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Assessing the Reliability and Validity of Student Self-Reports of Campus Violence

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Responses of adolescents who failed reliability and/or validity checks on a school climate and violence questionnaire (n = 109) were compared with a randomly selected matched group of students (n = 109) who answered consistently and accurately. Results indicated significant differences between the two groups on indexes of school violence victimization, perceived danger at school, peer connections, and course grades. The most critical finding was that students with invalid and/or unreliable responses reported significantly more violence victimizations than the comparison group. The need for research addressing the accuracy of school violence self-reports and concerns about the accuracy of existing school violence prevalence information are discussed.

INTRODUCTION

Despite the general public's high level of concern about violence that occurs at school (Elam and Rose, 1995), data from school violence studies have provided varied results. Some studies found deep concerns about the fundamental level of safety on school campuses. Harris (1993), for example, reported that only 21% of students believed their peers were safe in school.

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A survey conducted by the American School Health Association (1989) found that 14% of students reported being "robbed" and 14% "attacked" at school or on the school bus. In contrast, findings from the *School Crime Supplement to the National Crime Victimization Survey* suggested violence on campuses is less rampant (Bastian and Taylor, 1991; Whitaker and Bastian, 1991). In this study, 9% of the students reported being a victim of various personal and property crimes on a school campus in the previous 6 months, but only 2% reported victimization involving any form of personal violence. In other studies, 99% of teachers and 90% of students reported feeling safe at their own schools (Metropolitan Life, 1993) and only 2%–4% of educators indicated that violence was a "very big" problem at their school (Dear *et al.*, 1995). These latter findings are consistent with those reported in *Violent Schools, Safe Schools* (National Institute of Education, 1978) and suggest that although there is heightened public concern about school violence, students and educators generally feel their "own" schools are safe. One possible explanation as to why these school violence findings are incongruent has been the lack of uniformity in measurement procedures used in school violence studies.

Issues Involving Self-Report Data

Due to time and cost benefits, self-report surveys are the most frequently used procedure for assessing rates of violence on school campuses. Fitzgerald and Mulford (1986) contended that practical and ethical issues make self-reports the only feasible means to obtain information such as school violence victimization. However, when having individuals subjectively rate their own behavior or situation, it is necessary to assess the reliability and validity of these reports, a prerequisite that has been conspicuously overlooked in school violence research (Furlong and Morrison, 1994). Some insights into the methodological challenges facing researchers who study school violence can be found in the general survey research methodology literature.

Several types of errors in recall can reduce accuracy of self-reports including telescoping, saliency of event, availability heuristic, and anchoring. Telescoping error refers to a tendency to report events as occurring earlier or later than they actually transpired. Most research has indicated shorter recall periods lead to decreased bias in reporting, yet if length of recall is too short, a tendency to telescope events into the specified time period often occurs (Eisenhower *et al.*, 1991). For example, if a respondent is asked whether he or she was a victim of a crime at school in the past 30 days, the respondent may telescope this rare event into the given time period, when in actuality the incident occurred before the specified time

range. Recent time periods should be more suited for recall of frequent and habitual incidents, such as persistent schoolyard bullying or harassment.

Saliency of an event also influences memory recall. Events become salient when emotionality is involved and when they reinforce personal values, beliefs, and self-image (Eisenhower *et al.*, 1991). Strongman and Russell (1986) reported that students recount emotionally charged material more accurately than emotionally neutral components. Given this finding, one would suspect that incidents of campus violence fall into the class of highly salient events for students, suggesting that memory would be enhanced, a positive condition for using self-report procedures.

