Running head: STUDENT SURVEY OF BULLYING BEHAVIOR

Student Survey of Bullying Behavior: Preliminary Development and Results from Six

Elementary Schools

Mary Helen Hunt, Joel Meyers, Olga Jarrett, John Neel

Research Report Number 1

Center for Research on School Safety, School Climate and Classroom Management

Georgia State University

Abstract

This study consists of preliminary development and exploratory analysis of a survey about bullying behavior, which led to development of the Student Survey of Bullying Behavior (SSBB). Participants in the preliminary development phase included 646 students in grades three through five from urban and suburban school districts in the Southeast. A revised survey was constructed based on the three-factor structure indicated by the principal components analysis and items were added with the expectation that the survey would expand to a five-factor structure. The SSBB was administered to a sample of 1101 students in grades three through five from a suburban school district in the Southeast. A principal components analysis indicated that a six-factor structure was the best fit for the data. The factors included: Victimization, Bullying Behaviors, Perceptions of Safety, Negative Coping, Assertive Coping and Passive Coping. Reliability coefficients for the scales ranged from .65 to .89. About 41% of students were identified as victims, 4.1% as bullies, 13.6% as bully/victims, and 41.1% of students were not involved. Comparisons between groups (gender, grade) on SSBB scale mean scores indicated that boys scored significantly higher than girls on the Bullying Behaviors, Perceptions of Safety and Negative Coping factors. Girls scored significantly higher than boys on the Assertive and Passive Coping factors. Developmental trends indicated that in higher grade levels fewer students were identified as victims or bully/victims and a greater number of students reported not being involved.

The Student Survey of Bullying Behavior: Preliminary Development and Results from Six

Elementary Schools

Bullying is a serious problem that affects an enormous number of students. Victims of bullying suffer repeated harassment over a period of time by one or more individuals that are older, bigger, more popular or in some way more powerful than the victim (Olweus, 1991, 1993). Bullying can take the form of physical aggression (hitting, kicking, pushing), verbal aggression (name-calling, abusive language) and indirect or relational aggression (spreading rumors, manipulation of friendships, excluding or ignoring) (Sullivan, 2000).

Bullying is often viewed as the first step in the development of more serious problems with aggression (Batsche & Knoff, 1994; Borg, 1999; Olweus, 1991; 1993). Children identified as bullies are more likely to be gang members in the future (Holmes & Brandenburg-Ayres, 1998) and have adult criminal records (Eron & Huesmann, 1984). Olweus (1991) reported that about 60% of boys identified as bullies in grades six through nine had at least one conviction by age 24, and 35-40% had three or more convictions (compared to 10% of the control group). Aggressive behavior has been shown to be stable over time. Farrington (1991) suggests that children who bully are likely to grow up to abuse alcohol and/or drugs, bully spouses and children and perpetuate the cycle of violence by instilling aggressive behavior patterns in their own children.

Peer victimization has been linked to many problems such as depression and suicide (Carney, 2000; Cleary, 2000; Craig, 1998; Greenbaum, 1989; Neary & Joseph, 1994; Rigby and Slee, 1999; Slee, 1995), low self-esteem/self concept (Callaghan & Joseph, 1995), self-blame, loneliness and anxiety (Andreou, 2000; Craig, 1998; Graham & Juvonen, 1998; Slee, 1994), lack of social support, poor mental health, poor physical health and somatic complaints (Rigby,

2003), lower perceptions of academic competence (Callaghan & Joseph, 1995) and significant difficulties with social relationships as adults (Gilmartin, 1987). Long-term, high frequency bullying can also interfere with educational progress of victims (Hazler, Hoover, & Oliver, 1992; Sharp, Thompson, & Arora, 2000). The effects of bullying can have serious and long-lasting negative outcomes for both victims of bullying and for those that perpetrate bullying (Olweus, 1993; Nansel, Overpeck, Pilla, Ruan, Simons-Morton, & Schiedt, 2001). An important first step in intervention is accurate assessment of the problem. In an age of emphasis on school accountability as well as a growing concern about youth violence, valid and reliable methods of assessing bullying can have important benefits.

Bullying may be the most common form of school violence and is likely to affect a large number of students (Batsche & Knoff, 1994). A survey of over 15,000 students in grades 6 through 10 across the United States indicated that 19.4% of students reported bullying others either "sometimes" or once a week or more. Nansel and colleagues (2001) reported almost 16% of secondary school students reported being bullied either "sometimes," or once a week or more. An estimated 29.9% of students reported moderate involvement in bullying, either as a victim, a bully or both. Stockdale, Hangaduambo, Duys, Larons & Sarvela (2002) found that 34% of 4th through 6th grade students in seven rural elementary schools reported that they had been bullied when asked, "How many times in the past week have you been bullied?" The same students reported the frequency with which both physical and verbal types of bullying occurred. Similar to the present study, the bullying behaviors were behaviorally defined rather than using the word "bullying" (i.e., instead of bullying using the term "pushed around"). When measured using the behaviorally defined questions, 66% of the student reported a physical bullying experience and 76% reported a verbal bullying experience at least once in a one week time-frame. Stockdale and

colleagues' study (2002) highlights the potential differences in estimates of bullying behavior as a function of way surveys are constructed.

