An item that asked participants whether they bullied someone in “another way” was excluded from analysis because there were no affirmative responses. Student responses on the other nine items were averaged to obtain the bullying scale. Chronbach’s alpha for the scale was .83 in the current sample.

Friend and individual intervention. Individual-level intervention was assessed with two questions. The first question was “How do you usually react if you see or understand that a student your age is being bullied by other students?” (Olweus, 1996). There were six response options ranging from “I have never noticed that students my age have been bullied” to “I try to help the bullied student in one way or another”. Student responses of “I have never noticed that students my age have been bullied” were treated as missing data to ensure that students’ lack of intervention was not due to limited exposure to bullying. All other data from these 11 students were retained in all analyses. The five remaining response options were treated as a continuous scale with 1 indicating little intervention and 5 indicating frequent intervention. The second question was “How often do you try to put a stop to it when a student is being bullied at school?” (Olweus, 1996). The response options ranged from “Almost never” to “Almost always”. Students’ responses on these two questions were averaged to obtain the individual intervention scale. Chronbach’s alpha for the scale was .66 in the current sample.

Friend intervention was assessed with a question “How often do your friends try to put a stop to it when a student is being bullied at school?”(Olweus, 1996). The five response options ranged from “Almost never” to “Almost always”. This variable is titled perceived friend intervention. A group-level score of friend intervention was also obtained

for every friendship group by averaging students' responses on perceived friend intervention within each group. This variable is titled "group friend intervention" in the analyses.

Attitudes toward victims. The 10-item revised Pro-victim scale was used to assess students' attitudes toward victims of bullying (Rigby, 1997). An example item would be "Kids who get picked on a lot usually deserve it". The response options were "agree", "unsure", and "disagree". Higher scores on this scale indicate greater support of children who are bullied. Five of the items were reverse-scaled so that for all items, a high score indicated a pro-victim attitude. Student responses on each item then were averaged to obtain the scale. The internal consistency of this scale was .71 in the current sample.

Beliefs about aggression. Questions assessing students' beliefs about aggression were adopted from the revised Normative Beliefs about Aggression scale (Huesmann & Guerra, 1997). Eight questions that assessed general beliefs about aggression were used. Half of the items were worded to reflect low approval of aggression (e.g. "In general, it is wrong to hit other people"). The remaining four items were worded to reflect high approval of aggression (e.g. "In general, it is OK to yell at others and say bad things"). These items were reverse-scaled so that a high score indicated more aggression approval. Student responses on the eight items were then averaged to obtain the aggression beliefs scale. Chronbach's alpha for the scale was .83 in the current sample.

Procedure

Students were asked to participate in groups of 3-5 friends. However, students who came with only one friend or by themselves were also allowed to participate. Students completed questionnaires either in a classroom or school library. Each student completed

his or her own questionnaire without consulting others. To ensure privacy students were encouraged to spread around the room before completing the surveys if there was space available. All questionnaires from a friendship group were given the same ID. The questionnaires were anonymous; it was only possible to identify which group each student belonged to. The researcher was available in the classroom at all times to answer any questions. Participants were asked to give honest responses to questions related to bullying. There was a definition of bullying in every questionnaire. The following definition was used: "A student is being bullied when another student, or several other students: say mean and hurtful things or make fun of him or her or call him or her mean and hurtful names; completely ignore or exclude him or her from their group of friends or leave him or her out of things on purpose; hit, kick, push, shove around, or lock him or her inside a room; tell lies or spread false rumors about him or her or send mean notes and try to make other students dislike him or her; and other hurtful things like that" (Olweus, 1996).

Data Analysis

Prevalence. Frequency distributions were examined to determine the rate of bullying others and student intervention. A *t*-test was conducted to test for any gender differences in the overall bullying behavior. A one-way ANOVA was conducted to determine if there were any grade differences in the overall bullying behavior.

