



Published in final edited form as:

J Sch Health. 2011 June ; 81(6): 331–340. doi:10.1111/j.1746-1561.2011.00598.x.

Prioritizing the School Environment in School Violence Prevention Efforts

Sarah Lindstrom Johnson, PhD,

Postdoctoral Fellow, Johns Hopkins University, 200 North Wolfe St, Room 2088, Baltimore, MD 21287, Phone: (410) 614-1081, Fax: (410) 502-5440

Jessica Griffin Burke, PhD, MHS, and

Assistant Professor, University of Pittsburgh, 218 Parran Hall, Pittsburgh, PA 15261, Phone: (412) 614-3610, Fax: (412) 624-5510

Andrea Carlson Gielen, ScD, ScM

Professor, Johns Hopkins University, 624 North Broadway, Room 554, Baltimore, MD, Phone: (410) 955-2397, Fax: (410) 614-2797

Sarah Lindstrom Johnson: slj@jhmi.edu; Jessica Griffin Burke: jgburke@pitt.edu; Andrea Carlson Gielen: agielen@jhsph.edu

Abstract

Background—Numerous studies have demonstrated an association between characteristics of the school environment and the likelihood of school violence. However, little is known about the relative importance of various characteristics of the school environment or their differential impact on multiple violence outcomes.

Methods—Primarily African-American students (n=27) from Baltimore City high schools participated in concept mapping sessions, which produced interpretable maps of the school environment's contribution to school violence. Participants generated statements about their school environment's influence on school violence and with the assistance of quantitative methods grouped these statements according to their similarity. Participants provided information about the importance of each of these statements for the initiation, cessation, and severity of the violence that occurs at school.

Results—More than half of the 132 statements generated by students were rated as school environment characteristics highly important for the initiation, cessation, and/or severity of school violence. Participants identified students' own actions, expectations for disruptive behavior, and the environment outside the school as characteristics most important for the initiation and increased severity of violence that occurs in school. Participants had a more difficult time identifying school environment characteristics important for the cessation of school violence.

Conclusion—This study provides support from students for the role of the school environment in school violence prevention, particularly in preventing the initiation and reducing the severity of

Correspondence to: Sarah Lindstrom Johnson, slj@jhmi.edu.

Human Subjects Approval Statement: This study was approved by the Johns Hopkins Committee for Human Research and the Family League of Baltimore City.

school violence. Schools can utilize the information presented in this paper to begin discussions with students and staff about prioritizing school environment changes to reduce school violence.

Keywords

school violence; school environment; intervention; concept mapping

Introduction

The school environment is frequently measured by schools to gauge students', teachers', and parents' satisfaction with the school. However, perhaps more important than satisfaction, the school environment has been related to students' academic success.^{1,2} The school environment also influences students' academic success indirectly, by impacting students' behaviors. Research has suggested a role for the school environment in the prevention of dropout, delinquency, drug and alcohol use, and violence.³⁻⁷ This study aims to better understand how the school environment contributes to the one of these outcomes, school violence.

Violence in U.S. schools is hindering the educational, psychological, and social development of students. Students who are victimized are more likely to report feelings of social isolation, depression, frustration, and poorer school attachment.⁸⁻¹⁰ In the 2007 Youth Behavior Risk Surveillance Survey 12.4% of high school students self-reported being in a fight in school in the previous 12 months, 5.9% reported carrying a weapon to school, and 27.1% of students reported having property deliberately damaged or stolen on school property.¹¹ Research suggests that the consequences of school violence exist for not just the victim and perpetrator, but for all exposed.¹² In 2007, 5.5% of high school students did not come to school at least one day in the past month because they felt unsafe.¹¹

A recent review of the literature found evidence that both the school social and physical environment influence the amount of violence that happens at school.¹² Research has supported a relationship between the following aspects of the school social environment and school violence: school management policies, positive social interactions in the classroom, students' feelings of belonging, students' feelings of teacher support, students' belief in the fairness of the rules, and students' involvement in school.^{6, 13, 14} While less research has been conducted on the influence of the school physical environment, associations between student perceptions' of the security of the school, the amount of disorder, and the presence of drugs and graffiti and school violence have been found.¹⁵⁻¹⁷ Based on these findings, interventions, such as Peacebuilders, Positive Action, and the Good Behavior Game, have attempted to improve school and classroom climates.¹⁸⁻²⁰ These school environment interventions have resulted in a reduction in aggression, conduct disorders, mental health services use, suspension rates, and absenteeism as well as improved test scores.

