

Examining the Social Context of Bullying Behaviors in Early Adolescence

Dorothy L. Espelage, Kris Bosworth, and Thomas R. Simon

Familial and adult influences, peer relations, and distal contextual factors were tested as correlates of a continuous measure of bullying behavior within a sample of 558 middle school students. Only 19.5% of the sample reported exhibiting no bullying behavior in the past 30 days. Parental physical discipline, time spent without adult supervision, negative peer influences, and neighborhood safety concerns were each positively associated with bullying behavior. In contrast, positive adult role models were associated with less bullying behavior. Results suggest that counselors should focus prevention and intervention efforts on the risk factors within the larger social context of an adolescent's life.

Aggression in childhood and adolescence has been the focus of many empirical investigations in the last several decades (e.g., Guerra, Tolan, & Hammond, 1994). As a result, bullying, a subset of aggression, has been identified as a significant problem that can affect the physical and psychosocial health of those who are frequently bullied and those students who bully their peers at an early age (Batsche & Knoff, 1994). Bullying has been defined as a set of behaviors that is "intentional and causes physical and psychological harm to the recipient" (Smith & Thompson, 1991, p. 1). Bullying includes actions such as name-calling or teasing, social exclusion, and hitting (Crick, 1997; Olweus, 1991; Rigby, Cox, & Black, 1997; Thompson & Sharp, 1998). Although past research has advanced our understanding of aggression, it has been limited by its focus on overt aggression (for exceptions see Crick, 1995, 1997). Thus, bullying behaviors characteristic of early adolescents, including verbal threats and teasing, are less understood.

Previous studies indicate that bullying in the form of teasing is a common event experienced among adolescents and can have serious consequences (Corsaro & Eder, 1993). In one study conducted in the United States, 75% of adolescents reported some form of victimization from a bully during their school years (Hoover, Oliver, & Hazler, 1992). In another study, 90% of adolescents who were bullied believed that the victimization caused them significant problems, including loss of friendships and feelings of isolation and hopelessness (Hazler, Hoover, & Oliver, 1992). Research

conducted outside of the U.S. suggested that students who bully were themselves at an increased risk of being physically abusive and of having a criminal record as adults (e.g., Olweus, 1993). The entire climate of a school can be affected by bullying behaviors if they go unchecked; threats and intimidation associated with bully behaviors can create a negative atmosphere for all students (Hoover & Hazler, 1991).

Given these serious consequences for students who bully, for their victims, and for the impact on the school environment, intervention during early adolescence is extremely important to minimize these risks. Because counselors are likely to receive referrals from school administrators and teachers for students who bully their peers, counselors working with these children must be knowledgeable about the environmental factors that may be contributing to and maintaining bullying behavior so that prevention and intervention programs can be implemented.

In the past several decades, etiological perspectives on aggression have progressed from the view of aggression as an innate characteristic in all humans to the more recent conception that aggression reflects some degree of learning from our surroundings (e.g., Eron, 1994). From a social learning perspective, Bandura (1973, 1986) has argued that the external environment contributes, in large part, to acquiring and maintaining aggression. Children learn from role models, including adults and peers, to use aggressive means to achieve their goals. The present investigation used this theory as a framework by examining the social context within which bullying occurs during early adolescence.

Dorothy L. Espelage is an assistant professor of counseling psychology at the University of Illinois, Urbana-Champaign. Kris Bosworth is the Smith Endowed Chair in Substance Abuse Education and an associate professor in Educational Leadership at The University of Arizona, Tucson. Thomas R. Simon is a behavioral scientist in the National Center for Injury Prevention and Control at the Centers for Disease Control and Prevention, Atlanta, Georgia. This research was supported by the Centers for Disease Control and Prevention, National Center for Injury Prevention and Control (Grant No. U81/CCU510049-03). Correspondence regarding this article should be sent to Dorothy L. Espelage, Department of Educational Psychology, University of Illinois, Urbana-Champaign, College of Education, 226 Education Building, 1310 South Sixth Street, Champaign, IL 61820-6990 (e-mail: espelage@uiuc.edu).

In addition to social learning theory, we also drew on the work of Hawkins and colleagues (Hawkins, Catalano, & Miller, 1992), in which risk and protective factors were identified for substance abuse in youth. This research has explicated factors that include both personality characteristics and contextual variables. The contextual situations contributing to substance abuse are family factors (e.g., family management practices, family conflict, low family bonding), environmental factors (e.g., neighborhood disorganization, economic distress) as well as association with drug-using peers. Extending this theory, we examined the extent to which students' perceptions of their environment as disorganized or unsafe were related to bullying behavior in early adolescence.