Mediation Analysis. Multilevel analysis was conducted to test the mediation model depicted in Figure 1. Multilevel analysis is an extension of multiple regression. It takes into account that students are nested in friendship groups, thus providing improved analytical opportunities and addressing some important statistical issues, such as dependence among nested observations (Bickel, 2007). There were two mediating variables and two dependent

variables in the model, and all variables were evaluated simultaneously. Group friend intervention was treated as a between cluster variable (Level 2). All other variables were at Level 1. The Mplus program was used to test the hypothesized model as well as the direct effects model without any mediators (Muthen & Muthen, 2007). For each model, each path was estimated, then confidence intervals for the indirect effect (the product of the coefficients for the path from the independent variable to each mediator and the path from the mediators to the dependent variables) were computed using Prodclin (MacKinnon, Fritz, Williams, & Lockwood, 2007). Those confidence intervals not including 0 were taken to indicate a significant indirect effect.

RESULTS

Prevalence

Approximately 89% of students who participated in the study reported they had engaged in some form of bullying in the past couple of months. Of 118 participants, 45 (38%) reported bullying others 2 or 3 times a month. A *t*-test revealed gender differences in self-reported bullying behavior, $t(77.72) = 2.34, p = .02$, partial $\eta^2 = 0.05$. Boys indicated they bullied others more often ($M = 1.61, SD = 0.59$) than girls ($M = 1.39, SD = 0.4$). No grade level differences in the bullying behavior were found, $F(2,113) = 0.74, p = 0.48$.

Frequency distributions were used to examine students' reactions to witnessing other students being bullied (see Table 1). Of 118 students, 11 said they never noticed students had been bullied. Among those who did notice bullying, 48% reported they don't do anything, and the remaining half said they try to help the bullied student. When asked about how often they try to intervene to stop bullying, the majority of students responded "once in a while" (31%) or "sometimes" (31%). Thirteen students, or 11%, reported they intervened "almost never", and 14 students, or 12%, said they intervened "almost always".

Table 1. *Students' reactions to witnessing other students being bullied*

Response	Frequency	%
I have never noticed that students my age have been bullied	11	9.3%
I take part in bullying	1	.8%
I don't do anything, but I think the bullying is OK	0	0%
I just watch what goes on	12	10.2%
I don't do anything, but I think I ought to help the bullied student	39	33.1%
I try to help the bullied student in one way or another	55	46.6%

$N = 118$

Descriptive Information

Means, standard deviations, intraclass correlations, and correlations among all variables are displayed in Table 2. All relationships that were statistically significant were in predicted directions. Perceived friend intervention was negatively correlated with bullying and positively correlated with individual intervention. It was also positively correlated with positive attitudes towards victims, but was not correlated with normative beliefs about aggression. Beliefs about aggression were positively associated with bullying and negatively associated with intervention. Positive attitudes toward victims were negatively correlated with bullying and positively correlated with intervention.

The intraclass correlation (ICC) for the perceived friend intervention was large ($r = .44$), indicating that 44% of the variability in perceived friend intervention occurs between groups. Thus, aggregating perceived friend intervention to the group level seems appropriate.

Table 2. *Correlations, means, standard deviations, and intraclass correlations*

Variable	1	2	3	4	5	6
1. Perceived friend intervention						
2. Group friend intervention	.57**					
3. Bullying	-.22*	-.02				
4. Victim attitudes	.23*	-.04	-.43**			
5. Aggression beliefs	-.18	-.01	.51**	-.59**		
6. Individual intervention	.52**	.21*	-.20*	.37**	-.25**	
Mean	2.53	2.53	1.48	2.63	1.37	3.52
Standard Deviation	1.08	0.61	0.50	0.32	0.48	0.95
Intraclass Correlations	.44		.03	.15	.18	.22

Note. * $p < 0.05$, ** $p < 0.01$

There were a total of 39 friendship groups, with an average size of 3.03. Ten students had no friends; however, their responses were still included in the mediation analyses.