A leading researcher has noted the need for “a significantly enhanced body of research...that will help schools navigate the complex terrain of school climate change as a means to reduce school violence”.²¹ (p.15) One important step is to identify the importance of different school environment characteristics for school violence prevention. In a time of increasing financial constraints, this information will allow schools to more effectively target their

school environment change efforts. Additionally, there is a need to understand how school environment characteristics differentially influence multiple violence outcomes. Health behaviors, including violence, have been conceptualized as having three different prevention targets: the initiation of the behavior, the escalation of the behavior, and the cessation of the behavior.^{6,22} McNeely and Falci⁶ found that teacher support was related to both a decrease in initiating violence as well as an increase in the cessation of violence. Understanding which prevention target (initiation, escalation, or cessation) various school environment changes address will allow schools to ensure a comprehensive approach to violence prevention.

It is important to solicit this information from students.²¹ Prior qualitative studies have found that common understandings of youth violence, based on adult notions of violence, are not always correct.^{23,24} To our knowledge, this study is the first to ask students for their understanding of the school environment's influence on school violence. The goal of this paper is to examine the importance of multiple school environment characteristics on different school violence outcomes from the perspective of students. The concept mapping method facilitated this exploration by taking participants through a structured process that resulted in a pictorial representation of their ideas. From this process, information will be gained about 1) the relative importance of school environment characteristics for the reduction of school violence and 2) how characteristics differentially influence the initiation, cessation, and severity of the violence that occurs in schools.

Methods

This study utilized concept mapping, a participatory mixed-methods process through which visual representations of the perceptions and ideas of a group are created.^{25,26} Concept mapping has traditionally been used by health practitioners interested in program planning or evaluation, but increasingly is emerging as an important methodology for capturing the lived experiences of participants.^{25,27}

Subjects

Current Baltimore City high school students were recruited from 2 after-school organizations based in schools (Group A and Group B). Large after-school organizations with broad based missions to enhance the academic and personal enrichment of students were targeted as this was expected to increase the generalizability of the student sample. Any English-speaking student who participated in the after-school program was eligible to participate.

Of the 45 students given parental permission forms, a total of 27 students returned them and provided assent to participate in the concept mapping sessions; 12 for Group A and 15 for Group B. More females participated in Group B (67%) while Group A was evenly divided between males and females. Group A tended to be older having a slight majority of upper classman (10th and 11th grade) (59%) while Group B was younger, having a majority of under classman (9th and 10th grade) (73%). In both groups the majority of participants in each sample were African-American (100% for Group A and 87% for Group B), which is representative of the Baltimore City Public School student population. The majority of

participants participating stated that they averaged A's and B's in their coursework (92% for Sample A and 60% for Sample B). Participants' responses to school violence experience questions and comparative statistics for both Baltimore City and the United States from the Youth Risk Surveillance Study are presented in Table 2.¹¹

Procedure

Data collection occurred in May of 2008. Students with signed parental permission and assent forms were allowed to participate. All concept mapping sessions were facilitated by the first author (SLJ) and a research assistant. Sessions were audio recorded and lasted approximately 1.5 hours. All study materials were at a 6th grade reading level or below. Participants were given \$10 at the conclusion of each session for their time and contributions. At the end of the study, a separate session was held to share results with school staff.