Other relevant issues that influence retrieval of information are heuristics (Tversky and Kahneman, 1990). The availability heuristic is activated when the availability and speed with which an incident is recalled influences judgments regarding the frequency of that event. Stronger associations lead to increased judgments of frequency. When an event is rare, estimation of occurrence is usually reported by recalling the specific incidence, whereas when an event occurs repetitively, a heuristic may be utilized to estimate frequency of occurrence (Eisenhower *et al.*, 1991). Thus, estimations frequently depend upon the significance of the event for the individual, suggesting that an availability heuristic may lead to overestimations of rare salient events and underestimation of more habitual or routine events. This has implications for campus violence research in that a student may overestimate the presence of guns on campus (a relatively rare, yet salient event), whereas he or she may underestimate the frequency of habitual bullying (a frequent and routine event). Similarly, extensive media coverage of school violence may make it easier to access information about violent incidents that occur on campuses. All of these issues would, of course, raise questions about the accuracy of school violence self-reports.

Other heuristics also may potentially influence self-reports. The anchoring and adjustment heuristic affects a response when an individual determines an appropriate initial response or anchor and then adjusts his or her report based on that anchor (Eisenhower *et al.*, 1991). For example, if students believe a high level of campus crime is a normal condition of all schools, they may adjust their self-reports of violence on their school campuses to be consistent with this perceived general norm. Depending on the circumstances present on each campus, this could lead to either over- or underestimations.

When examined from an information processing perspective, it is apparent that self-report assessment is not as straightforward as it might appear. In addition, assessment involving youth becomes more convoluted. Clarke-Stewart *et al.* (1985) contended that children often remember and distort information depending on their age and cognitive ability, leaving

the accuracy of self-reports questionable. Also, written questions and/or statements must be appropriate for the age and skill level of the target children (Witt *et al.* 1988). Gorsuch *et al.* (1972) found a relationship between a child's verbal ability and the reliability of his or her self-report of locus of control. These authors suggest that children with lower verbal ability responded randomly to test items because they were unable to fully understand the questions. One would hypothesize that a similar dynamic could be true for school violence self-reports.

Given the many methodological considerations with using student self-reports to measure the incidence and correlates of school violence, it is surprising that most research has been published without any reference to reliability or validity checks. To date, two studies examining an area closely related to school violence broached the issue of reliability when using youth self-report information. In their examination of gun acquisition and possession in 6 correctional facilities and 10 high schools, Sheley and Wright (1993) calculated the percentage of youth who failed to respond with logical consistently to 11 (for students) or 14 (for delinquent inmates) pairs of items. Inconsistent responses averaged 1.5% (range 0.7–3.0) for the student sample, and 2.4% (range 1.2–3.4) for the inmate sample. The authors contended that the reliability was higher than might be expected for the type of respondents and subject surveyed, a promising outcome that should be cross-validated.

In another study, Shapiro *et al.* (1995a) administered a gun and violence attitude scale to 1,619 youth in Grades 3–12. In their survey, 3 of 61 items were repeated in the questionnaire and scored for consistency of response. They found that 17.4% of their sample was excluded due to excessive missing responses or written comments indicating that the questionnaire was not answered conscientiously. Thus, the limited information available from studies about reliability of gun attitudes coupled with the void in research concerning school violence report accuracy suggest a need to begin a closer examination of school violence self-reports.

Purpose of the Study

Because the subject of violence in our schools is an unsettling and daunting issue, it is essential that accurate data are gathered from surveys. Due to the relatively low incidence of extreme forms of school violence incidents, any error margin could render current and past information quite difficult to interpret. Given these concerns, two fundamental questions were examined in this study. First, in surveys of student self-reports of campus violence, how often do students fail reliability and/or validity checks em-

bedded in the questionnaire? Second, are the general response patterns of those students who fail reliability and/or validity checks different than students who have reliable profiles? This information is needed to accurately assess school violence incidence reports.

METHOD

Participants

The data for this study were taken from a larger study of school violence involving 6,189 students[3] in Grades 5–12 attending 26 schools in two suburban school districts in southern California. The sample contained 45.7% males and 54.3% females (see Furlong *et al.*, 1995a). The communities in which the schools were located have some of the lowest official arrest rates of moderate-sized communities in the United States.