Literature on aggression and familial factors has provided considerable support for the association between general aggressive behavior in youth and lack of family cohesion (Gorman-Smith, Tolan, Zelli, & Huesmann, 1996), inadequate parental supervision (Farrington, 1991), family violence (Thornberry, 1994), hostile discipline techniques (Loeber & Dishion, 1983), and poor modeling of problem-solving skills (Tolan, Cromwell, & Braswell, 1986). Moreover, investigations in other countries have found significant associations between familial characteristics and bullying behavior (Berndt & Smith, 1996; Bowers, Smith, & Binney, 1994; Olweus, 1980, 1993). For example, on the basis of studies with Scandinavian youth, Olweus (1980, 1993) reported that parenting style was of great significance in the development of bullying behaviors in young boys. He concluded that families of boys who bullied were often described as lacking in warmth, using physical violence within the family, and failing to monitor children's activities outside the school. We sought to replicate and extend these findings within a sample of students from a midwestern middle school in the U.S. We examined the association between self-reported bullying behavior and prosocial messages that adolescents received from adults about violence, the amount of time adolescents spent with their family, parental use of physical discipline, and the time spent without adult supervision.

Aggression research has also emphasized the relation between aggression and involvement with delinquent peer influences. In a longitudinal study of delinquency, Elliott, Huizinga, and Ageton (1982) found that the association between social bonds to family and delinquency was mediated by involvement with delinquent peers. However, the association between peer influences and bullying behavior has received less attention. We investigated the relationship between peer influences and bullying behavior and hypothesized that bullying would be positively associated with negative peer influences.

In addition to familial and peer influences, the current study explored other environmental factors that may be associated with bullying in early adolescence. Firearm possession (Webster, Gainer, & Champion, 1993) and exposure to community violence (Gorman-Smith & Tolan, 1998; Thornberry, 1994) have also been linked to aggression. However, previous research has not related these factors to bullying behavior. Therefore, we tested the association between

bullying behavior and access to guns, neighborhood safety issues, and school safety concerns. We hypothesized that these factors were correlated with increased bullying behavior.

Departing from previous research, bullying behavior in this study was treated as a continuous variable, and no students were categorized as "bullies." This decision was made because there was no clear indication of what cutoff score would be appropriate to classify students as "bullies" or "nonbullies." Thus, a continuous measure of the types and frequency of bullying behaviors was used in this study to examine the relationship between bullying behavior and the social context of middle school students, including family and adult influences, peer influences, and other contextual variables.

METHOD

Data were collected in a large middle school (sixth, seventh, and eighth graders), located within 10 miles of a major midwestern metropolis, with a diverse socioeconomic population. All participants completed a survey as part of the baseline data collection for an evaluation of a violence prevention study (Bosworth, Espelage, Dubay, Dahlberg, & Daytner, 1996). Students for whom parental permission was granted were given a pencil-and-paper survey at midyear. A detailed description of the violence prevention evaluation can be found in Bosworth and colleagues (1996).

Participants

Parent permission forms were sent to all 1,361 students registered at this school. Of the 700 (51%) who returned permission forms, 142 denied permission, leaving a sample of 558. Students who were absent on the day of data collection were given the study measures on a make-up day. Of the 558 student participants, 54% ($n = 300$) were girls and 46% were boys ($n = 258$); 42% were sixth graders ($n = 232$), 31% seventh graders ($n = 173$), and 27% eighth graders ($n = 153$). Approximately 84% were White ($n = 468$), 9% ($n = 52$) were African American, 3% ($n = 19$) were biracial, and 3% ($n = 19$) reported other racial backgrounds. Forty-nine percent ($n = 271$) were currently living with two biological or adoptive parents (two parents, no step-parents), 20% ($n = 113$) were living with two parents one of whom was a stepparent, 28% ($n = 157$) reported residing with a single parent, and the remaining 3% ($n = 17$) reported other living arrangements (e.g., grandparents, foster care). In addition, 29% ($n = 162$) of the sample were receiving free or reduced price lunch, and 18% ($n = 100$) had Chapter 1 status, indicating qualification for remedial support. (Chapter 1 status means that the student has skills below grade level in a particular subject and is therefore involved in a program to improve these skills.) The zip code in which each participant lived was obtained from guidance records, linked with census income data, and was used as a proxy for socioeconomic status. Our sample consisted of participants with varying levels of socioeconomic status. For example, approximately 60% ($n = 334$) of the partici-

pants resided in a community in which 23% of persons earned an annual income less than \$10,000, 8% reported an income greater than \$50,000, and approximately 43% of adults over 25 years of age had a high school diploma.

To determine the representativeness of our sample, chi-square analyses were conducted to test differences on relevant demographic variables between the 558 study participants and those students who did not return a permission form (nonparticipants), including sex, grade, race, free/reduced price lunch, Chapter 1 status, and zip code. A significant difference was found for the distribution of grade between the two groups; approximately 42% of the study participants were sixth graders, whereas 25% of the nonparticipants were sixth graders. No other significant differences were found between study participants and nonparticipants (Bosworth et al., 1996).