Session One: Statement Generation—In the first session, the general process of concept mapping was explained to the participants and demographic information about each participant collected through a survey. The survey asked for participant's gender, race, age, academic achievement, and experience with violence.¹¹ Also in this first session, participants were asked to “generate a list of items that describe characteristics of your school environment that could relate in any way, good or bad, to a student's experience of violence.” Participants were instructed that, “violence includes any behavior that is intended to harm, physically or emotionally, persons in school and their property (as well as school property). This includes things like threatening with or without a weapon, fighting, stealing and damaging property, bringing or using a weapon at school, and gender violence.” Participants were also told “when we say school environment we are referring to both the physical and social characteristics of the school.”

The statements generated from each group were consolidated into 2 separate lists as the statements related to a specific place. A review of the literature noted commonly studied characteristics of the school environment that participants had not mentioned. In order to understand how these characteristics fit with those generated by the participants and to understand their relative importance, a few statements were added to each group. This is common practice for concept mapping.^{22, 25, 27} These statements are indicated with an asterisk in all tables.

Session Two: Sorting and Rating—In the second session each participant was given flash cards for each of the statements and asked to sort their cards into piles according to the statements' similarity. Participants were instructed to create more than one pile and to ensure that each pile had a minimum of 2 statements (which may have forced some statements together). Participants then individually rated each statement on a scale of 1 (low) to 5 (high) for its importance in the initiation, cessation, and severity of school violence. See Table 1 for the prompts. Students' understanding of concepts was assessed by having them brainstorm synonyms for the three rating characteristics (i.e. begin for initiation or worse for severity).

Participants' information from the sort and rate was input into Concept Systems, a licensed software program that facilitates the concept mapping process. This software creates a similarity matrix from participants' sorts, which is converted into two-dimensional space (distance matrix) using multidimensional scaling. This technique results in a map of statements, with statements sorted as more similar appearing closer together on the map. Stress value, a goodness of fit statistic that evaluates how well the distance matrix reproduces the similarity matrix, can be calculated for this map, with a lower-stress value indicating a better fit. A study of 33 concept mapping projects found that an average stress value of .29 with stress values ranging from .155-.352.²⁸ Both maps' stress value fell within the above mentioned range, indicating an acceptable fit (Group A .262 and Group B .271).

Hierarchical cluster analysis using Ward's algorithm was used to partition the two-dimensional space into non-overlapping clusters of similar statements. The results from the cluster analysis can be visually displayed on a cluster map. On the cluster map, the shape of the cluster is created by connecting each cluster's outward points. As the points are fixed in space, with closer points representing more similar statements, larger clusters can be thought to represent more diverse ideas.

Session Three: Representation and Interpretations—In the third session participants were presented with multiple possible representations of their data (i.e., different cluster solutions) and asked to choose the most representative. This process occurred primarily through group dialogue. Once the cluster solution was determined, participants were asked to choose a cluster label that best represented the content of the items in the cluster.

Data Analysis

After the completion of the concept mapping activities, subsequent analyses to determine both individual and cluster average ratings of importance were conducted. First, the average rating of each statement for the initiation, cessation, and severity of violence was calculated separate for Group A and Group B. Using the range of these ratings, tertile classifications of low (statements rated less than 2.79), moderate (items rated between 2.80 and 3.76, and high importance (statements rated 3.77 or higher) were then created. This allowed for a comparison of each individual statements importance across the three different violence outcomes. Then by averaging all statements in a cluster, the average cluster rating was calculated. This information was then displayed on the third dimension of the cluster maps. It should be noted that this resulted in each cluster having three average ratings (initiation, cessation, and severity).

Results

Statement Ratings

Participants from Group A identified 77 characteristics of the school environment that contribute to school violence with participants from Group B identifying 55 characteristics. Table 3 lists all statements as well as provides the relative importance of each statement for the initiation, cessation, or severity of a school violence outcome. Participants gave ratings

ranging from 1 (low) to 5 (high). Using the distribution of ratings, the ratings were divided into tertiles of importance: low, moderate, and high. High statements had ratings between 4.73-3.77. Moderate statements had ratings between 3.76-2.80. Low statements had ratings between 2.79-1.82.