In another study, 192 third through eighth grade students from three rural schools in Appalachia, United States, were surveyed (Dulmus, Theriot, Sowers, & Blackburn, 2004). Of these students, 82.3% of the students reported experiencing some type of bullying at least one time in the past three months. A number of students in the study reported being the victim of the following types of bullying behavior either 2 to 3 times a month, about once a week, or several times a week: called mean names, made fun of, teased (31%), excluded or ignored by others (19.1%), hit, kicked, shoved, or assaulted (18.4%), and others told lies or spread false rumors (25.4%).

Seals and Young (2003) surveyed 454 seventh and eighth grade students and found that 24% of the students were involved in bullying as either a bully or a victim. When asked for their perceptions of the frequency of bullying behavior during the past school year, 32.3% reported physical bullying to occur either "sometimes" or "often." Similarly 50.2% of students perceived name calling and 32.1% perceived exclusion to occur either "sometimes" or "often."

Reports of the prevalence of bullying generally indicate that boys bully others more often than girls (Borg, 1999; Seals & Young, 2003; Nansel et al., 2001). Previous research suggests that boys tend to be more physically aggressive and the victims of physical aggression more often than girls (Mynard & Joseph, 2000; Olweus, 1993), and girls tend to be more indirectly or relationally aggressive than boys (Crick & Grotpeter, 1995, Lagerspetz, Bjorkqvist, & Peltonen, 1988; Lowenstein, 1978; Mynard & Joseph, 2000). Thus, girls are more likely to bully other children using psychological means rather than physical means (Rigby & Slee, 1991) and view this kind of aggression as more hurtful than boys (Galen & Underwood, 1997; Rivers & Smith,

1994).

Children are more likely to feel unsafe in places where bullying is likely to occur. Borg (1999) indicated that on the playground, in the classroom, on the way home and on the way to school are the most common places where students report that bullying takes place. Previous research indicates students reporting higher levels of victimization also report lower perceptions of safety (Anderman & Kimweli, 1997). Surveys of secondary school students in the United States (Kingery, Coggeshall, & Alford, 1998) indicated that although a majority of students feel safe in school, a significant number (from 1.4 to 11.8% of students) felt unsafe either at school or on the way to or from school.

Coping styles of children who are victimized have been described as falling under one of two categories: either a problem-solving, assertive approach that is associated with deescalating the situation, or an aggressive, reactive approach that tends to worsen the situation (Wilton, Craig, & Pepler, 2000). Kristensen and Smith (2003) described five different categories of coping with bullying: Self-Reliance/Problem Solving, Distancing, Seeking Social Support, Distancing, Externalizing and Internalizing. In group of 305 Danish children in years four through nine, they found that girls reported using strategies of Seeking Social Support and Internalizing types significantly more often than boys. Boys reported using more Externalizing strategies. These researchers also found differences in coping strategies by age. Younger children used Seeking Social Support, Distancing, and Internalizing more often than older children.

Measuring the types of coping styles of children has direct implications for prevention and intervention of bullying behaviors. In a sample of 145 kindergarten through fifth grade children, Kochenderfer-Ladd (2004) found that children's emotional responses to bullying are likely to influence their use of coping strategies, which she described as revenge seeking,

cognitive distancing, advice seeking and conflict resolution. The types of coping strategies students select can lead to either increasing or decreasing the probability of further victimization. Researchers have found that found that coping with bullying through cognitive distancing or avoidance is a predictor of increased victimization (Hunter & Boyle, 2004; Kochenderfer-Ladd, 2004). Additionally, conflict resolution was associated with lower levels of victimization, and both advice seeking and conflict resolution were associated with a lower risk of victimization (Kochenderfer-Ladd, 2004).

Anonymous student self-reports are one of the most common methods of assessing bullying and victimization (Borg, 1999) and may be the most accurate method of obtaining information about the prevalence of violence among youth (Kingery et al., 1998). Considering that as many as 40 to 50% of students that are bullied do not tell an adult (Menesi, Elsea, Smith, Genta, Fonzi, & Constabile 1997; Whitney & Smith, 1993), it is important to consider the use of self-reports in the assessment of bullying and victimization.

There are two main goals of this study. The first is to use a set of preliminary data to guide instrument development, followed by exploratory analyses to further develop of an instrument measuring bullying behavior and related constructs. The second goal is to determine prevalence and make comparisons between grade level and gender on bullying behavior, victimization, perceptions of safety, and coping with bullying in a sample of elementary school students.

Regarding scale development, analyses of the preliminary data set are expected to produce a proposed factor structure for concepts relating to bullying. By revising the survey to improve measurement of these concepts, exploratory factor analysis is expected to provide support for a five-factor model. Establishing this factor structure constitutes the first step in the

process of developing the Student Survey of Bullying Behaviors.

Young students are expected to report higher levels of victimization than older students. Boys are expected to be identified as bullies more frequently than girls. Perceptions of safety are expected to be related to reported levels of victimization, with higher victimization relating to lower perceptions of safety.

Methods

Preliminary Data Collection

Participants

A total of 646 third through fifth grade students from two schools participated in data collection for the preliminary analysis. One school was located in a large inner city school system and the other was in a small city school system in the Southeast. A majority of the students from the inner city school were African American and approximately 96% received free or reduced price lunch. One hundred and seventy-nine third grade students participated from this school as part of a bullying prevention program. The students from the small city school district were approximately equally divided between African American, Hispanic and Caucasian ethnicities. Approximately 70% of elementary school students in the small city school district received a free or reduced price lunch. A total of 467 students participated from this school: 214 fourth graders, 241 fifth graders, and 12 students who omitted this information.