The present study examined responses of 218 students. One group of students failed a reliability and/or validity check (Rejected group, $n = 109$; 40 failed reliability check only, 24 failed validity check only, and 45 failed both reliability and validity checks). The students in the Rejected group were then matched with a randomly selected group of students who passed both the reliability and validity check (Valid group, $n = 109$). Students were matched on gender, grade, and school attended. Each group had 63 males (57.8%) and 46 females (42.2%). The students were in Grades 5–12, with the majority (50.5%) in Grades 7 and 8.

Instrument

The *California School Climate and Safety Survey* (CSCSS; Furlong and Morrison, 1995) is a four-page, 102-item, self-report questionnaire designed to measure student perceptions of campus climate, school violence victimization, hostility, and social support. Originally cultivated as a needs assessment tool to augment the school safety planning model described in *Safe Schools: A Planning Guide for Action* (California Department of Education, 1989), this survey has been field tested and used in previous studies (Furlong *et al.*, 1995; Morrison *et al.*, 1994). Furlong *et al.* (1991)

[3]All surveys were previously screened and excluded from analysis for (a) incomplete protocols (more than four missing items), (b) obvious response sets, and (c) responses out of valid range. All of the remaining surveys had no obvious reason for exclusion from analysis. Usable surveys represent approximately 70% of all surveys. This figure is consistent with other large scale youth self-report surveys (e.g., Shapiro *et al.*, 1995b).

found the attitude portion on the CSCSS to have an internal reliability of .88.

Reliability and Validity Checks

In order to assess response consistency, a comparison was made between two items that asked about feelings of personal safety at school: "I feel perfectly safe at this school" and "I do not feel safe at this school" (from the *National Educational Longitudinal Study* questionnaire, Green *et al.*, 1995). If a student responded consistently, agreement on one item should correspond to disagreement on the other item, or the reverse. If responses to these two personal safety items were the same (either *agree* or *disagree* to both items), the student was assigned to the Rejected group.

A validity check item representing an improbable situation ("I took ten field trips in the previous month") was randomly embedded among 21 other items pertaining to campus violence. Students who answered "yes" to this implausible item were considered to be answering questions haphazardly and were assigned to the Rejected group.

Social Desirability

Three items pertaining to the quality of student responses in the area of social desirability (e.g., "I tell the truth every single time") were randomly dispersed among the attitude portion of the instrument to check for a positive or negative response tendency. A 5-point Likert response scale (range of 1 = *strongly disagree* to 5 = *strongly agree*) was used with high scores being associated with a socially desirable response pattern.

School Violence Victimization Index

To assess victimization on school grounds, students were asked if they had personally experienced any of 21 different types of violent events involving *bullying* (e.g., "Someone threatened to hurt you"), *harassment* (e.g., "Someone sexually harassed you—made unwanted sexual comments to you"), *property intrusion* (e.g., "You had personal property stolen"), *serious physical intrusion* (e.g., "You were hit with a club, pipe, or rock, etc., by Someone trying to hurt you"), or *threats related to deviant behavior* (e.g., "You were bullied, threatened, or pushed around by gang members"). A school violence victimization index was calculated for each student by summing the incidents that were endorsed by each respondent. For the larger

sample used to derive the subset groups in this study, this index was highly skewed, with more than one half of the respondents (53%) reporting they experienced three or fewer incidents in the preceding month (Furlong *et al.*, 1995). Overall internal reliability of this index with the total sample of 6,189 students is .86 (Furlong *et al.*, 1995).

Comparison Indexes

In addition to victimization information, other items assessed characteristics and attitudes of students in order to elucidate similarities and differences between the Rejected group and Valid group. Analyses were conducted utilizing the following indexes: (a) Perceived Danger, (b) Hostility, (c) Interpersonal Trust, (d) Belonging to School, (e) Teacher Connections, (f) Peer Connections, (g) Like/Dislike School, (h) Average Course Grades, and (i) Preoccupation with School Violence. Index scores were calculated by finding the mean of all items comprising each index. If an index contained only one item, the item response was the index score. Because a 5-point Likert scale was utilized for each item, all index scores range from 1 to 5. A brief description of each index follows.