Sixty-eight of the 132 statements generated by students were rated as school environment characteristics highly important for the initiation, cessation, and/or severity of school violence. In general statements that were rated as high for the initiation of violence were rated high for the severity of violence. More statements were rated as high in importance for the initiation (n=46) and severity (n=52) of school violence than for the cessation of violence (n=11).

Cluster Ratings

Both groups of students choose 8 clusters as the appropriate grouping of their statements (see bolded names in Table 3). Clusters contain statements that participants felt represented a common theme. For example, the cluster *Bullying* includes statements that focus on power differentials (40, 44, 45, 46, 47, 51, 64) and the cluster *Staff* focuses on students relationships with teachers (25, 31, 32, 34, 50, 52, 54). An in-depth explanation of statements and clusters can be found in Lindstrom Johnson, Burke, & Gielen.²⁹

Figure 1 shows the average cluster rating for one violence outcome, initiation of violence. This is shown in the third dimension of the map as layers of clusters. Those clusters with more layers had average statement ratings higher than those clusters with fewer layers. For example in Figure 1, for Group A the cluster *Frightful Environment* with 4 layers was rated as more important for the initiation of school violence than a cluster with one layer, *School Security*. The numbers on these cluster maps correspond to the statement numbers, which can be found in Table 3.

In examining Figure 1, those clusters that dealt with student actions, student norms of behavior, and the neighborhood environment were rated as most important for the start of violence. For Group A this includes the clusters *Violence All Over*, *Relationships*, *Bullying*, *School Disruption*, and *Frightful Environment* are important triggers of violence starting for Group A. For Group B *Students' Conduct*, *Problem Starters*, *Community Problems*, and *Staff* are important triggers of violence starting.

Figure 2 shows the average cluster rating for the three violence outcomes: initiation, cessation, and severity. This figure allows for a comparison of cluster importance across the three violence outcomes. The figure shows that clusters students thought to be important for the initiation of violence were also thought to be important for the increased severity of violence that occurs at school. Additionally, average cluster ratings were much lower for the cessation rating than for the initiation and severity ratings. Three clusters in both groups are exceptions to this: *Bullying*, *Concerned Grown-ups*, and *School Pride*.

Discussion

This paper details the importance of the various characteristics of the school environment for the initiation, severity and cessation of school violence. This study represents one of the first qualitative studies with students attempting to understand how the school environment influences school violence. The information provided can be used by both schools and researchers to create more effective and parsimonious school environment interventions.

Participants felt that student actions and expectations for behavior (clusters *Relationships, Violence All Over, Bullying, Problem Starters, School Issues, and Student's Conduct*) were the characteristics most responsible for the initiation of school violence. Interventions have either focused on changing individual behavior or changing the school environment, with few addressing the complex relationship between individuals' behaviors and the school environment.^{14, 21, 30, 31} More research needs to be done to explore the potential synergism between individual behavior change interventions and school environment interventions to reduce school violence.

Also important for the initiation of school violence was the environment outside the school (See Table 3 clusters *Frightful Environment and Community Problems*). For Group A, most of the students were residents of the school neighborhood. Students mentioned the values and behaviors common in the neighborhood that when brought into school became a source of violence. Group B students were bused to the school from throughout the city. As the neighborhood is primarily white, the environment outside the school was an additional source of potential violence, both through racist acts as well as fear for their safety in the neighborhood. These 2 examples highlight the importance of examining how the neighborhood environment could be incorporated in school violence interventions and supports the emerging emphasis of using an ecological lens to examine school violence.³²⁻³⁴

Student actions, expectations for behavior, and outside environment influences were also all rated as extremely important for the severity of violence that occurs. However, for one group, school security was also seen as something that escalates the severity of violence rather than the intended reverse. This finding is similar to other studies that have found that a greater presence of security is associated with increasing amounts of school violence.^{35, 36} However, what this study adds is the importance of the relationships between school security and students (see Table 3 clusters *School Security and School Trust*). In both groups, students' emphasized the importance of having school security that cared about them and had their best interests at heart.