Instruments

The Bully Survey with revisions by Jarrett is a 42 item revised version of the Bully Survey (Garrity, Jens, Porter, Sager, & Short-Camilli, 1996). Jarrett enlisted the help of elementary school students to adapt the wording on the Bully Survey (Jarrett, Davies, Hunt, & Rogers, 2000). Significant changes to the survey included eliminating the word "bully,"

changing the anchors on Likert-type items, eliminating a number of items (such as the peer nomination section), expanding the safety section, and adding questions regarding coping and advice-giving regarding bullying situations.

Procedures

Data from two separate violence prevention programs were combined into a single database for the preliminary analysis. Data were collected from the large urban school system using passive consent procedures. The surveys were collected in the classroom on a pre and post basis to measure the effects of a bullying intervention. In the small city school, pre and post surveys were completed with active parental consent as part of an ongoing violence prevention program within the school. Only the surveys used for pre-testing were included in the database for the preliminary survey analysis.

Exploratory Study

Participants

Participants in the exploratory study included 1,101 third through fifth grade students from six schools within a suburban school district of approximately 13,000 students in the southeastern United States. Participation rates across schools ranged from 48 to 68%. The percentage of students in each school receiving free or reduced price lunch ranged from 12 to 66% with an average of 39%. The participants included 46% males and 54% females. Thirty-five percent of the students were in the third grade, 32% in the fourth grade, and 33% in the fifth grade. Sixty-four percent of the respondents were Caucasian, 24% African American, 6.4% Mixed/Other, 3.6% Hispanic, and 2% Asian/Pacific Islander.

Instruments

The Student Survey of Bullying Behavior (SSBB) consists of 73 items assessing three

factors that emerged in the preliminary analyses. Twenty-nine of 42 items were retained from the

Bully Survey with revisions by Jarrett, and 44 items were added. Additional items were added

using two procedures. First, the factor structure was analyzed and items were added that

appeared to fit best with existing items on each factor. Second, a review of literature about

measurement of bullying and victimization generated additional items. A significant number of

items were added to expand measurement within the third factor from eleven items to 22 items.

It was expected that the addition of these items would result in the factor splitting into separate

Bullying Behavior and Victimization factors, which would more accurately represent each

construct. Almost half the items were added to expand the measurement of bullying and

victimization behavior from the original six items indicated in the exploratory analysis on the

Bully/Victim factor into two separate factors that more thoroughly and accurately represented

each construct (i.e. victimization and bullying). A cover sheet was added that included a practice

question for the two types of questions on the survey and a behavioral description of bullying.

Procedures

A letter explaining the purpose and content of the survey was sent to parents of potential

participants at six elementary schools. Only students with a signed and returned consent form

participated in data collection. Homeroom teachers administered the survey to students in a

group setting by reading the items aloud. Teachers were provided instructions for survey

administration and were asked to emphasize the anonymous nature of the survey. In addition,

students were encouraged to be honest and assured that they could not be identified or punished

according to their responses. Surveys were collected over a 4-week period from the last 2 weeks

in November through the first 2 weeks in December 2001. Of the 1101 returned surveys, 20

surveys were eliminated due to partial completion or questionable response patterns, leaving a

total sample of 1081 surveys.

Results

In keeping with goals of this research, which include instrument development and reporting information about bullying behaviors and related constructs, the results are articulated under the headings "Instrument Development" and "Student Survey of Bullying Behavior Results." Within the section on instrument development, both results from the preliminary data and the exploratory study are presented separately.

Instrument Development

Preliminary Data Collection

Data from the Bully Survey with revisions by Jarrett were analyzed using a Principal Components Analysis (PCA). All items (42) were included in the PCA using a Promax rotation because the factors were expected to be correlated. Catell's scree test showed a 3-factor solution as the probable best fit. Additional analyses using Velicer's Minimum Average Partial (MAP) (O'Connor, 2000) test indicated a 3 component factor structure as the probable best fit. A PCA was conducted forcing the items into a 3-factor solution (Table 1). All items that did not have at least a .40 loading on one of the four factors were eliminated. Correlations between factors are presented in Table 2.

Factor one, Assertive Coping, indicated positive, adaptive responses or advice for being bullied or in response to seeing another child being bullied. This factor had 14 items that loaded at or above .40. Examples of items that defined this factor included: tell an adult, walk away from it, tried to talk it out with the kid and stop him or her from being mean, made friends with the child who was being hurt and I try to ignore him or her. This scale had a reliability coefficient of .85.

Factor two, Perceptions of Safety, included eight items with a focus on how safe students felt in specific locations both in and out of school. One item, "this is how I feel being in my school," which loaded at .62, had a different question stem from the others. However, this item seemed to measure the same construct as the items inquiring about safety. This 8-item scale had a reliability coefficient of .76.