Perceived Danger

A perceived general campus danger index tapped students' perceptions about the occurrence of dangerous activities on campus. Students were asked to indicate how often each of seven kinds of behaviors occurred on their school campus (drug use, vandalism, alcohol consumption, fights, theft, bullying, and weapons possession) by utilizing the following 5-point scale: (1) *not at all,* (2) *a little,* (3) *some,* (4) *quite a bit,* (5) *very much.* The items were modified from the *Minnesota Adolescent Health Survey* (Blum *et al.*, 1989). Reliability analysis with the total sample of 6,189 students indicates an inter-item reliability of .80 (Furlong *et al.*, 1995).

Hostility

The Hostility subscale, modified from the *Buss and Perry Aggression Inventory* (Buss and Perry, 1992), was used to measure generalized expectations for negative interpersonal outcomes. This scale includes seven items (e.g., "When people are especially nice I wonder what they want" and "Other people always seem to get the breaks"). A 5-point Likert response scale (1 = *strongly disagree* to 5 = *strongly agree*) was used. Reliability analy-

sis with the total sample of 6,189 students indicates an inter-item reliability of 0.65 for this scale (Furlong *et al.*, 1995).

Interpersonal Trust

This subscale was measured by the following item: "You can really trust people at this school." Responses were provided on a 5-point scale ranging from (1) *strongly disagree* to (5) *strongly agree.*

Belonging to School

This index was used to determine students' feelings of school attachment. This was assessed by the items "I feel I belong at this school" and "I am comfortable talking to teachers about problems I might have." Responses were made using a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree.*

Like/Dislike of School

In order to assess satisfaction with school, the item "How do you feel about going to school?" was included. Possible responses included (1) *I like school very much,* (2) *I like school quite a bit,* (3) *I like school,* (4) *I don't like school very much,* and (5) *I hate school.*

Peer and Teacher Connections

In order to assess social relationships in school, students were asked how many other students at school they consider to be good friends (Peer Connections), and with how many teachers they would be able to talk about their problems (Teacher Connections). Students could respond with 0, 1, 2, 3, and 4 or more, to each item.

Preoccupation with School Violence

Students were asked what they are MOST worried about in order to specifically assess preoccupation with school violence. Possible responses were (1) *Getting good grades,* (2) *Violence in your school,* (3) *Being accepted by your peers,* (4) *Violence in your neighborhood,* (5) *Getting along with your parents and other family members.* This forced-choice item provides a meas-

ure of prominent preoccupation or worry about school violence. Because responses to this item were scored on a nominal scale, a chi-square test was performed and this index was not included in the parametric analyses.

Average Course Grades

Students were asked to indicate their average course grades. Possible responses were (5) *mostly A's,* (4) *mostly B's,* (3) *mostly C's,* (2) *mostly D's,* or (1) *mostly F's*. This item has been used in studies of adolescent health conditions (Blum *et al.*, 1989).

Procedure

Data were collected during May and June 1994. Packets containing student questionnaires (printed on a single 11 × 17 inch sheet), machine-readable scantron response sheets, detailed administration instructions, and a sample completed response sheet were distributed to teachers. All questionnaires were administered during the same class period at participating schools. The survey was anonymous and students were specifically instructed not to include their name or any other identifying information.

All response sheets were individually reviewed and screened for inclusion in the analysis through a three-step process. First, all response sheets were excluded from analysis for (a) incomplete protocols (more than four missing items), (b) obvious response sets, and (c) responses out of valid range. Second, all surveys that failed the reliability and/or validity checks described earlier were assigned to the Rejected group. Finally, the comparison group was comprised of responses provided by students matched on gender, grade, and school of attendance who were randomly sampled from all remaining response sheets that had passed the aforementioned screening procedures.