Tests of Mediational Model

Individual-level bullying. Two indirect pathways to individual-level bullying were tested. One pathway linked group-level perceived friend intervention to normative beliefs about aggression (Path A), which then were linked to individual bullying (Path B). In this pathway perceived group friend intervention did not have an effect on normative beliefs ($A = -0.01$, $SE = 0.08$). See Figure 2. However, beliefs that aggression is acceptable were positively associated with bullying ($B = 0.41$, $SE = 0.11$). The indirect effect (the product of the A and B coefficients) was nonsignificant (95 % CI = -0.065 to 0.059). A second pathway linked group-level perceived friend intervention to positive attitudes toward victims (Path A), which then were linked to individual bullying (Path B; see Figure 2). In this pathway friend intervention did not have a significant effect on attitudes toward victims. However, attitudes were negatively related to bullying ($\beta = -0.32$, $SE = 0.16$). The indirect effect was nonsignificant (95% CI = -0.023 to 0.042). Both the direct effect ($\beta = -.02$, $SE = .06$) and the total effect of group-level friend intervention on bullying ($\beta = -0.01$, $SE = 0.06$) were not significant. Thus, neither normative beliefs about aggression nor attitudes toward victims appear to mediate a relationship between group-level perceived friend intervention and individual-level bullying.

Individual-level intervention. Two indirect pathways to individual intervention were tested. In one of the pathways group-level perceived friend intervention was hypothesized to relate to normative beliefs about aggression (Path A), which in turn were predicted to

relate to individual bullying (Path B). In this pathway both paths A and B were not significant. Thus, there was no indirect effect (95% CI = -0.027 to 0.031). In another pathway, group-level perceived friend intervention was expected to relate to positive attitudes toward victims (Path A), which in turn were expected to relate to individual intervention (Path B; see Figure 2). In this model path A was not significant. However, Path B was significant ($B = 0.88$, $SE = 0.32$). The indirect effect was not significant (95% CI = -0.111 to 0.064). Both the direct effect ($\beta = .33$, $SE = .10$) and the total effect of group-level perceived friend intervention on individual intervention was positive and significant ($\beta = 0.31$, $SE = 0.09$).

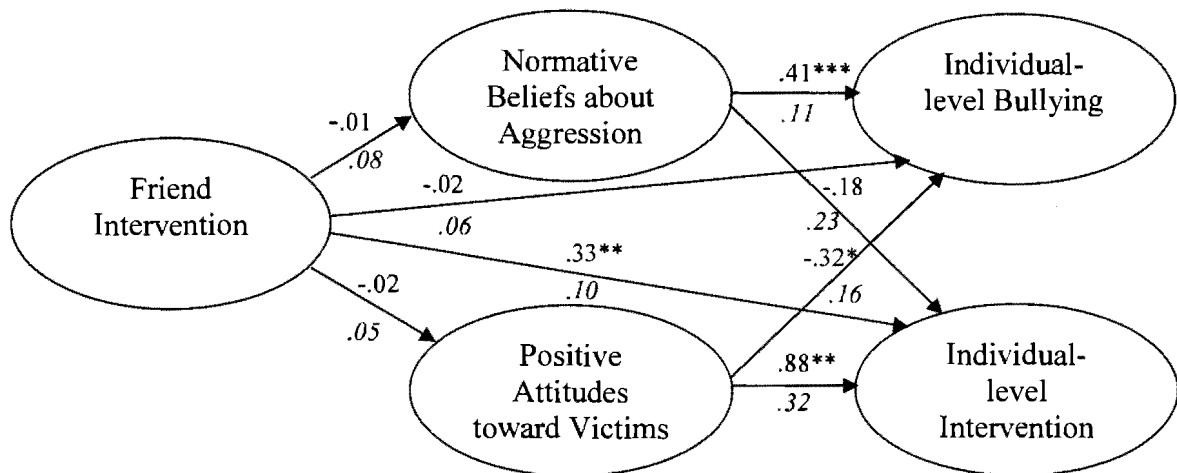


Figure 2. Estimated model of peer contribution to bullying. Coefficients are above each arrow. Standard errors are below each arrow and in italics. * $p < .05$, ** $p < .01$, *** $p < .001$.

Final model fit. To evaluate whether a full model predicted better than would be expected by chance, deviance statistics were compared for the full and the intercepts-only

models. The full model was significantly better than the intercepts-only model, $\chi^2(7, N = 118) = 583.03, p < .001$.