Measures

All measures were developed in a similar manner, with the exception of the demographic variables and the single item indicators. Whenever possible, existing measures with strong psychometric properties were selected from a comprehensive literature review. Other measures were developed specifically for the violence prevention intervention. All measures were presented to groups of middle school students for their review of the items' clarity and readability. Exploratory factor analysis was then conducted for all study measures. Factors were extracted based on eigenvalues, percent variance explained, and examination of scree plots. Items that had factor loadings above .40 and did not have cross-loadings above .30 on any other factor were retained. Although a lengthy description of this scale development process was beyond the scope of the current article, development of the Bully Scale and the Peer and Adult Influence scales are briefly described in more detail later in this article.

Demographic Variables

Sex, grade, race, free/reduced price lunch, Chapter 1 status, and zip code were included as demographic characteristics. In addition, students were asked, "Who lives with you?" On the basis of these responses, students were categorized into mutually exclusive family types: two biological/adoptive parents, single parent, and stepfamily (e.g., grandparents, foster care). Three dummy coded variables were created for family type in the regression; biological/adoptive parents was used as the reference category.

Bullying Behaviors

A literature review was conducted to obtain measures of bullying; however, many available self-report measures of bullying rely on a subjective label. For example, these measures ask students how many times they bullied their peers rather than asking about the frequency of specific behaviors like name-calling, teasing, and hitting. In contrast, the University of Texas-Houston Health Science Center Student Questionnaire's 11-item Aggression scale (Dahlberg, Toal, & Behrens, 1998) in-

cludes items related to these specific behaviors. Thus, this questionnaire was included in a factor analysis with additional items created for this study. Results of a principal axis factoring analysis with an oblimin rotation and subsequent confirmatory factor analysis yielded a five-item Bully scale (Bosworth, Espelage, & Simon, 1999). This factor accounted for 43% of the variance and included eight items from the Aggression scale with factor loadings that ranged from .39 to .83. Five items that loaded clearly on this factor were retained with factor loadings that ranged from .67 to .83. The items on the final Bully scale were consistent with the definition of bullying used in the current study and reflected both psychological and physical aspects of bullying. Participants were asked how many times they did the following in the last 30 days: (a) "I called other students names"; (b) "I teased students"; (c) "I said things about students to make other students laugh"; (d) "I threatened to hit or hurt another student"; and (e) "I pushed, shoved, slapped, or kicked other students." Response choices included 0 = *never*, 1 = *1 or 2 times*, 2 = *3 or 4 times*, and 3 = *5 or more times* (Cronbach's alpha = .83). Summing across all five items created total scores ranging from 0 through 15, with 0 meaning no bullying activity. As can be seen in Table 1, the Bullying scale in the current sample was skewed with the highest percentage of students reporting low to moderate levels of bullying behavior. Thus, a log transformation was used on the sum scores in subsequent analyses.

Familial and Adult Influences

Positive adult messages about violence. Four items selected from the University of Texas-Houston Health Science Center Student Questionnaire (Dahlberg et al., 1998) were used to assess students' report of what adults tell them about fighting. These items and the four items on the Negative Peer Influence scale were subjected to a principal axis factor-

TABLE 1
Frequencies and Percentages of Scores on the
Bully Scale for Male and Female
Students ($N = 558$)

Scale Score	Male Students		Female Students		Total Sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
0	40	15.5	69	23.0	109	19.5
1	19	7.4	36	12.0	55	9.9
2	23	8.9	41	13.7	64	11.5
3	37	14.3	36	12.0	73	13.1
4	28	10.9	21	7.0	49	8.8
5	22	8.5	28	9.3	50	9.0
6	22	8.5	21	7.0	43	7.7
7	17	6.6	11	3.7	28	5.0
8	6	2.3	8	2.7	14	2.5
9	8	3.1	8	2.7	16	2.9
10	10	3.9	10	3.3	20	3.6
11	5	2.0	4	1.3	9	1.6
12	21	8.1	7	2.3	28	5.0

ing analysis in which a varimax rotation was used. Two factors with eigenvalues greater than 1 were extracted. The amount of variance explained and examination of the scree plot supported this solution. All four items from the Positive Adult Messages scale loaded on the first factor and accounted for 30% of the variance and included factor loadings that ranged from .46 to .81. No items cross-loaded on the Negative Peer factor. Therefore, all items were retained. Respondents were asked to think about the adults they spend the most time with and to indicate how many of them tell them the following: (a) "If another student hits you, hit them back"; (b) "If another student wants to fight, you should try to talk your way out of the fight"; (c) "If another student asks you to fight, you should tell a teacher or someone older"; and (d) "Fighting is not good, there are other ways to solve problems." Response choices included 0 = *none*, 1 = *few*, 2 = *most*, and 3 = *all* (Cronbach's alpha = .77). Total scores ranged from 0 to 12, with higher scores indicating greater positive adult influence or more adults perceived as endorsing prosocial strategies. Of note, the first item is reverse scored.