RESULTS

In an attempt to delineate differences between members of the Valid and Rejected group on the different indexes, the following analyses were conducted.[4]

[4]Analyses conducted with the subcategories within the Rejected group (unreliable only, invalid only, and both unreliable and invalid) compared with the combined Rejected group yielded no significant differences by subcategory so all subsequent reporting includes only the combined Rejected group.

Social Desirability Findings

A Pearson chi-square test indicated a significant difference in social desirability between the two groups, $\chi^2(3) = 8.70$, $p = .03$. Students from the Valid group tended to respond in a more socially desirable manner than the Rejected group members. Therefore, social desirability was used as a covariate in the following multivariate analysis of covariance (MANCOVA).

MANCOVA

To ascertain whether group (Valid vs. Rejected) and gender (M vs. F) differences on the indexes were present, a MANCOVA was conducted with the mean scores for nine indexes (*Victimization*, *Perceived Danger*, *Hostility*, *Interpersonal Trust*, *Belonging to School*, *Teacher Connections*, *Peer Connections*, *Like/Dislike School*, and *Average Course Grades*) used as dependent variables, group and gender as independent variables, and social desirability as the covariate.

Results of the MANCOVA indicated a significant main effect for group, $F(9, 190) = 7.53$, $p = .001$. No significant main effect for gender was found, $F(9, 190) = 1.20$, $p > .30$. The interaction was nonsignificant, $F(9, 190) = 1.35$, $p > .22$. Because no main effects or interaction were detected, all subsequent analyses are exclusively between Valid and Rejected groups.

For the group main effect, significant differences were found on the univariate analyses for: Victimization, $F(1, 198) = 62.91$, $p < .0001$; Danger, $F(1, 198) = 8.43$, $p = .004$; Grades, $F(1, 198) = 4.41$, $p = .037$; and Peer Connections, $F(1, 198) = 6.76$, $p = .01$.

Rejected group members reported *more victimizations* ($M = 9.95$, $SD = 5.65$ vs. $M = 4.40$, $SD = 3.83$), *higher perceptions of dangerous conditions on the school campus* ($M = 3.08$, $SD = .94$ vs. $M = 2.62$, $SD = .79$), *lower grades* ($M = 2.42$, $SD = 1.24$ vs. $M = 2.83$, $SD = 1.10$), and *fewer peer connections* ($M = 4.13$, $SD = 1.24$ vs. $M = 4.54$, $SD = 1.11$). The mean scores for all indexes included in the MANCOVA for Rejected and Valid group members are shown in Table I.

To further facilitate an understanding of the differences between Valid and Rejected group responses on the significant indexes, percentage of students in each group who responded in the "low" (defined as an index score between 1.0 and 2.0 on the 5-point Likert scale) or in the "high" (defined as an index score between 4.0 and 5.0 on the 5-point Likert scale) range were calculated. The following patterns were found:

Table I. Descriptive Statistics and Univariate ANOVA Results for the Valid and Rejected Group Members on Nine Indexes

	Means	*SD*	*F* Values	*p* Values
Victimization				
Valid	4.40	3.83	62.91	**.000**
Rejected	9.95	5.66		
Danger				
Valid	2.62	0.79	8.43	**.004**
Rejected	3.08	0.94		
Peer connections				
Valid	4.53	1.11	6.76	**.01**
Rejected	4.13	1.24		
Grades				
Valid	2.83	1.10	4.41	**.037**
Rejected	2.42	1.24		
Like/dislike school				
Valid	3.33	1.25	0.55	.459
Rejected	3.23	1.30		
Teacher connections				
Valid	2.73	1.26	1.02	.314
Rejected	2.42	1.37		
Hostility				
Valid	2.88	0.63	1.06	.305
Rejected	2.78	0.73		
Trust				
Valid	2.70	0.85	0.31	.578
Rejected	2.49	1.07		
Belong				
Valid	3.07	0.95	1.79	.183
Rejected	2.81	0.95		

1. Only 2% of Rejected group members reported being a non-victim of school violence, as compared to 15% of Valid group members.
2. On the index of perceived danger, 71% of Valid group members reported low levels, as compared to 43% of Rejected group members.
3. Of Valid group members, 5% reported low levels of peer connections, compared to 12% of Rejected group members.
4. In terms of course grades, 69% of Valid group members reported high grades as compared to 54% of Rejected group members.