DISCUSSION

Consistent with the results from previous studies (Fekkes, Pijper, & Verloove-Vanhorick, 2005; Nansel et al., 2001), quite a large proportion of children reported engaging in bullying at least once in the past couple of months. Furthermore, one third of children reported bullying others several times a month. Also, consistent with many other studies (Fekkes et al., 2005; Rigby, 2007; Salmivalli & Voeten, 2004), boys reported bullying others more often than girls. No grade differences were found in the frequency of self-reported bullying behavior. Thus, bullying behavior was equally distributed among middle-school students.

When asked about how they usually react when they see students their age are being bullied, almost half of the students said they do nothing. Also, when asked about how often they intervene to stop bullying, 42% answered “almost never” or “once in a while”. These results are consistent with previous findings indicating that many students prefer not to get involved to help bullied children (Bradshaw et al., 2007; Lodge & Frydenberg, 2005; Menesini et al., 1997; O’Connel et al., 1999). Nevertheless, the majority of students in this study had positive attitudes toward bullied children and believed that it is not acceptable to use aggression. As mentioned previously, this disagreement between attitudes and behavior can be explained by students’ fear of being the next victim, lack of confidence or knowledge about what to do (Lodge & Fryderberg, 2005), or diffusion of responsibility (Thornberg, 2007).

Previous bullying research has shown that bullying behavior is positively correlated with children’s beliefs supporting aggression (Bosworth, Espelage, & Simon, 1999; Huesmann & Guerra, 1997), positive attitudes toward bullying (Boulton, Bucci, & Hawker,

1999; Boulton, Trueman, & Flemington, 2002; Endresen & Olweus, 2001; Salmivalli & Voeten, 2004), and negative attitudes toward victims (Rigby, 2007). There is also evidence that anti-bullying attitudes are positively associated with defending behaviors (Salmivalli & Voeten, 2004). The results of the present study support these findings. Self-reported bullying had a moderate negative correlation with positive attitudes toward victims and positive correlation with beliefs about aggression. Propensity to intervene had a moderate positive correlation with positive attitudes toward victims and a small negative correlation with positive beliefs about aggression.

The main goal of this study was to determine whether both an individual's decision to intervene to stop bullying and an individual's bullying behavior can be predicted from the degree of perceived friend intervention in a friendship group to which that individual belongs. This hypothesis was partly supported. Children in friendship groups with lower levels of perceived intervention were less likely to intervene themselves, but were not more likely to bully. Assuming that children's perceptions of friend intervention are based on friends' actual behavior, this finding suggests that intervention in bullying situations may be socially contagious. When children see their friends intervene to stop bullying they may be more likely to intervene themselves. This is consistent with the social learning theory, which posits that behaviors may be acquired by observing an influential person engage in the behavior (Bandura, 1977). Furthermore, the likelihood that an individual will learn the observed behavior is higher when a person performing the behavior is similar or attractive to the viewer and the viewer identifies with the person (Bandura, 1977). Given that friends are important sources of influence for adolescents (Prinstein & Dodge, 2008) and that they are similar to each other in many respects (Hartup, 1993), it is possible that the social

learning processes of modeling may play a role in influencing children's intervention in bullying situations. It is important to note here that the social status of a child within a peer group can contribute to his or her support for a victim (O'Connell et al., 1999). Previous studies showed that children with high social standing (e.g. popular kids) are more likely to defend a victim (Ginsburg & Miller, 1981; Salmivalli et al., 1996). Thus, it could be that the social learning processes may occur only when the model has a high social status.

It was further hypothesized in the study that low levels of group-level perceived friend intervention will be related to more individual bullying through negative attitudes toward victims and positive attitudes toward aggression. Likewise, it was expected that lower levels of perceived friend intervention in a group will be related to lower individual intervention through negative attitudes toward victims and positive attitudes toward aggression. These predictions were not confirmed. Neither attitudes toward victims nor beliefs about aggression mediated a relationship between group-level friend intervention and bullying and intervention.

Several explanations may account for these nonsignificant findings. First of all, the actual intervention behavior of friends was not measured in the study. It was assumed that groups that displayed high levels of actual intervention had high levels of perceived friend intervention. Thus, friend intervention was operationalized as the extent to which children in a friendship group perceived each other as intervening rather than the extent to which friends actually intervened. Measuring actual intervention behavior would require the use of more sophisticated techniques, such as observations and videotaping, and the use of experimental design.