Family physical discipline. Students were asked, "If you break a rule in your home, how often are you spanked, hit, or slapped?" Response choices included 0 = *never*, 1 = *seldom*, 2 = *sometimes*, 3 = *often*, and 4 = *always*. Examination of the distribution of responses for this item indicated a skewed distribution. Thus, a dichotomous variable was created representing two groups: (a) those students who reported that they never or seldom get spanked, hit, or slapped when they break a rule in their home; and (b) those students who reported that they sometimes, often, or always are spanked, hit, or slapped when they break a rule in their home.

Adult contact and time with family. Time spent without adult supervision was assessed with one item, "On an average weekday, how many hours a day do you spend without an adult around you?" In addition, to determine how much time they spent with family members, students responded to the following item: "On an average weekday, how many hours a day do you talk to or do activities with your family." For both items, response options included 0 = *0 minutes*, 1 = *1 to 30 minutes*, 2 = *30 minutes to 1 hour*, 3 = *1 to 2 hours*, and 4 = *2 to 4 hours*.

Negative Peer Influences

Based on a comprehensive literature review and several student focus groups, a four-item scale was developed specifically for the violence prevention evaluation to assess the types of activities engaged in by the respondent's peer group. As stated previously, these items were included in a factor analysis with the four items on the Positive Adult Messages scale. Two factors with eigenvalues greater than 1 were extracted. All four items from the Negative Peer Influences scale loaded on the second factor and accounted for 16% of the variance and included factor loadings that ranged from .42 to .77. No items cross-loaded on the Positive Adult Messages factor. Therefore, all items were retained. Respondents were asked, "Over the last thirty days, how many of the friends you spent

most of your time with did the following?" The following items were then presented: (a) "suggested that you do something against the law," (b) "damaged or destroyed property," (c) "were involved in gang activities," and (d) "hit or threatened to hit someone." Response choices included 0 = *none*, 1 = *few*, 2 = *most*, and 3 = *all* (Cronbach's alpha = .79). Total scores ranged from 0 to 12, with higher scores indicating greater negative peer influence.

Other Contextual Factors

Neighborhood safety. Participants were asked how often they would agree with the following statements: "I see gang activity in my neighborhood" and "I live in a safe neighborhood." Response choices included 0 = *never*, 1 = *seldom*, 2 = *sometimes*, 3 = *often*, and 4 = *always*. A Pearson product-moment correlation $-.46$ ($p < .001$) was found between these two items. To create a composite score, response options were recoded for the second item, such that higher scores indicated that the participant did not agree that his or her neighborhood was safe. We summed responses to both items, and higher scores reflected greater neighborhood safety concerns. Total scores ranged from 0 to 8.

Access to guns. Students were asked to respond to the following: "I can get a gun easily." Response choices ranged from 0 = *strongly disagree*, 1 = *disagree*, 2 = *neither agree nor disagree*, 3 = *agree*, and 4 = *strongly agree*. This variable had a skewed distribution, thus a dichotomous variable was created representing two groups: (a) those students who reported that they were either neutral, disagreed, or strongly disagreed in response to this item; and (b) those students who responded that they agreed or strongly agreed with the statement.

Feeling unsafe at school. School safety was measured with two items. Students were asked how often they agreed with the following statements: "I worry about my safety getting to and from school" and "I worry about my safety in school." Five response choices offered ranged from 0 = *never*, 1 = *seldom*, 2 = *sometimes*, 3 = *often*, and 4 = *always*. A Pearson product-moment correlation of .51 ($p < .001$) was found between these two items. Summing across the two variables, the total scores ranged from 0 to 8. High scores indicated greater concern for safety.

Data Analysis

To test the hypothesis that higher levels of bullying behaviors would be significantly associated with demographics and familial and environmental influences, multivariate regression analyses were used. In each regression analysis, the continuous Bully scale with a log transformation was used as the criterion variable. First, relationships between demographic variables (i.e., sex, grade, race, Chapter 1 status, zip code, and family type) and bullying were tested using a single multivariate regression model. Second, the associations between bullying and familial, peer, and other contextual measures were assessed with separate regression models controlling for significant demographic characteristics. Because of the potential influence of sex on the associations

tested, we examined the extent to which sex modified these relationships. Therefore, each model included the main effect of sex and a sex by environmental variable (e.g., familial, peer) interaction term. Nonsignificant interaction terms were removed, and the models were recalculated. Finally, we ran one multivariate model to determine whether the familial, peer, and other contextual correlates were independently associated with bullying behavior.

