

Are We Really Measuring Bullying?

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INTRODUCTION

- 30 percent of students in grades six through ten experience bullying at school (Bowman, 2001; Nansel et al., 2001).
- Best practice suggests that conducting an individual assessment of the school milieu is the best method to address bullying (Larson, Smith, & Furlong, 2002).
- Many bullying assessment materials were developed in response to the demand of schools and communities, as a result, the psychometric properties have not been adequately addressed (Cornell, Sheras, & Cole, 2006).
- As a result, bullying prevalence rates may vary based on methodology.
- This leads to the question: "how do we accurately assess bullying?" It is this question that has researchers debating over the best way to measure this multidimensional construct.
- There are a number of issues facing bullying assessment today.
 - whether or not to use the word "bully" in the assessment
 - whether a definition is provided,
 - whether the assessment captures the essential components of bullying (e.g. repetition, imbalance of power, and intention of harm).
- In order to assess instrument validity, substituted measures of bullying behavioral correlates must be used.
- Office referral data have been consistently identified as a predictor of future delinquent behavior. (Sharkey, Furlong, & Yetter, 2006). In addition, higher levels of relational and physical aggression and lower levels of prosocial behavior have been consistently associated with bullying behavior (Zimmer-Gembeck et al., 2005).
- This poster will address current issues related to bullying assessment and illustrate a case example of the different prevalence rates that can be generated based on different methodologies; all of which purport to measure bullying. In addition, each prevalence rate will be compared to psychosocial variables related to bullying behavior in an effort to determine the most useful measurement method.

PROCEDURES

- Data were collected in the Fall of 2005 from fifth, sixth, seventh, eighth, and ninth grade students at nine Midwestern schools.
- Active parental consent and youth assent were obtained for each student participant.
- Student participants completed a series of instruments which were administered during the school day and took approximately 1 hour to complete.
- Four different methodologies were used to derive bully/victim status (See Table 1).

Table 1. Different methodologies for assessing bullying

| BVS-Type | Survey | How bullying was assessed |
|----------|--------|---|
| BVS 1 | BS-S | Endorsing "Yes" to involvement in bullying as a bully, victim, or bully-victim. |
| BVS 2 | BS-S | Endorsing "yes" and bullying occurring "one or more times a day" or "one or more times a week" excluding "one or more times a month." |
| BVS 3 | GAOP | Endorsing engagement in bullying "about once a week" or "several times a week" and excluding "once or twice." |
| BVS 4 | GAOP | Endorsing engagement in bullying at least "once or twice." |

PARTICIPANTS

- Participants were recruited as part of a larger longitudinal investigation examining school experiences across cultures.
- 1170 (623 females and 547 males) students participated in this study from 9 Midwestern public schools.
- Students were grouped into "bullies"; students who report bullying other students, or "no-status"; students not involved in bullying, based on the four methodologies. Students who were categorized as victims or bully victims were not included in the analyses.
- The participants consisted of 118 fifth-graders, 370 sixth-graders, 312 seventh-graders, 248 eighth-graders, and 125 ninth-graders.
- Ages ranged from 9-16 years old ($M = 12.20$; $SD = 1.29$).
- Racial distribution of the students who participated is as follows: 74.2% Caucasian, 6.4% Biracial, 5.1% African-American, 4.3% Latino/Hispanic, 2.7% "other," 2.2% Asian American, 1.7% Asian, 1.1% Middle Eastern, 1.0% Native American, and .5% Eastern European.

MEASURES

- The Bully Survey-Short (BS-S; Swearer et al., 2002) is a 6-item self-report measure designed to assess the occurrence and frequency of bullying behavior, victimization, and observation of bullying. This measure has been modified from the Bully Survey-Student Version (Swearer, 2001). Bully/victim status is derived by participants reported involvement in bullying. Participants are classified as bullies, victims, bully/victims, bystanders, or not involved. Bullying is defined as: "Bullying happens when someone hurts or scares another person on purpose and the person being bullied has a hard time defending himself or herself. Usually, bullying happens over and over." The coefficient alpha for the BS-S for this study was .401

- Getting Along with Other People (GAOP; Taki et al., 2006) consists of 27 self-report items designed specifically for a larger international study. It is designed to assess the frequency of bullying behaviors and other social interactions. Since the term "bullying" can have different connotations in other cultures, items are worded as to avoid using this term. The coefficient alpha for the BS-S for this study was .44.

- The Crick Relational Aggression Scale (CRA; Crick & Grotpeter, 1995) is a 15-item self-report measure used to assess how often children engage in aggressive and prosocial behaviors. The CRA is based on Crick and Grotpeter's (1995) Children's Social Behavior Scale (CSBS) covers 6 basic scales (Relational Aggression, Physical Aggression, Prosocial Behavior, Verbal Aggression, Inclusion, and Loneliness). Responses to items are summed for total scores. The subscales have shown acceptable internal consistency, ranging from .66 to .82 (Crick & Grotpeter, 1995). In the present study, the internal consistency reliability using coefficient alpha was .73 for the total score. The coefficient alpha for the relational aggression subscale that was analyzed in the present study was .83.

- Office Referrals. Data were collected for each participant. Information gathered included: the number of referrals received, the type of referral (e.g., physical fighting, noncompliance, etc.), and the administrative response (e.g., detention, suspension, removal of privileges).