Secondly, although it was assumed in the study that children's attitudes toward victims and beliefs about aggression are formed by observing friends intervening (or not) in a bullying situation, it is possible that other factors may contribute to children's beliefs and attitudes, such as their friends' beliefs about the acceptability of aggression. Previous research (Henry et al., 2000) has found that children's normative beliefs about aggression were influenced by beliefs of their classmates regarding aggressive behavior rather than by observed behaviors of classmates. Even though that study involved classmates rather than friends, it is likely that similar results would be found for friends. Therefore, it is possible that children may form their beliefs about aggression by adopting the beliefs of their friends. Future research utilizing longitudinal design could examine whether this might be the case.

The present study also did not consider any factors that may moderate peer-group influences on adolescent behavior. One such factor is peer status. One experimental study found that adolescents conformed their aggressive and health risk attitudes and behaviors to that of their peers only when their peers were high in status (i.e. high peer acceptance and popularity) (Cohen & Prinstein, 2006). The status of the peer group also seems important. For example, one study examined group centrality (i.e. group location within the larger social network) and social preference (i.e. peer acceptance) as moderators of peer group socialization of deviant, aggressive, and prosocial behaviors (Ellis & Zabatany, 2007). It revealed that high group centrality intensified group socialization of deviant behavior, school misconduct, relational aggression, and prosocial behavior. Low group acceptance intensified only the socialization of deviant behavior. There is also evidence that the strength of identification with one's group can moderate the effects of a group on an

individual. For example, Kiesner, Cadinu, Poulin, and Bucci (2002) found that when identification with one's self-nominated peer group was low, the group had no effect on the individual's development of delinquent behavior across a 1 year period, whereas when identification was average or high the group did have an influence. Finally, the quality of friendship and frequency of interaction with friends may also moderate the level of friends' influence. A study by Barry and Wentzel (2006) demonstrated that the perceived quality of a friendship (i.e. friendship closeness and friendship importance) and the frequency with which friends interact moderated a link between a friend's prosocial behavior and an individual's prosocial goal pursuit. Due to the small sample in the current study, none of these factors were examined for possible moderation. In future studies, it may be important to examine whether friends' status, group status, group identification, and qualities of friendships influence the link between friend intervention and individual intervention and bullying.

The lack of significant findings can be also attributed to several limitations of the study. One of the limitations relates to measurement issues. The study utilized children's self-reports to assess bullying and individual intervention. The main disadvantage of using self-reports is the subjectivity of responses and social desirability bias (Hoyle, Harris, & Judd, 2002). Students could have underreported their bullying behavior because of the social disapproval associated with being labeled a bully (Branson & Cornell, 2009). Similarly, they could have overreported their intervention in a bullying situation. Thus, peer nominations may be a better alternative to self-reports because data are gathered from several sources, and peer nominations allow researchers to verify the validity of student reports (Branson & Cornell, 2009). Furthermore, both individual and friend intervention

was assessed with only one or two items. Single item indicators are generally considered unreliable. A better approach would have been to use a number of questions that measure individual and friend intervention in different types of bullying situations. For example, instead of asking how often children/friends intervene in general, questions could ask how often they intervene when someone is being teased or hit. These questions could then be combined to obtain an overall measure of intervention.

Another possible measurement related limitation is the use of a general scale of attitudes toward victims. According to Salmivalli (2009), children's attitudes toward victims in general may differ from their attitudes toward actual victims. Thus, in future studies, it may be useful to identify specific victims in a classroom and have children report their attitudes toward them. Furthermore, because attitudes toward victims can vary depending on who holds them (boy or girl), towards whom (boy or girl), and under what condition (bullying alone or in group), attitude measures that take into account context should be used (Baldry, 2004). For example, the items in a questionnaire could specify the gender of a bullied child.

Another limitation of this study is a low response rate (31%) and consequently a small sample size collected from one school, which may limit the generalizability of the findings. Such a low response rate could be a result of students' inability to obtain parental consent to participate. Also, because students were asked to come with at least two friends, some of them could have decided not to come without their friends or they could have come with children who are not their real friends. Thus, the extent to which friendship groups are "real" is questionable. A related limitation is that children were never provided with a definition of a friend. The question that assessed the frequency of friend intervention

did not explain which friends participants were asked about – those they came with or their best friends. A better approach would have been to determine reciprocated friends by asking children to name their top three to five friends. Then, children could have been asked how often each of their friends intervenes, and friends could have been asked how often they intervene themselves.