DISCUSSION

The largest and most powerful difference found in this study was that students in the Rejected group reported dramatically higher ratings of school violence victimizations than students in the Valid group. Differences of a lesser magnitude were found in terms of higher ratings of perceived campus danger, lower grades, and lower levels of peer connections for Rejected group members. Rejected group members also responded in a less socially desirable manner than the Valid group members. The students did not differ significantly on indexes examining hostility, belonging, preoccupation with school violence, like or dislike of school, or teacher connections. There were no differences in terms of gender.

These differences do not appear to be caused merely by random responding by the Rejected group because if this were the case, we would not expect to find differences on any of the indexes compared. The students reported occurrences of violent events at differing rates, suggesting that students in the Rejected group were not just careless either; they appear to have a systematic bias in their response patterns such that they portray school in a more negative light than their peers and are more likely to say that bad things have happened to them at school. Decreased connections with peers and lower grades suggest that the Rejected group members are more likely to be among those students who find social and academic school experiences less rewarding than their peers. Because the *belonging to school index* was not significantly different for group membership, it is also possible that these students are not responding inaccurately due to a hatred or general dissatisfaction with school.

Another possibility is that these students are angry and have a "negative worldview," wanting to make everything, including school, look undesirable. Inconsistent with this explanation, however, the finding that there were no differences between the groups on the hostility index, suggests that the Rejected group members were not merely responding in a hostile manner to the questions. In contrast, students who report multiple forms of school violence victimization have been found to score higher than nonvictims on a hostility measure by a 22:1 margin (Furlong *et al.*, 1995). If the Invalid group members were accurately reporting high levels of victimization, one would expect their overall response profile to be similar to that of school violence victims, which it is not.

Another pertinent issue that warrants further examination is that of the interaction between type of violent incident and the manner in which the victimization questions were asked. In this study, students were asked to identify violent incidents that are not equivalent in terms of frequency, saliency, or emotionality, and may have been processed in different man-

ners. For example, an incident that is habitual and in a clear context (e.g., a student is harassed by the same student everyday in the cafeteria) may be stored in a general knowledge structure or schema, whereas a rare event (e.g., a student is stabbed with a knife) may be processed as an individual episode. When recounting the frequency of such differing incidents, Blair and Burton (1987) contended that reports of recurrent events are often estimations, while unusual events tended to be recalled and counted individually. The Rejected group participants may include some students who have had violent experiences on campus and used a victimization heuristic when responding. This may have lead to oversubscribing to violent incidents in the victimization list.

In this study, and all other campus violence studies to date, participants were asked to respond to all violence incidents using the same format. Future research should evaluate the methodological implications of using such a procedure. Researchers tend to treat these events as equivalent, when in fact, they may warrant different assessment procedures. Reporting of rare events such as campus shootings may be measured more accurately through interviews, whereas habitual events (such as bullying), which may have developed into schemas, may be accurately assessed through surveys asking questions pertaining to frequency, duration, and intensity of the incidents.

The results also raise the issue of potentially inconsistent administration of surveys. Large scale surveys often utilize convenient, cost-effective mechanisms for distribution of questionnaires by giving packets to schools and requesting that teachers administer surveys during a specific class period. These procedures can potentially result in inconsistent compliance. Despite providing each class with a detailed written script in this study, students at some schools were more likely to have responded inconsistently. This may have been due to an unequal importance attributed to the survey when the directions were given to the students. This possibility is consistent with Eisenhower *et al.* (1991) finding that motivation and the importance of surveys, as perceived by the respondent, affects retrieval of information. Thus, unforeseen factors during administration of the survey may affect the students' perception of the survey's legitimacy.