The third, relatively weak factor included a combination of different items that reflected Negative Coping, Bullying, and Victimization. Negative Coping items focused on maladaptive responses to bullying in the form of actions taken when bullied, advice given, and actions taken by bystanders. Examples include: I fight back, I don't tell anybody, and I joined up with the kid who was being mean. There were also two items measuring victimization (how often are other children unpleasant to you by…) and two items measuring bullying behavior (how often are you unpleasant to another child by…). The 11 items on this factor had a reliability coefficient of .55.

Exploratory Study

 Principal Components Analysis. Data from the Student Survey of Bullying Behavior were analyzed using a Principal Components Analysis (PCA). All items (73) were included in the PCA using a Promax rotation with Kaiser normalization (Stevens, 1996). An oblique rotation was selected because it was assumed that the factors would be correlated. Several methods were used to determine the number of factors to retain. Retaining all factors with eigenvalues of 1 or great was not used because this typically results in overestimation of factors (O'Conner, 2000), particularly in large sample sizes (Stevens, 1996). Indeed, 17 factors had eigenvalues greater than 1. Results of Catell's scree test were somewhat ambiguous. Three factors were clearly evident. The fourth and fifth factors seemed to follow closely behind, and then the sixth and seventh factors. Velicer's minimum average partial (MAP) test (O'Connor, 2000) was also

conducted. Velicer's MAP test indicated a 6 component solution.

A PCA was conducted forcing the items into a 6-factor solution (Table 3). Given a sample size of 1000, the critical value of items loadings recommended for statistical significance is .162. However, particularly with larger sample sizes, Stevens (1996) recommends using a critical value of .400 or above for interpretative purposes. The first 3 factors emerged relatively strongly as Victimization, Bullying Behaviors, and Perceptions of Safety. The Coping factors separated into Negative Coping, Assertive Coping and Passive Coping. All items with less than .400 loading were eliminated. The remaining 61 items accounted for 41% of the variance. Means and standard deviations of factors are included in Table 4. Correlations between factor mean scores are presented in Table 5.

Factor one, Victimization, contained items that describe the frequency of students being the victims of various forms of bullying. This factor had 13 items that loaded above .45. Examples of items that defined this scale include: saying mean things to you, leaving you out, hitting, kicking or pushing you, and trying to turn friends against you. This scale had a reliability coefficient of .89 and accounted for 14.82% of the variance.

Factor two, Bullying Behavior, included items that describe the frequency of students bullying others. This factor included 11 items that loaded at or above .41. Examples of items that defined this scale include: saying mean things to them, teasing them, hitting, kicking or pushing them, and ignoring them. This scale had a reliability coefficient of .88 and accounted for 9.28% of the variance.

Factor three, Perceptions of Safety, included student perceptions of safety in specific locations both in and outside of school. This factor consisted of 11 items that loaded at .45 or above. Examples of items include: this is how safe I feel in the lunchroom, on the playground, in

the hall at school, and going to school. This scale had a reliability coefficient of .83 and accounted for 5.66% of the variance.

The fourth factor, Negative Coping, focused on maladaptive responses to bullying or negative advice given by adults. Ten items on this scale loaded at .43 or above. Examples of negative coping include: calling the kid names, spreading rumors about the kid, and not telling anybody. This scale had a reliability coefficient of .72 and accounted for 4.53% of the variance.

The fifth factor, Assertive Coping, focused on adaptive responses to bullying. This scale included 8 items loading at .40 or above. Examples include the following: I try to talk to the kid and tell him or her to stop, I tell somebody at home, and I tell the teacher or another adult at school. This scale had a reliability coefficient of .67 and accounted for 3.94% of the variance.

The sixth factor, Passive Coping, focused on responses in which the student took a passive approach to dealing with bullying. Rather than responding aggressively or assertively trying to cope with the bullying, some students reported generally avoiding or ignoring bullying situations. This scale included 6 items. Examples include: I try to ignore him or her, walk away from it, and avoid the mean kid. The reliability coefficient was .65 and accounted for 2.96% of the variance.

Prevalence of Bullying and Victimization

The incidence of bullying and victimization was determined according to the following guidelines. Behaviors occurring "weekly" or "daily" met criteria of bullying or victimization. This cut-off was selected because this form of bullying (once a week or more often) is of particular concern in recent intervention research (Nansel et al., 2000) and has been identified as a "severe" form of bullying by Olweus (1991). Classification as a bully or a victim required either weekly or daily frequency of at least of 2 out of 11 behaviors within the bully or victim

factors of the survey. The following groups of children were generated: Victim, Bully,

Bully/Victim and Not Involved. Children in the Victim group were identified as students with at

least two victimization items occurring at least weekly, and one or fewer bullying behaviors that

occurred at least weekly. Bullies were identified as students with at least two bully behaviors that

occurred at least weekly and one or fewer victimization items. Bully/Victims indicated two or

more victimization items and two or more bully behavior items. Students who did not meet the

previous criteria were identified as "not involved." Using these criteria, 41.3% of students were

identified as Victims Only, 4.1% as Bullies Only, 13.6% as Bully/Victims, and 41.1% as Not

Involved.