Finally, because the data are cross-sectional, it is difficult to determine the sequencing in the process. It is not known whether normative beliefs about aggression and attitudes toward victims cause children to choose friends who are like-minded (i.e. selection effect), or friends cause children to hold certain beliefs and attitudes (i.e. socialization effect) (Prinstein & Dodge, 2008). Also, it is important not to infer any causal links between beliefs about aggression and bullying behavior. As Salmivalli and Voeten (2004) point out “it is possible that over time a child adopts beliefs consistent with his/her behavior” (p. 256). A child who had engaged in bullying behavior before, may adopt beliefs that justify his or her bullying. Studies with a longitudinal design are needed to disentangle selection from socialization effects (Salmivalli, 2009) and allow researchers to make conclusions about causal links between attitudes, beliefs, and behavior.

Despite the above mentioned limitations, this study provides a foundation for studying group-level processes that may influence children’s intervention in bullying situations and bullying behavior. Previous studies have found that behaviors of peers may promote and maintain peer aggression in schools. However, little is known about the role peers play in promoting bullying by failing to intervene (Espelage, 2002). The present study demonstrates that children in friendship groups with higher levels of perceived friend intervention are more likely to intervene. Future research could examine processes that

may explain this relation. It is also important in future to utilize measures of actual intervention behavior to better understand peer socialization effects in bullying.

Furthermore, because a link between beliefs about aggression and bullying as well as a link between attitudes toward victims and bullying and intervention was established, it is important to explore the source of these beliefs and attitudes.

Several implications for prevention and intervention programs can be drawn from this study. Clearly, because levels of perceived friend intervention were associated with an individual's decision to intervene in a bullying situation, interventions should target the friendship group. It is important to increase children's awareness of their role in the bullying process and raise their personal responsibility (O'Connell et al., 1999).

Furthermore, because children's beliefs about aggression and attitudes toward victims were associated with bullying behavior, programs should put emphasis on changing children's beliefs supporting aggression and their negative attitudes toward victims. One of the strategies could be to promote children's empathy toward victims. Some programs have been successful in reducing bullying and victimization in schools using this approach (Kärnä et al., in press).

In summary, the present study revealed that in friendship groups with low levels of perceived friend intervention children were less likely to intervene. In addition, children's normative beliefs about aggression and attitudes toward victims predicted their bullying behavior. Attitudes toward victims also predicted their propensity to intervene in a bullying situation. Given these findings, future research will need to elaborate processes through which friends may affect each others' intervention behavior and explore the ways in which normative beliefs about aggression and attitudes toward victims develop.

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APPENDIX A. BULLYING QUESTIONNAIRE

Bullying Questionnaire

Thank you for your participation. Please be honest and accurate when answering the questions. All your answers will remain confidential.

Demographic Questions

Please put an X next to the response option that best describes you.

Gender: Male Female

Age: 11 12 13 14 15 16

Grade in school: 6 7 8

Race/Ethnicity (Check all that apply): White Black or African American

Hispanic or Latino Asian American Indian Other:

Specify _____

How long have you attended this school? _____

Bullying

Now please answer some questions related to bullying. A student is being bullied when another student, or several other students:

- say mean and hurtful things or make fun of him or her or call him or her mean and hurtful names
- completely ignore or exclude him or her from their group of friends or leave him or her out of things on purpose
- hit, kick, push, shove around, or lock him or her inside a room

- tell lies or spread false rumors about him or her or send mean notes and try to make other students dislike him or her
- and other hurtful things like that

1) How do you usually react if you see or understand that a student your age is being bullied by other students?

- I have never noticed that students my age have been bullied
- I take part in the bullying
- I don't do anything, but I think the bullying is OK
- I just watch what goes on
- I don't do anything, but I think I ought to help the bullied student
- I try to help the bullied student in one way or another

2) How often do you try to put a stop to it when a student is being bullied at school?