RESULTS

Descriptive Analysis

As shown in Table 1, only 19.5% (15.5% of male students and 23.0% of female students) of the current sample indicated that they did not bully their peers in the past 30 days. Means and standard deviations for the five continuous study variables were as follows: bullying ($M = 3.93$, $SD = 3.45$), positive messages from adults about violence ($M = 7.25$, $SD = 3.03$), negative peer influence ($M = 3.80$, $SD = 4.24$), neighborhood safety concerns ($M = 2.58$, $SD = 2.45$), and feeling unsafe at school ($M = 2.62$, $SD = 2.48$). Percentages and frequencies of the responses to other predictor variables are presented in Table 2. To highlight a few of our findings, 17.2% ($n = 96$) of the participants reported that they are at least sometimes spanked, hit, or slapped when they break a rule at home. Some 33.9% ($n = 189$) of the participants reported spending more than 1 hour a day without an adult. Most surprising is the finding that 24.2% ($n = 135$) agreed that they could get a gun very easily.

TABLE 2

Percentages and Frequencies for the Environmental and Familial Items ($N = 558$)

Scale Item	Frequency of Response	
	<i>n</i>	%
If you break a rule in your home, how often are you spanked, hit, or slapped?		
Never or seldom	462	82.8
Sometimes, often, or always	96	17.2
How many hours during the day do you spend <i>without</i> an adult around?		
0 minutes	69	12.4
1-30 minutes	161	28.9
30 minutes-1 hour	139	24.9
1-2 hours	94	16.8
2-4 hours	95	17.0
How many hours during the day do you spend with your family?		
0 minutes	101	18.1
1-30 minutes	201	36.0
30 minutes-1 hour	122	21.9
1-2 hours	76	13.6
2-4 hours	58	10.4
I can get a gun very easily.		
Neutral, strongly disagree, disagree	423	75.8
Agree or strongly agree	135	24.2

Social Context Variables

In the multivariate regression analysis examining demographic correlates of bullying behavior, sex was significantly associated with bullying behavior, with male students ($M = 4.56$, $SD = 3.62$) engaging in higher amounts of bullying behavior than did female students ($M = 3.38$, $SD = 3.20$). Sex was therefore entered as a covariate in subsequent analyses. There was no significant relationship between bullying behavior and grade, race, free/reduced price lunch status, Chapter 1 status, and family type. Sex was not a significant modifier of any of the associations between bullying and familial, peer, and other contextual variables (all p values $> .05$). Therefore, the interaction terms were removed, and each model was recalculated. The results from the bivariate regression analyses, with sex as a covariate in each model, are presented in Table 3. With the exception of the school safety variable and time spent with family members, each of the associations was statistically significant. As shown in Table 3, after controlling for the main effect of sex, those students who were sometimes or more frequently spanked, slapped, or hit when they break a rule at home ($\beta = .10$) and those who spent their time without adults ($\beta = .25$) were more likely to bully their peers. In addition, students who reported negative peer influences ($\beta = .20$), who had reported that they had access to guns ($\beta = .17$), and who had neighborhood safety concerns ($\beta = .29$) were significantly more likely to bully their peers. In contrast, students who stated that the adults with whom they spend most of their time tell them that there are nonviolent ways to deal with conflicts ($\beta = -.39$) were significantly less likely to bully.

TABLE 3

Bivariate Regression Analysis Results for Environmental and Familial Factors Predicting Bullying Behavior ($N = 558$)^a

Predictor Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i>
Positive adult models	-.05	.01	-.39	-10.03**
Spanked, slapped, or hit when break rule at home ^b	.09	.04	.10	2.30*
Time spent talking to or doing things with family	-.02	.01	-.06	-1.47
Time spent without adult around	.01	.01	.25	6.13**
Negative peer influence	.02	.04	.20	4.90**
Access to guns ^c	.15	.04	.17	3.97**
Neighborhood safety concerns	.05	.01	.29	7.31**
School safety concerns	-.01	.01	-.05	-1.09

^aSex was entered as covariate in each bivariate analysis. ^b1 = never or seldomly spanked, hit, or slapped when break a rule at home; 2 = sometimes, often, or always spanked, hit, or slapped when break a rule at home. ^c1 = neutral, strongly disagree, or disagree to item "I can get a gun very easily"; 2 = agree or strongly agree to item "I can get a gun very easily."
* $p < .05$. ** $p < .001$.