An important incidental finding of this study is that a sizable number of students in the original sample produced response sheets that were rejected because they (a) did not complete items, (b) had obvious response patterns, and/or (c) provided illegitimate answers. Previous campus violence surveys have presumed that responses are accurate without any inquiry into their reliability or accuracy. These studies used questionnaires and response sheets that included only legitimate responses. In such circumstances, even with inspection, the option of screening for out-of-range answers is elimi-

nated. In the present study, due to available resources, students marked their answers on a generic machine readable form. For this reason, not all of the standard 1–5 response "bubbles" for each item were legitimate. For example, on the 21 victimization items, only options 1 (*no*) and 2 (*yes*) were valid responses. We found that some students in the original unusable pool gave responses in the 3–5 range—these options not being on the printed form of the survey. This suggests that the standard utilization of response sheets with opportunities for out-of-range responses may assist in decreasing potentially fraudulent or invalid questionnaires. Without individual screening of surveys, the results of this study suggest that large scale campus violence surveys are likely to include invalid data. It is noteworthy that the 109 Rejected cases in this study did not have any out-of-range responses (this was a criterion for inclusion).

A positive finding is that a relatively small number of students (1.76% of the usable sample) failed the reliability and/or validity checks. This figure is similar to Sheley and Wright's (1993) reliability failure rate (1.5%). However, if included in analyses, these students' responses would inflate school violence incidence rates. This potential inflation of incidence reports coupled with screening concerns raises questions about the base rates of campus violence reported in previous studies and may help explain various contradictory results.

Notwithstanding these concerns, researchers should be able to catch most of the spurious surveys by adhering to rigorous survey procedures, controlling for social desirability in analyses, screening for obvious response sets and incomplete surveys, and designing procedures that include illegitimate answers. The small group of students who bypass these previous procedures can be screened through the inclusion of simple reliability and validity checks. Given the manner in which campus violence reports can be used to portray schools and youth in a negative manner, these are certainly responsible methodological procedures to follow as additional research examines the causes of campus violence and ways to reduce its incidence.

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REFERENCES

American School Health Association. (1989). *The National Adolescent Student Health Survey: A Report on the Health of America's Youth*. Author, Reston, VA.

Bastian, L. D., and Taylor, B. M. (1991). *School Crime: A National Crime Victimization Survey Report* (Shipping List No.: 91-775-P). U.S. Department of Justice, Washington, DC.

Blair, E., and Burton, S. (1987). Cognitive processes used by survey respondents in answering behavioral frequency questions. *J. Consumer Res.* 14: 280-288.

Blum, R., Harris, L., Resnick, M., and Rosenwinkel, K. (1989). *Technical Report on the Minnesota Adolescent Health Survey.* University of Minnesota, Minneapolis.

Buss, A., and Perry, M. (1992). The aggression questionnaire. *J. Person. Social Psychol.* 63: 452-459.

California Department of Education. (1989). *Safe Schools: A Planning Guide for Action.* Author, Sacramento, CA.

Clarke-Stewart, A., Friedman, S., and Koch, J. (1985). *Child Development: A Topical Approach.* John Wiley, New York.

Dear, J. D., and the Advisory Panel on School Violence. (1995). *Creating Caring Relationships to Foster Academic Excellence: Recommendations for Reducing Violence in California Schools. Final Report of the California Commission on Teaching Credentialing Advisory Panel on School Violence.* California Commission on Teaching Credentialing, Sacramento, CA.

Dear, J. D., Scott, K., and Marshall, D. (1994). An attack on school violence. *School Safety* 4-7.

Eisenhower, D., Mathiowetz, N. A., and Morganstein, D. (1991). Recall error: Sources and bias reduction techniques. In Biemer, P. P., Groves, R. M., Lyberg, L. E., Mathiowetz, N. A., and Sudman, S. (eds.), *Measurement Errors in Surveys.* John Wiley, New York.