Differences between Groups

   Factor Scores of the SSBB. A multivariate analysis of variance (MANOVA) was

conducted to determine whether there were differences in the mean scale scores as a function of

gender or grade. The MANOVA was significant for gender and grade (Wilks Lambda, $\underline{F}_{6, 1058} =$

14.21, p < .001; $\underline{F}_{12, 2116} = 8.81$, p < .001). There were no significant gender and grade

interactions. Test of between subjects effects indicated significance gender differences for the

Bullying Behavior, Perceptions of Safety, Negative Coping, Assertive Coping, and Passive

Coping, F = 9.46, p < .01, F = 9.58, p < .01, F = 38.76, p < .001, F = 49.97, p < .001, and F =

11.34, p < .01. Boys had higher scores than girls on the Bullying Behavior, Perceptions of Safety

and Negative Coping factors. Girls indicated higher scores than boys on the Assertive Coping

and Passive Coping factors.

   Test of between subjects effects showed significant grade differences for the

Victimization, Perceptions of Safety, Negative Coping, Assertive Coping, and Passive factors, F

= 20.30, p < .001, F = 7.15, p = .001, F = 5.99, p < .01, F = 9.31, p < .001, and F = 3.59, p = 03.

Tukey's HSD post-hoc tests indicated that fifth grade students reported significantly lower levels of victimization than both third and fourth grade students, $p < .001$ and $p < .001$. Both fourth and fifth grade students scored significantly higher than third grade students on the Perceptions of Safety factor ($p = .05$, $p = .001$). Third grade students also endorsed more Negative Coping types of behaviors in comparison to fourth and fifth grade students, $p = .002$, $p = .009$. Post-hoc tests indicated that fifth grade students reported significantly lower assertive coping behavior than both fourth and third grade students, $p = .012$, $p < .001$. Third grade students reported significant high levels of passive coping than both fourth and fifth grade students, $p = .027$, $p = .041$.

Group Membership. The number of boys and girls were cross tabulated with group membership (Bully, Victim, Bully/Victim, Not Involved) and a chi-square statistic was used to determine if there were significant differences in group membership based on gender (Table 6). The null hypothesis was rejected, $\chi^2_{(3, N = 1072)} = 13.32$, $p = .004$. Follow-up chi-square analyses indicated that significantly more boys were identified a bullies than would be expected based on chance alone ($\chi^2_{(1, N = 1072)} = 5.94$, $p = .015$). The null hypothesis was retained in comparisons between gender and membership in the Victim, Bully/Victim, and Not Involved groups.

Grade level was cross tabulated with frequency of group membership (Victim, Bully, Bully/Victim, Not Involved) and a chi-square statistic was used to determine if there were significant differences in group membership based on grade. The null hypothesis was rejected, $\chi^2_{(6, N = 1081)} = 40.94$, $p < .001$. Follow-up chi-square analyses indicated significant grade effects for membership in the Victim, Bully/Victim, and Not Involved groups ($\chi^2_{(2, N = 1081)} = 10.90$, $p = .004$, $\chi^2_{(2, N = 1080)} = 11.12$, $p = .004$, $\chi^2_{(2, N = 1080)} = 31.22$, $p < .001$). The null hypothesis was retained in comparisons between grade and membership in the Bully group. The data indicated a general trend of less Victim and Bully/Victim membership and greater likelihood of being in the

Not Involved group as students progressed from third through fifth grades (Table 7).

Discussion

Instrument Development

Self-report measures may be the most reliable method of measuring peer victimization (Ahmad & Smith, 1994; Kingery et al., 1998) because many children do not tell adults that they are being bullied (Menesi et al., 1997; Whitney & Smith, 1993). Accurate assessment of bullying is an important step in the initial stages of program development and implementation. In addition, instruments with strong psychometric properties are essential to measure change in intervention programs. The Student Survey of Bullying Behavior was constructed based on moderately large set of preliminary and exploratory analyses, which constitutes a statistically sound basis for this first stage of scale development.

The factors measuring assertive, passive and negative coping behaviors emerged as potentially weak components of the survey with relatively lower reliability scores (all under .80) and accounting for the least amount of variance. This may have occurred because the items measuring coping required only a yes/no response as opposed to the 5-point Likert responses on the other survey items. Further, these coping factors had relatively fewer items when compared to the bullying, victimization and safety factors. As a result, future research is needed to substantiate the constructs of assertive, passive and negative coping in relation to bullying and to further develop items and response options that best exemplify these constructs.

The variance accounted for by the SSBB was relatively low (41%). However, this is not very meaningful given the conceptual nature of the instrument. The SSBB measures six different constructs relating to bullying. Further, the scales measuring bullying and victimization include items measuring verbal, physical and relational behaviors. The survey is intended to be a

comprehensive assessment of behaviors associated with bullying. Therefore, by design it does not measure one construct. By measuring varied behaviors associated with bullying, the results of the instrument are intended to guide research and target behaviors for intervention.

Student Survey of Bullying Behavior Findings

Bullying is a significant problem among elementary school children in this sample. In this study, 4.1% of students were identified as Bullies only. This is consistent with estimates of 2% of students in grades two through six (Olweus, 1991), 4% of students ages 8 to 11 (Whitney & Smith, 1993), and 5.2% of fourth through sixth graders identified as bullies in previous studies (Bentley & Li, 1995).

Estimates of bully/victims vary from study to study. This study indicated 13.6% of third through fifth graders identified as bully/victims. This is consistent with research by Austin and Joseph (1996) and Andreou (2000) that used similar procedures to calculate group membership and identified, respectively, 15% and 18.2% of elementary age participants as bully/victims. It is important to note that in the current study, group membership (Victim, Bully, Bully/Victim, Not Involved) was mutually exclusive. That is, a member of one group could not be a member of any other group.