Students did not present as clear of a picture of how the school environment relates to the cessation of school violence. Overall, importance ratings were substantially lower for cessation than initiation or severity, indicating that students may see the cessation of school violence to be determined by individual factors and not school factors. The few statements that students rated as highly important for the cessation of school violence mostly described relationships between peers (see Table 3 Group A cluster *Bullying*) or a feeling of being cared about as a student (see Table 3 Group B statements 38, 44, 56, and 59). A role for the school environment in the cessation of school violence could be in shaping the nature of

interactions between students and between students and school staff. This view is partially supported by McNeely and Falci⁶ who found teacher support to be predictive of violence cessation, but did not find a relationship between other aspects of the school environment and violence cessation.

Limitations

As in all qualitative research, the generalizability of this research is limited. This study is based on the opinions of only 27 high school students from 2 after-school programs. That students participated in an after-school program potentially indicates a difference from other students in their school. Large after-school programs with general missions were recruited to reduce any potential difference. The setting for this study is Baltimore City, one of the highest crime areas in the United States. Our sample experienced higher rates of school victimization than the national average and in some cases average Baltimore City students.¹¹ The findings from these schools might not be similar in other communities. In fact, even in our study, differences between the two schools could be seen.

An additional limitation stems from the difficulty some participants had in reading and interpreting statements. Concept mapping is a linguistically based process with sorting and rating based on an understanding of the relationship between words and ideas. Some participants appeared to have difficulties with this process but tended to overcome any barriers they had through consultation with other participants or the research staff about the meaning of words. The potential bias on the study was limited as help was focused on understanding the word and not on its connection to the other concept. This being said, students seemed to enjoy this experience and at its conclusion were able to explain the results and the process to both peers and school personnel. The process of concept mapping is very interactive and the main tenets (spatial organization and idea clusters) are commonly used in education. Concept mapping has been used successfully in research with a similar population of adolescents.²⁷

Implications for Schools

This is the first study of the authors' knowledge to ask students about how the school environment influences school violence. The role of the school environment in school violence prevention was evident to students, those most experienced with the violence that occurs at schools. Students in this sample suggested that addressing students' relationships with each other, having clear and consistent expectations for students' behaviors, and addressing the influence of the neighborhood were ways schools could reduce the likelihood that violence starts or that it becomes more severe. Schools should gather students and discuss aspects of their own school environment important for the occurrence of school violence.³⁷ This study suggests that even limited changes in the school environment can have positive results.

The primary role of the school environment in violence prevention is preventing a violent event from starting or becoming more serious. This supports literature that suggests that focusing on the prevention of school violence is more effective than focusing on its punishment.³⁶⁻³⁷ This being noted, students did suggest that positive relationships between

students and feeling cared about by school personnel could help in the cessation of violent conflicts. Students also mentioned the importance of positive relationships with school security. Schools should work on improving relationships between students and school personnel as an effective violence prevention strategy.

Overall this study adds to a growing body of literature supporting the school environment as an important intervention point to reduce school violence.^{12, 21} This study takes the literature one step further in helping schools utilize the research connecting the school environment and school violence by providing information about the relative importance of different school environment characteristics as well as linking these characteristics to different violence prevention outcomes. It is hoped that this research will make school environments safer, healthier places to learn thereby improving both health and educational outcomes.

Acknowledgments

This research was funded by grant 1R36CE001374-01 to Johns Hopkins University from the Centers for Disease Control and Prevention.