Results from the multivariate analysis of the familial, peer, and other environmental measures are shown in Table 4. These predictors accounted for 26% of the variance in bullying behavior. The single best predictor for the absence of bullying behavior was having positive adult role models ($\beta = -.27$). In contrast, students who were sometimes or more frequently slapped or hit when they break a rule at home ($\beta = .09$), who spent time without an adult around ($\beta = .16$), who were exposed to negative peer influences ($\beta = .09$), and who expressed concern about neighborhood safety ($\beta = .18$) reported higher levels of bullying behavior. Sex was no longer a significant predictor of bullying behavior ($\beta = -.07$) in the multivariate regression model.

DISCUSSION

Our research in this study focused on the association between bullying behavior and three components of the social context of middle school students: family and adult influences, peer influences, and other contextual variables. Our findings add to the literature on the dynamics of and possible influences on the phenomenon of bullying in the U.S. and provide guidance for counselors working with early adolescents and their families.

In contrast to previous studies that compare "bullies" with "victims" or with a control population, we focused on the number and frequency of bullying behaviors, conceptualizing bullying as a continuous variable. In our sample of students in a large middle school, only 19.5% reported no bul-

lying behavior in the past month. Sex was the only demographic characteristic associated with bullying behavior; male students reported participating in higher rates of bullying than did female students. However, sex did not modify any of the associations observed and was not a significant predictor of bullying behavior in the multivariate model. This finding indicates that the significant correlates are relevant for both boys and girls. Because sex was not significant in the multivariate model adjusting for contextual variables, one or more of these variables may explain the association between sex and bullying. Future research should examine these potential mediators with the goal of enhancing those factors that may reduce risk for bullying behavior.

Although family structure was not significantly associated with bullying behaviors, we did establish potential relationships between family environment factors and bullying. First, family physical discipline was significantly associated with bullying behavior. Consistent with previous research (Olweus, 1980, 1993), students who reported that their parents used physical discipline strategies when they broke a rule at home were more likely to report engaging in bullying behavior. Second, the likelihood of bullying was significantly reduced for those students spending time with adults who suggest nonviolent strategies to manage conflicts. Finally, students who spent the greatest amount of time during a typical weekday without adults were more likely to engage in bullying behavior.

Together, these findings suggest that adults may play a substantial role in the development of bullying behaviors. Specifically, messages they sent about fighting, discipline strategies, and the time they spent with adolescents were highly correlated with level of bullying behavior. Our findings differ from other work suggesting that the relations between family factors and at-risk behaviors are mediated through peer influence. The fact that these associations remained significant after controlling for perception of peer involvement in negative behaviors indicated that the effect of adult influences on bullying behavior was independent of the effect of peer influence. In designing prevention and intervention programs, efforts should be made to assess the students' perceptions of adult role models, and counselors should include parents in their interventions whenever possible.

As with other risk-taking behaviors (e.g., alcohol/drug use, sexual activity), bullying behavior was strongly associated with perceptions of peer involvement in negative behaviors (Hawkins et al., 1992; Jessor & Jessor, 1973). The number of peers involved in negative activities such as damaging or destroying property, suggesting illegal activities, participating in gang activities, and fighting was predictive of bullying behaviors. Counselors and administrators need to pay particular attention to peer group interactions and group norms.

Neighborhood safety concerns were strongly correlated with bullying behavior. This result finds some support from recent research in which investigators found strong relationships between exposure to violence (i.e., gang shootings, beatings) and aggression (Attar, Guerra, & Tolan, 1994; Gorman-Smith & Tolan, 1998) in elementary school children. Although it would

TABLE 4

Multiple Regression Analysis Results for Environmental and Familial Factors Predicting Bullying Behavior ($N = 558$)

Predictor Variable	B	SE B	β	t
Sex ^a	-.05	.03	-.07	-1.83
Positive adult models	-.04	.01	-.27	-6.62**
Spanked, slapped, or hit when break rule at home ^b	.09	.04	.09	2.26*
Time spent talking to or doing things with family	-.01	.01	-.01	-0.12
Time spent without adult around	.05	.01	.16	4.09**
Negative peer influence	.01	.00	.09	2.29*
Access to guns ^c	.05	.03	.06	1.55
Neighborhood safety concerns	.03	.01	.18	4.53**
School safety concerns	-.01	.00	-.05	-1.32

Note. Full model statistics: $R^2 = .26$, $F(9, 548) = 21.49^{**}$.

^a1 was assigned to girls, and 2 was assigned to boys. ^b1 = never or seldomly spanked, hit, or slapped when break a rule at home; 2 = sometimes, often, or always spanked, hit, or slapped when break a rule at home. ^c1 = neutral, strongly disagree, or disagree to item "I can get a gun very easily"; 2 = agree or strongly agree to item "I can get a gun very easily."