Research reporting on victimization from bullying has also been varied with some studies reporting low numbers (i.e., 3% – 10%; Olweus, 1991; Bently & Li, 1995; Whitney & Smith, 1993) and some reporting much higher numbers (i.e., 34% using subjective assessment of bullying, and 66% and 76% when queried using behavioral descriptions of verbal or physical bullying; Stockdale et al., 2002). Similar to Stockdale, et al., the present study found relatively high rates of reported victimization (41% of respondents were identified as Victims).

The higher percentage of victimization reported in this study is an important finding that

underscores the serious nature of problems associated with bullying in today's schools. This finding, as well as the variability in number of victims, bullies and bully-victims reported in prior research, is likely to be a function of several measurement issues that were considered in developing the Student Survey of Bullying Behavior. For example, Olweus (1993) indicated that students reporting being bullied "now and then" over the last two months were considered victims. Rigby and Slee (1996) defined bullying as occurring "often" during the school year. In another report, a serious bully/victim problem was described as occurring about once a week or more frequently (Olweus, 1993). There is a potential range of frequency of behaviors that could be considered bullying (often, now and then, sometimes, about once a week, or most days) and these terms are ambiguous. Therefore, it can be difficult to compare results from study to study.

The present investigation was designed to overcome these problems in the following ways. First, an attempt was made to reduce ambiguous terms in this study by including specific frequencies (never, once or twice a year, monthly, weekly, daily) and by making it clear that the focus of this study is on severe bullying behaviors, defined as occurring weekly or more often. In addition, the Student Survey of Bullying Behavior avoids using the word "bullying," and instead, uses operational definitions of bullying behaviors. Finally, while many surveys use only one or a small number of items to define bullying and victimization, the present survey incorporates a range of items reflecting specific behaviors related to bullying or victimization. To be defined as a victim or bully, our definition requires that the student report weekly or daily occurrence of least 2 of the specific behaviors listed.

Significantly more boys were identified as bullies in this study than would be expected based on chance alone. This is consistent with previous literature (Andreou, 2001; Nansel et al., 2001; Whitney & Smith, 1993). Also in line with previous findings, boys and girls were equally

likely to be victimized (Andreou, 2001; Boulton & Smith, 1994, Perry, Kusel, & Perry, 1988).

Reports of victimization from large-scale studies have shown a clear decrease as children get older (Nansel et al., 2001; Olweus, 1993; Whitney & Smith, 1993). Indeed, this study indicated the highest level of victimization among third grade students, and the lowest level among fifth grade students. The grade level trends observed in much of the research about bullying can be affected by a number of variables, such as how grade levels are grouped within a school system, what kind of methodologies are used to assess rates of victimization, and potential age-related changes in the way children define bullying as they mature.

A majority of students in this study felt safe in school. Students felt the safest in media centers, classrooms and lunchrooms. Increased perceptions of safety in these areas are likely due to a high level of adult supervision. Although a majority of students felt safe, there was still a significant number who felt unsafe on the way to and from school (particularly on the bus) and within their neighborhoods. It was disturbing to find that 16.1% of children in this study felt unsafe or mostly unsafe on the school bus. It was clear that students in this study perceived a much lower level of safety on the school bus than any other area of school property. This has direct implications for the need for schools to develop more effective ways of improving student perceptions of safety while in transit to and from school. Overall perceptions of safety at school and on the way to and from school (excluding the school bus) are similar to survey results of students from the United States conducted by Kingery et al. (1998). In that study, a range of 1.4 to 11.8% of students felt unsafe either at school or on the way to or from school.

Most students in this study were able to identify effective means of coping in bullying situations, such as trying to talk to the student and telling him or her to stop, or telling an adult at home or at school. This factor also encompassed a number of items regarding pro-social

bystander behavior, such as making friends with the child being hurt and intervening on behalf of a victimized child. These kinds of behaviors were labeled Assertive Coping.

A number of students selected methods of coping that could be considered reactive aggression, such as fighting back, and planning revenge or trying to get the other student in trouble. These behaviors were labeled Negative Coping. A sizable number of students selected aggressive choices when asked what they would do if another child picked on them, such as fight back (26.3%), try to get the other kid in trouble (16.4%) and plan a way to get the kid back (19.4%). This has significant implications for the need of preventive intervention programs and social skills instruction to assist children in developing better mechanisms for coping with peer harassment.

The coping behaviors factors generated on the SSBB correspond to methods of coping described by Kochenderfer-Ladd (2004) and Hunter and Boyle (2004) in recent literature on children's coping with bullying. The Negative Coping, Assertive Coping, and Passive Coping factors on the SSBB are similar to the coping strategies described by Kochenderfer-Ladd (2004) (i.e., Conflict Resolution, Cognitive Distancing, Advice and Support, and Revenge) and Hunter and Boyle (2004) (i.e., Wishful Thinking, Seeks Social Support, Problem Focused, and Avoidance coping). Certain types of coping with bullying can lead to either a decrease of increase in victimization. For example, Kochenderfer-Ladd (2004) found that revenge seeking and cognitive distancing are likely to lead to increased levels of victimization, and conflict resolution, and seeking advice and support are likely to decrease victimization. Measurement of coping behaviors in reaction to bullying similar to those within the SSBB have emerged in recent literature as having important implications for designing interventions to reduce the likelihood of peer victimization (Hunter & Boyle, 2004; Kochenderfer-Ladd, 2004).