References

1. MacNeil AG, Prater DL, Busch S. The effects of school culture and climate on student achievement. *International Journal of Leadership in Education*. 2009; 12:73–84.
2. Uline C, Tschannen-Moran M. The walls speak: The interplay of quality facilities, school climate, and student achievement. *Journal of Educational Administration*. 2008; 46:55–73.
3. Bisset S, Markham WA, Aveyard P. School culture as an influencing factor on youth substance use. *J Epidemiol Community Health*. 2007; 61:485–490. [PubMed: 17496256]
4. Hawkins JD, Guo J, Hill KG, Battin-Pearson S, Abbott RD. Long-term effects of the Seattle social development intervention on school bonding trajectories. *Appl Dev Sci*. 2001; 5:225–236. [PubMed: 17955057]
5. Henry KL, Slater MD. The contextual effect of school attachment on young adolescents' alcohol use. *J Sch Health*. 2007; 77:67–74. [PubMed: 17222157]
6. McNeely C, Falci C. School connectedness and the transition into and out of health-risk behavior among adolescents: A comparison of social belonging and teacher support. *J Sch Health*. 2004; 74:284–292. [PubMed: 15493705]
7. Payne AA. A multilevel analysis of the relationships among communal school organization, student bonding, and delinquency. *J Res Crime & Del*. 2008; 45:429–455.
8. Juvonen J, Nishina A, Graham S. Peer harassment, psychological adjustment, and school functioning in early adolescence. *J Educ Psy*. 2000; 92:349–359.
9. Nansel TR, Overpeck M, P RS, Ruan WJ, Simons-Morton B, Scheidt P. Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *JAMA*. 2001; 258:2094–2100. [PubMed: 11311098]
10. Wei H, Williams JH. Relationship between peer victimization and school adjustment in sixth-grade students: Investigating mediation effects. *Violence Vict*. 2004; 19:557–571. [PubMed: 15844725]
11. Centers for Disease Control and Prevention. [July 12, 2008] Youth risk behavior surveillance study. Available at: <http://apps.nccd.cdc.gov/yrbss>
12. Lindstrom Johnson S. Improving the school environment to reduce school violence: A review of the literature. *J Sch Health*. 2009; 10:451–465.
13. Sprott JB. The development of early delinquency: Can classroom and school climates make a difference. *Canadian Journal of Criminology and Criminal Justice*. 2004; 46:553–572.

14. Welsh WN. Individual and institutional predictors of school disorder. *Youth Violence and Juvenile Justice*. 2003; 1:346–368.
15. Kitsantas A, Ware HW, Martinez-Arias R. Students' perceptions of school safety: Effects by community, school environment, and substance use variables. *Journal of Early Adolescence*. 2004; 24:412–430.
16. Van Dorn RA. Correlates of violent and nonviolent victimization in a sample of public high school students. *Violence and Victims*. 2004; 19:303–320. [PubMed: 15631283]
17. Wilcox P, Augustine MC, Clayton RR. Physical environment and crime and misconduct in Kentucky schools. *J Prim Prev*. 2006; 27:293–313. [PubMed: 16596467]
18. Flannery DJ, Vazsonyi AT, Liau AK, et al. Initial behavioral outcomes for the PeaceBuilders universal school-based violence prevention program. *Dev Psychol*. 2003; 39:292–308. [PubMed: 12661887]
19. Flay BR, Allred CG, Ordway N. Effects of the positive action program on achievement and discipline: Two matched-control comparisons. *Prevention Science*. 2001; 2:71–89. [PubMed: 11523754]
20. Iolango NS, Wethamer L, Kellum SG, Brown CH, Want S, Lin Y. Proximal impact of two first-grade preventive interventions on the early risk behaviors for later substance abuse, depression, and antisocial behavior. *Am J Community Psychol*. 1999; 27:599–641. [PubMed: 10676542]
21. Greene MB. Reducing school violence: School based curricular programs and school climate. *The Prevention Researcher*. 2008; 15:12–16.
22. O'Campo P, Burke J, Peak GL, McDonnell KA, Gielen AC. Uncovering neighbourhood influences on intimate partner violence using concept mapping. *J Epidemiol Community Health*. 2005; 59:603–608. [PubMed: 15965146]
23. Kerbs JJ, Jolley JM. The joy of violence: What about violence is fun in middle-school. *Am J Crim Just*. 2007; 32:12–29.
24. Freudenberg N, Roberts L, Richie BE, Taylor RT, McGillicuddy K, Greene MB. Coming up in the boogie down: The role of violence in the lives of adolescents in the South Bronx. *Health Educ Behav*. 1999; 26:788–805.
25. Burke JG, O'Campo P, Peak GL, Gielen AC, McDonnell KA, Trochim WMK. An introduction to concept mapping as a participatory public health research method. *Qual Health Res*. 2005; 15:1392–1410. [PubMed: 16263919]
26. Trochim WMK. An introduction to concept mapping for planning and evaluation. *Eval Program Plann*. 1989; 12:1–16.
27. Reis AV, Voorhees CC, Gittelsohn J, Roche KM, Astone NM. Adolescents' perceptions of environmental influences on physical activity. *Am J Health Behav*. 2008; 32:26–39. [PubMed: 18021031]
28. Trochim WMK. The reliability of concept mapping. 1993:1–17.
29. Lindstrom, Johnson S.; Burke, JG.; Gielen, AC. Students' perception of the school environment's role in school violence. *Health Educ Res*. Submitted.
30. Hyman IA, Perone DC. Introduction to the special theme section on school violence. *J School Psychol*. 1998; 36:3–5.
31. Ozer EJ. Contextual effects in school-based violence prevention programs: A conceptual framework and empirical review. *J Prim Prev*. 2006; 27:315–340. [PubMed: 16619107]
32. Benbenishty R, Astor RA, Estrada JN. School violence assessment: A conceptual framework, instruments, and methods. *Child Schools*. 2008; 30:71–81.
33. Culley MR, Conkling M, Emshoff J, Blakely C, Gorman D. Environmental and contextual influences on school violence and its prevention. *J Prim Prev*. 2006; 27:217–227. [PubMed: 16770725]
34. Henry S. School violence beyond columbine: A complex problem in need of an interdisciplinary analysis. *Am Behav Sci*. 2009; 52:1246–1265.
35. Mayer MJ, Leone PE. A structural analysis of school violence and disruption: Implications for creating safer schools. *Education and Treatment of Children*. 1999; 22:333–356.