Elam, S. M., and Rose, L. C. (1995). The 27th annual Phi Delta Kappa/Gallup Poll of the public's attitudes toward the public schools. *Phi Delta Kappan* 77: 41-56.

Fitzgerald, J. L., and Mulford, H. A. (1986). Self-report validity issues. *J. Stud. Alcohol* 48: 207-211.

Furlong, M. J. (1994). Evaluating school violence trends. *School Safety* 23-27.

Furlong, M. J., and Morrison, G. M. (1994). Introduction to miniseries: School violence and safety in perspective. *School Psychol. Rev.* 23: 139-150.

Furlong, M. J., and Morrison, R. L. (1995). Status update of research related to National Education Goal Seven: School violence content area. In *Proceedings of National Education Goals Panel/National Alliance of Pupil Service Organizations Safe Schools, Safe Students Conference.* Educational Research Information Center, Chapel Hill, NC.

Furlong, M. J., Morrison, R. L., and Boles, S. (1991, April). *California School Climate and Safety Survey.* Paper presented at the annual meeting of the California Association of School Psychologists. Los Angeles.

Furlong, M. J., Chung, A., Bates, M., and Morrison, R. L. (1995). Who are the victims of school violence? *Educat. Treat. Child.* 18: 1-17.

Gorsuch, R. L., Henighan, R. P., and Barnard, C. (1972). Locus of control: An example of dangers in using children's scales with children. *Child Develop.* 43: 579-590.

Green, P. J., Dugoni, B. L., and Ingels, S. (1995). Trends among high school seniors, 1972-1992: National Educational Longitudinal Study of 1988. National Center for Educational Statistics, Washington, DC.

Harris, L. (1993). A survey of experiences, perceptions, and apprehensions about guns among young people in America. Unpublished survey, prepared for the Harvard School of Public Health under a grant from the Joyce Foundation.

Metropolitan Life. (1993). *The American Teacher 1993: Violence in America's Public Schools.* Louis Harris and Associates, New York.

Morrison, G., Furlong, M. J., and Smith, G. (1994). Factors associated with the experience of school violence among general education, leadership class, opportunity class, and special day class pupils. *Educat. Treat. Child.* 17: 356-369.

National Institute of Education. (1978). *Violent Schools—Safe Schools: The Safe School Study Report to the Congress.* [Executive Summary]. Author, Washington, DC.

Shapiro, J. P., Burkey, W. M., Dorman, R. L., Welker, C. J., and Clough, J. B. (1995a). Development and factor analysis of a measure of youth attitudes toward guns and violence. Submitted for publication.

Shapiro, J. P., Dorman, R. L., Welker, C. J., Burkey, and Clough, J. B. (1995b). Youth attitudes toward guns and violence: Relations with sex, age, ethnic group, and exposure. Submitted for publication.

Sheley, J. F., and Wright, J. D. (1993). *Gun acquisition and possession in selected juvenile samples.* National Institute of Justice, Office of Juvenile Delinquency Prevention,Washington, DC.

Strongman, K. T., and Russell, P. N. (1986). Salience of emotion in recall. *Bull. Psychon. Soc.* 24: 25-27.

Tversky, A., and Kahneman, D. (1990). Judgment under uncertainty: Heuristics and biases. In Moser, P. K. (ed.). *Rationality in Action: Contemporary Approaches*. Cambridge University Press, New York.

Whitaker, C. J., and Bastian, L. D. (1991). *Teenage Victims: A National Crime Survey Report.* Department of Justice, Office of Justice Programs, Bureau of Justice Statistics (No. NCJ-128129), Washington, DC.

Witt, J. C., Cavell, T. A., Heffer, R. W., Carey, M. P., and Martens, B. K. (1988). Child self-report: Interviewing techniques and rating scales. In Shapiro, E. S., and Kratochwill, T. R. (eds.), *Behavioral Assessment in Schools.* Guilford, New York.