Practical Implications

Interventions that target changing the behavior of bystanders have the potential to

enhance bullying prevention efforts. Although not an explicit goal of this research, results of the

survey can be used to draw tentative recommendations for invention in this area. Peer norms of

acceptable behavior can be a tremendous influence on students. Often, interventions focus

heavily on educating and changing the behavior of students that are victimized or students that

bully. Items within the three factors from the SSBB associated with coping assess assertive,

negative and passive bystander behaviors. Future research could use these items to examine

differences in bystander behavior between groups. A significant number of students may be

inadvertently reinforcing bullying behavior by watching it and doing nothing. In many cases, the

students may not understand the harmful affects of bullying, or simply may not know how to

intervene. Passive bystanders could be specifically targeted for education about bullying and

taught skills for effective intervention.

With further development, the SSBB can potentially be a useful tool to collect data about

bullying and related constructs. More information about bullying has the potential to provide

insight about the relationships between victimization, bullying behavior, perceptions of safety,

negative coping, assertive coping and passive coping. It is important to learn more about these

relationships in the context of multiple moderating variables (such as gender and grade level).

Use of subsets of items within the victim and bully behavior scales also has the potential to

provide data about verbal, physical, and relational aggression, and about different types of

bystander behaviors and this could be a useful focus of future research.

The SSBB can be used to conduct a needs assessment with the goal being to plan

classroom, grade level or school-wide interventions. Along these lines, inclusion of methods of

peer nomination (such as the one described in Perry et al., 1988) in conjunction with the SSBB would allow the identification of individual students potentially in need of additional support and training. In addition to providing data to guide program planning, the SSBB can be used to assess pre and post differences in intervention programs.

Students are required by law to attend school. At a minimum, schools are obligated to maximize student perceptions of safety and to promote a social climate that inhibits bullying. Bullying has serious long-term negative affects on today's youth. Victims of bullying have difficulties in social-emotional functioning, have difficulty making friends, have poor relationships and feel lonely more often than children who are not victimized (Nansel et al., 2001). The psychological damage and physical harm implied in bullying can be prevented, and the problem of bullying must be systematically addressed. Prevention and intervention in this area has promise for improving the social climate within our schools and communities.

References

Ahmad, Y., & Smith, P. K. (1994). Behavioural measures: Bullying in schools. *Newsletter of the Association of Child Psychology and Psychiatry, 12*, 26-27.

Anderman, E. M., Kimweli, D. M. S. (1997). Victimization and safety in schools serving early adolescents. *Journal of Early Adolescence, 17*, 408-438.

Andreou, E. (2001). Bully/victim problems and their association with coping behavior in conflictual peer interactions among school-age children. *Educational Psychology, 21*, 59-66.

Andreou, E. (2000). Bully/victim problems and their association with psychological constructs in 8- to 12-year-old Greek schoolchildren. *Aggressive Behavior, 26*, 49-56.

Austin, S. & Joseph, S. (1996). Assessment of bully/victim problems in 8 to 11 year-olds. *British Journal of Educational Psychology, 66*, 447-456.

Batsche, G. M., & Knoff, H. M. (1994). Bullies and their victims: Understanding a pervasive problem in the schools. *School Psychology Review, 23*, 165-174.

Bentley, K. M., & Li, A. K. F. (1995). Bully and victim problems in elementary school and students' beliefs about aggression. *Canadian Journal of School Psychology, 11*, 153-165.

Borg, M. G. (1999). The extent and nature of bullying among primary and secondary schoolchildren. *Educational Research, 41*, 137-153.

Callaghan, S., & Joseph, S. (1995). Self-concept and peer victimisation among schoolchildren. *Personality and Individual Differences, 18*, 161-163.

Carney, J. V. (2000). Bullied to death: Perceptions of peer abuse and suicidal behaviour during adolescence. *School Psychology International, 21*, 213-223.

Cleary, S. D. (2000). Adolescent victimization and associated suicidal and violent behaviors.

Adolescence, 35, 671-682.

Craig, W. (1998). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality and Individual Differences, 24*, 123-130.

Crick, N. R., & Grotpeter, J. P. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*, 710-722.

Dulmus, C. N., Theriot, M. T., Sowers, K. M., & Blackburn, J., A. (2004). Student reports of victimization in a rural school. *Stress, Trauma, and Crisis, 7,* 1-16.

Eron, L. D., & Huesmann, L. R. (1984). The control of aggressive behavior by changes in attitudes, values, and the conditions of learning. In R. J. Blanchard & D. C. Blanchard (Eds.) *Advances in the Study of Aggression.* Orlando, FL: Academic Press.

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.* Hillsdale, NJ: Earlbaum.

Galen, B. R., & Underwood, M. K. (1997). A developmental investigation of social aggression among children. *Developmental Psychology, 33*, 589-600.

Garrity, C., Jens, K., Porter, W., Sager, N., & Short-Camilli, C. (1996). *Bully-proofing your school: A comprehensive approach for elementary schools.* Longmont, CO: Sopris West.