* $p < .05$. ** $p < .001$.

be premature to make a strong statement about this association until future studies are conducted, explanations for this relationship should be considered. Neighborhoods that are perceived as unsafe may reflect a larger social environment in which frequent bullying and aggression take place. Because relatively few studies have examined these community variables and bullying behavior, future research should focus on the dynamics of the community and the impact of these on behavior in the school.

Clearly, contextual factors play a role in bullying behaviors. Hawkins and colleagues (1992) examined contextual variables in a social development model, which emphasized the role of bonding to prosocial family, school, and peers as protective factors against the development of school-related problems such as misbehavior, truancy, and drug abuse. Within the snapshot of bullying behavior provided in this study, the relationship between bullying and prosocial or antisocial institutions in the adolescent's context were important determinants of bullying behavior. A next step in this area of research would be to explore potential risk and protective factors of bullying behavior using this social development model.

Our results demonstrate the extent to which influences external to individual children are related to their bullying behavior. As a result, efforts aimed at decreasing bullying behavior are likely to benefit from a comprehensive approach that includes interventions in families, peers, and neighborhoods. Although other studies have emphasized the association between bullying and individual-level characteristics (Horne & Socherman, 1996; Perry, Kusel, & Perry, 1988), the results from this study highlight the need to also consider the potential influence of social and environmental factors. Future research should test the extent to which these individual and social-level factors are independently associated with bullying behavior.

On the basis of these findings, we see several areas that may be important for counselors to consider when working with early adolescents. First, counselors might consider conceptualizing bullying as a continuum of behavior rather than focusing on identification of the "bully." This suggests a developmental and comprehensive approach to reducing bullying behaviors in all students. Second, as counselors recognize the social context within which bullying behavior occurs, current prevention efforts should be modified to focus beyond individual behavior change and include an assessment of the sociocultural factors that may be contributing and maintaining bullying behavior. Developing prevention programs that incorporate aspects of the social context of bullying is likely to yield effective results.

Our results should be interpreted in light of the limitations of the study. First, the data were obtained from self-reports. Thus, it is important to note that we measured participants' perceptions of family and peer behaviors, not the actual behavior of these people. Second, the research was conducted with a sample that consisted primarily of White students, with relatively few minorities, and the age range of participants was narrow. Therefore, only tenuous generalizations of the results of this research could be applied to a

more ethnically diverse population from a different age group. Third, the data presented in this article were cross-sectional, which prevents us from making any statement about the stability or instability of bullying behavior over time or the directionality of the associations. Fourth, bullying was measured in terms of behavior in the past 30 days. Thus, the systematic or chronic nature of bullying behaviors was not assessed. Fifth, the context in which these behaviors were exhibited was not explored. For example, teasing was included as bullying behavior; however, in certain contexts teasing may be a common part of socialization to adulthood (Corsaro & Eder, 1993; R. J. Hammond, personal communication, August 3, 1998) and students often feel that most teasing is done in fun (Oliver, Hoover, & Hazler, 1994). Nonetheless, regardless of how common teasing may be in certain settings, if teasing is related to other problem behaviors or negative environmental influences, then prevention and intervention strategies are indicated.

Despite these limitations, we believe that these findings will prove useful to counselors and administrators as they plan programs and work with students. In addition, we believe that the conceptualization of bullying behavior as a continuum may encourage future research that moves away from categorizing students as "bullies."

REFERENCES

- Attar, B. K., Guerra, N. G., & Tolan, P. H. (1994). Neighborhood disadvantage, stressful events, and adjustment in urban elementary-school children. *Journal of Clinical Child Psychology, 23*, 391-400.
- Bandura, A. (1973). *Aggression: A social learning analysis*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Batsche, G. M., & Knoff, H. M. (1994). Bullies and their victims: Understanding a pervasive problem in the schools. *School Psychology Review, 23*, 165-174.
- Berdondini, L., & Smith, P. K. (1996). Cohesion and power in the families of children involved in bully/victim problems at school: An Italian replication. *Journal of Family Therapy, 18*, 99-102.
- Bosworth, K., Espelage, D., DuBay, T., Dahlberg, L., & Daytner, G. (1996). Using multimedia to teach conflict resolution skills to young adolescents. *American Journal of Preventive Medicine, 12*(Suppl. 2), 229-255.
- Bosworth, K., Espelage, D., & Simon, T. (1999). Factors associated with bullying behavior among early adolescents. *Journal of Early Adolescence, 19*, 341-362.
- Bowers, L., Smith, P. K., & Binney, V. (1994). Perceived family relationships of bullies, victims, and bully/victims in middle childhood. *Journal of Social and Personal Relationships, 11*, 215-232.
- Corsaro, W. A., & Eder, D. (1993). Children's peer cultures. *Annual Review of Sociology, 16*, 197-220.
- Crick, N. R. (1995). Relational aggression: The role of intent attributions, feelings of distress, and provocation type. *Development and Psychopathology, 7*, 313-322.
- Crick, N. R. (1997). Engagement in gender normative versus nonnormative forms of aggression: Links to social psychological adjustment. *Developmental Psychology, 33*, 610-617.
- Dahlberg, L. L., Toal, S. B., & Behrens, C. B. (1998). *Measuring violence-related attitudes, beliefs, and behaviors among youths: A compendium of assessment tools*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.
- Elliott, D. S., Huizinga, D., & Ageton, S. S. (1982). *Explaining delinquency and drug use* (Report No. 21). Boulder, CO: Behavioral Research Institute.