- Almost never
- Once in a while
- Sometimes
- Often
- Almost always

3) How often do your friends try to put a stop to it when a student is being bullied at school?

- Almost never
- Once in a while
- Sometimes
- Often
- Almost always

4) How often have you taken part in bullying another student(s) at school in the past couple of months?

- I haven't bullied another student(s) at school in the past couple of months
- It has only happened once or twice
- 2 or 3 times a month
- About once a week

Several times a week

5) I called another student(s) mean names, made fun of or teased him or her in a hurtful way.

It hasn't happened in the past couple of months

It has only happened once or twice

2 or 3 times a month

About once a week

Several times a week

6) I kept him or her out of things on purpose, excluded him or her from my group of friends or completely ignored him or her.

It hasn't happened in the past couple of months

It has only happened once or twice

2 or 3 times a month

About once a week

Several times a week

7) I hit, kicked, pushed and shoved him or her around or locked him or her indoors.

It hasn't happened in the past couple of months

It has only happened once or twice

2 or 3 times a month

About once a week

Several times a week

8) I spread false rumors about him or her and tried to make others dislike him or her.

It hasn't happened in the past couple of months

It has only happened once or twice

2 or 3 times a month

About once a week

Several times a week

9) I took money or other things from him or her or damaged his or her belongings.

- It hasn't happened in the past couple of months
- It has only happened once or twice
- 2 or 3 times a month
- About once a week
- Several times a week

10) I threatened or forced him or her to do things he or she didn't want to do.

- It hasn't happened in the past couple of months
- It has only happened once or twice
- 2 or 3 times a month
- About once a week
- Several times a week

11) I bullied him or her with mean names or comments about his or her race or color.

- It hasn't happened in the past couple of months
- It has only happened once or twice
- 2 or 3 times a month
- About once a week
- Several times a week

12) I bullied him or her with mean names, comments, or gestures with a sexual meaning.

- It hasn't happened in the past couple of months
- It has only happened once or twice
- 2 or 3 times a month
- About once a week
- Several times a week

13) I bullied him or her in another way. Please indicate in what way

- It hasn't happened in the past couple of months
- It has only happened once or twice

- 2 or 3 times a month
- About once a week
- Several times a week

Now please read the following sentences carefully and indicate how strongly you agree or disagree with it. Do this by circling ONE of the answers.

- | | | | |
|--|-------|--------|----------|
| 14) Kids who get picked on a lot usually deserve it | Agree | Unsure | Disagree |
| 15) A bully is really a coward | Agree | Unsure | Disagree |
| 16) Kids should not complain about being bullied | Agree | Unsure | Disagree |
| 17) It's funny to see kids get upset when they are teased | Agree | Unsure | Disagree |
| 18) Kids who hurt others weaker than themselves should be told off | Agree | Unsure | Disagree |
| 19) Soft kids make me sick | Agree | Unsure | Disagree |
| 20) You should not pick on someone who is weaker than you | Agree | Unsure | Disagree |
| 21) Nobody likes a wimp | Agree | Unsure | Disagree |
| 22) It makes me angry when a kid is picked on without reason | Agree | Unsure | Disagree |
| 23) I like it when someone sticks up for kids who are being Bullied | Agree | Unsure | Disagree |

The following questions ask you about whether you think certain behaviors are wrong or are OK. Circle ONE answer that best describes what you think.

- 24) In general, it is wrong to hit other people.**

It's really wrong It's sort of wrong It's sort of OK It's perfectly OK

25) If you are angry, it is OK to say mean things to other people.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

26) In general, it is OK to yell at others and say bad things.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

27) It is usually OK to push or shove other people around if you are mad.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong

28) It is wrong to insult other people.

It's really wrong It's sort of wrong It's sort of OK It's perfectly OK

29) It is wrong to take it out on others by saying mean things when you are mad.

It's really wrong It's sort of wrong It's sort of OK It's perfectly OK

30) It is generally wrong to get into physical fights with others.

It's really wrong It's sort of wrong It's sort of OK It's perfectly OK

31) In general, it is OK to take your anger out on others by using physical force.

It's perfectly OK It's sort of OK It's sort of wrong It's really wrong