Gilmartin, B. G. (1987). Peer group antecedents of severe love-shyness in males. *Journal of Personality, 55*, 467-489.

Graham, S. Juvonen, J. (1998). Self-blame and peer victimization in middle school: An attributional bias. *Developmental Psychology, 34*, 538-587.

Greenbaum, S. (1989). *Set straight on bullies.* Malibu, CA: National School Safety Center.

Hazler, R. J., Hoover, J. H., & Oliver, R. (1992). What kids say about bullying. *The Executive Educator*, *14*, 20-22.

Holmes, S. R., & Brandenburg-Ayres, S. J. (1998). Bullying behavior in school: A predictor of later gang involvement. *Journal of Gang Research, 5,* 1-6.

Hunter, S. C. & Boyle, J. M. E. (2004). Appraisal and coping strategy use in victims of school bullying. *British Journal of Educational Psychology, 74,* 83 – 107.

Jarrett, O., Davies, G., Hunt, M. H., Rogers, K. (2000, April*). Fear, fighting, and bullying in high poverty environments: Survey results*. Paper presented at the American Educational Research Association. New Orleans, LA.

Kingery, P. M., Coggeshall, M. B., & Alford, A. A. (1998). Violence at school: Recent evidence from four national surveys. *Psychology in the Schools*, *35*, 247-258.

Kochenderfer-Ladd, B. (2004). Peer victimization: The role of emotions in adaptive and maladaptive coping. *Social Development, 13,* 329 – 349.

Kristensen, S. M., & Smith, P. K. (2003). The use of coping strategies by Danish children classified as bullies, victims, bully/victims, and not involved, in response to different (hypothetical) types of bullying. *Scandinavian Journal of Psychology, 44*, 479-488.

Lagerspetz, K. M. J., Bjorkqvist, K., & Peltonen, T. (1988). Is indirect aggression typical of females? Gender differences in aggressiveness in 11- to 12-year-old children. *Aggressive Behavior, 14*, 403-414.

Lowenstein, L. F. (1978). Who is the bully? *Home and School. 11*, 3-4.

Menesini, E., Eslea, M., Smith, P. K., Genta, M. L., Fonzi, A., & Costabile, A. (1997). Cross-national comparison of children's attitudes towards bully/victim problems in school. *Aggressive Behavior, 23*, 245-257.

Mynard, H. & Joseph, S. (2000). Development of the multidimensional peer-victimization scale. *Aggressive Behavior, 26*, 169-178.

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among U.S. youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association, 285*, 2094-2100.

Neary, A. & Joseph, S. (1994). Peer victimization and its relationship to self-concept and depression among schoolgirls. *Personality and Individual Differences, 16*, 183-186.

O'Connor, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, 32,* 396 – 402.

Olweus, D. (1991). Bully/victim problems among schoolchildren: Basic facts and effects of a school-based intervention program. In D. J. Pepler & K. H. Rubin (Eds.) *The development and treatment of childhood Aggression* (pp.411-447). Hillsdale, NJ: Erlbaum.

Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford: Blackwell.

Perry, D. G., Kusel, S. J., & Perry, L. C. (1988). Victims of peer aggression. *Developmental Psychology, 24*, 807-814.

Rigby, K., & Slee, P. (1991). Bullying among Australian school children: Reported behavior and attitudes toward victims. *Journal of Social Psychology, 131*, 615-627.

Rigby, K., & Slee, P. (1996). *Bullying in schools and what to do about it.* Melbourne, Victoria: The Australian Council for Educational Research.

Rigby, K., & Slee, P. (1999). Suicidal ideation among adolescent school children, involvement in bully-victim problems, and perceived social support. *Suicide and Life Threatening*

Behavior, 29, 119-130.

Rivers, I., & Smith, P. K. (1994). Types of bullying behavior and their correlates. *Aggressive Behavior, 20*, 359-368.

Seals, D., & Young, J. (2003). Bullying and victimization: Prevalence and relationship to gender, grade level, ethnicity, self-esteem, and depression. *Adolescence, 38,* 736 – 747.

Sharp, S., Thompson, D., & Arora, T. (2000). How long before it hurts?: An investigation into long-term bullying. *School Psychology International, 21*, 37-46.

Slee, P. T. (1994). Situational and interpersonal correlates of anxiety associated with peer victimisation. *Child Psychiatry and Human Development, 25*, 97-107.

Slee, P. T. (1995). Peer victimization and its relationship to depression among Australian primary school students. *Personality and Individual Differences, 18*, 57-62.

Stevens, J. (1996). *Applied multivariate statistics for the social sciences*. (3rd ed.). Mahwah, NJ: Erlbaum.

Stockdale, M. S., Hangaduambo, S., Duys, D., Larons, K., & Sarvela, P. D. (2002). Rural elementary students', parents', and teachers' perceptions of bullying. *American Journal of Health Behavior, 26*, 266-277.

Sullivan, K. (2000). *The anti-bullying book.* Oxford: University Press.

Whitney, I., & Smith, P. K. (1993). A survey of the nature and extent of bullying in junior/middle and secondary schools. *Educational Research, 35*, 3-25.

Wilton, M. M. M., Craig, W. M., & Pepler, D. J. (2000). Emotional regulation and display in classroom victims of bullying: Characteristic expressions of affect, coping styles and relevant contextual factors. *Social Development, 9*, 226-245.