- Eron, L. D. (1994). Theories of aggression: From drives to cognitions. In L. R. Huesmann (Ed.), *Aggressive behavior: Current perspectives* (pp. 3-11). New York: Plenum.
- Farrington, D. P. (1991). Childhood aggression and adult violence: Early precursors and later-life outcomes. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 5-29). Hillsdale, NJ: Erlbaum.
- Gorman-Smith, D., & Tolan, P. H. (1998). The role of exposure to community violence and developmental problems among inner-city youth. *Development and Psychopathology, 10*, 101-116.
- Gorman-Smith, D., Tolan, P. H., Zelli, A., & Huesmann, L. R. (1996). The relation of family functioning to violence among inner-city minority youths. *Journal of Family Psychology, 10*, 115-129.
- Guerra, N. G., Tolan, P. H., & Hammond, W. R. (1994). In L. D. Eron, J. H. Gentry, & P. Schlegel (Eds.), *Reason to hope: A psychosocial perspective on violence & youth* (pp. 383-403). Washington, DC: American Psychological Association.
- Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin, 112*, 64-105.
- Hazler, R., Hoover, J., & Oliver, R. (1992). What kids say about bullying. *The Executive Educator, 14*, 20-22.
- Hoover, J. H., & Hazler, R. J. (1991). Bullies and victims. *Elementary School Guidance and Counseling, 25*, 212-219.
- Hoover, J. H., Oliver, R., & Hazler, R. J. (1992). Bullying: Perceptions of adolescent victims in the midwestern USA. *School Psychology International, 13*, 5-16.
- Horne, A. M., & Socherman, R. (1996). Profile of a bully: Who would do such a thing? *Educational Horizons, 74*, 77-83.
- Jessor, R., & Jessor, S. L. (1973). A social psychology of marijuana use: Longitudinal studies of high school and college youth. *Journal of Personality & Social Psychology, 26*, 1-15.
- Loeber, R., & Dishion, T. (1983). Early predictors of male delinquency: A review. *Psychological Bulletin, 94*, 68-99.
- Oliver, R., Hoover, J., & Hazler, R. (1994). The perceived role of bullying in small-town midwestern schools. *Journal of Counseling & Development, 72*, 416-419.
- Olweus, D. (1980). Familial and temperamental determinants of aggressive behavior in adolescent boys: A causal analysis. *Developmental Psychology, 16*, 644-660.
- Olweus, D. (1991). Bully/victim problems among school children: Basic facts and effects of a school-based intervention program. In K. Rubin, & D. Pepler (Eds.), *The development and treatment of childhood aggression* (pp. 411-488). Hillsdale, NJ: Erlbaum.
- Olweus, D. (1993). Bully/victim problems among schoolchildren: Long-term consequences and an effective intervention program. In S. Hodgins (Ed.), *Mental disorder and crime* (pp. 317-349). Thousand Oaks, CA: Sage.
- Perry, D. G., Kusel, S. J., & Perry, L. C. (1988). Victims of peer aggression. *Developmental Psychology, 24*, 807-814.
- Rigby, K., Cox, I., & Black, G. (1997). Cooperativeness and bully/victim problems among Australian schoolchildren. *The Journal of Social Psychology, 137*, 357-368.
- Smith, P. K., & Thompson, D. (1991). *Practical approaches to bullying*. London: David Fulton.
- Thompson, D., & Sharp, S. (1998). The dynamics of victimisation and rejection in school. In D. Thompson & S. Sharp (Eds.), *Improving schools: Establishing and integrating whole school behavior policies* (pp. 11-25). London: David Fulton.
- Thornberry, T. P. (1994). *Violent families and youth violence*. Office of Juvenile Justice and Delinquency Prevention, Fact Sheet No. 21, 1994; Washington, DC: Department of Justice.
- Tolan, P. H., Cromwell, R. E., & Braswell, M. (1986). The application of family therapy to juvenile delinquency: A critical review of the literature. *Family Process, 15*, 619-649.
- Webster, D. W., Gainer P., & Champion, H. R. (1993). Weapon carrying among inner-city junior high school students: Defensive behavior vs. aggressive delinquency. *American Journal of Public Health, 83*, 1604-1608.