RESULTS

Frequencies (see Figure 1)

- BVS 1: 5.9% bullies; 55.5% no status
- BVS 2: 2.8% bullies; 81.4% no status
- BVS 3: 5.1% bullies; 81.7% no status
- BVS 4: 11% bullies; 35.8% no status

Correlations (see Table 2)

- Bullies were positively correlated with number of office referrals, physical aggression, and relational aggression across all methodologies.
- Bullies were negatively correlated with involvement in prosocial behavior.
- No-status students were consistently negatively correlated with office referrals, relational aggression, and physical aggression and were positively correlated with engagement in prosocial behavior.

Linear Regression (see Table 3)

- A linear regression analysis was conducted to evaluate how each bully/victim status predicted bullies' involvement in prosocial behavior.

Poisson Regression (see Table 4)

- A Poisson regression analysis was conducted to evaluate how bully/victim status predicted bullies' number of office referrals, and engagement in physical aggression.

Table 3. Linear Regression

| | Estimate | Standard Error | Log Likelihood |
|---------------------------|-----------|----------------|-------------------|
| <i>Prosocial Behavior</i> | | | |
| BVS 1 | -1.1750** | 0.4385 | -3118.2978 |
| BVS 2 | -1.2784* | 0.6255 | -3119.7916 |
| BVS 3 | -1.9590** | 0.4644 | -3101.5952 |
| BVS 4 | -0.7865* | 0.3273 | -3107.5459 |

* $p < .05$, ** $p < .01$

Table 4. Poisson Regressions

| | Estimate | Standard Error | Log Likelihood |
|------------------------------|----------|----------------|-------------------|
| <i>Office Referrals</i> | | | |
| BVS 1 | 1.3629** | 0.1242 | -791.8156 |
| BVS 2 | 1.3416** | 0.1644 | -813.0912 |
| BVS 3 | 1.1558** | 0.1460 | -802.2166 |
| BVS 4 | 1.1407** | 0.1117 | -783.2880 |
| <i>Relational Aggression</i> | | | |
| BVS 1 | 0.5998** | 0.0583 | 177.866 |
| BVS 2 | 0.7888** | 0.0742 | 179.2291 |
| BVS 3 | 0.6494** | 0.0601 | 176.4095 |
| BVS 4 | 0.4965** | 0.0466 | 178.2203 |
| <i>Physical Aggression</i> | | | |
| BVS 1 | 0.8242** | 0.0823 | -1110.2465 |
| BVS 2 | 0.8838** | 0.1102 | -1125.8639 |
| BVS 3 | 0.9201** | 0.0837 | -1098.623 |
| BVS 4 | 0.7400** | 0.0668 | -1093.9216 |

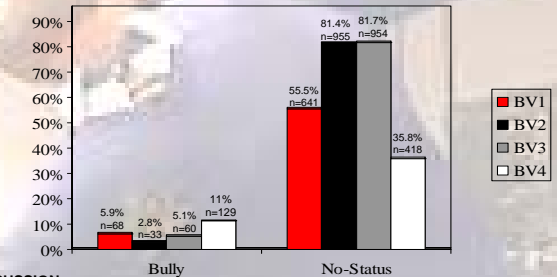
Note: Larger Log Likelihood values indicate better model fit. * $p < .05$, ** $p < .01$

Table 2. Correlation of measurement methods with behavioral correlates

| | Office Referrals | Relational Aggression | Physical Aggression | Prosocial Behavior |
|------------|------------------|-----------------------|---------------------|--------------------|
| Bully1 | .141* | .154* | .200* | -.078* |
| Bully2 | .087* | .164* | .161* | -.060* |
| Bully3 | .093* | .165* | .221* | -.123* |
| Bully4 | .150* | .161* | .220* | -.070* |
| No Status1 | -.073* | -.136* | -.098* | .038 |
| No Status2 | -.087* | -.190* | -.136* | .072* |
| No Status3 | -.053* | -.175* | -.140* | .092* |
| No Status4 | -.065 | -.226* | -.174* | .048 |

* $p < .05$, ** $p < .01$

Figure 1. Prevalence of bullies & no-status students based on four methodologies



DISCUSSION

- The frequency of bullying behavior appears to vary across all BVS measurement methods.
- Despite this variability, it appears that all BVS types were significantly correlated with the psychosocial variables. As suspected, bullies received more office referrals, engaged in more relationally and physically aggressive behavior, and engaged in less prosocial behavior.
- Figure 1 indicates that BVS 1 and 4 are more similar whereas BVS 2 and 3 are more similar in terms of frequency. These similarities may be reflective of the methodology in that BVS 1 and 4 measure engagement in bullying behavior whereas BVS 2 and 3 assess frequency.
- The linear and Poisson regression analyses found that all of the measurement methods were significantly related to each psychosocial variable.
- It appears that BVS 4 has the best model-fit with office referrals and physical aggression.
- BVS 2 and BVS 3 have the best model-fit with relational aggression and prosocial behavior, respectively.
- Bullying assessment measures that do not use the word "bullying" and are less stringent in their definition of "frequency" will be more closely related to assessments of office referrals and physical aggression.
- However, since bullying is considered to be a subset of aggression and frequency is one defining factor that differentiates it from aggression, one would not expect such measures to be equivalent.

LIMITATIONS

- The measures used in this study were self-report. Although research has illustrated the accuracy of this method, common method variance may have impacted the results. Future research utilizing observations may be more accurate in validating bullying assessment instruments.
- Imbalance of power was not specifically addressed in either assessment. Future research should address this component of bullying assessment.
- The low coefficient alphas on the BS-S and GAOP calls into question the reliability of these assessments. Future research should focus on the use of psychometrically sound instruments.
- More research is needed to determine the most accurate method for assessing involvement in bullying.