36. Nickerson AB, Martens MP. School violence: Associations with control, security/enforcement, educational/therapeutic approaches, and demographic factors. *Sch Psychol Rev.* 2008; 37:228–243.
37. Greene MB. Reducing violence and aggression in schools. *Trauma Violence Abuse.* 2005; 6:236–253. [PubMed: 16237157]

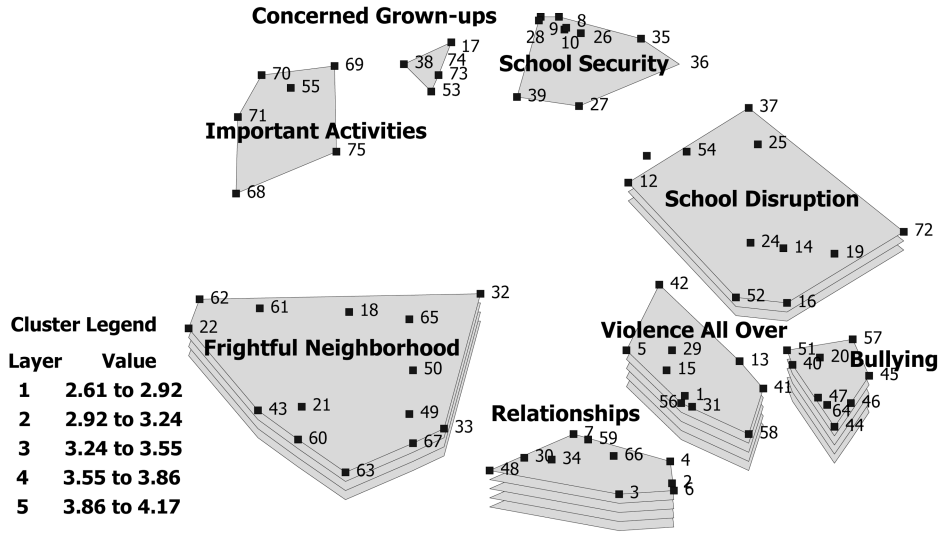
Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

GROUP A



GROUP B

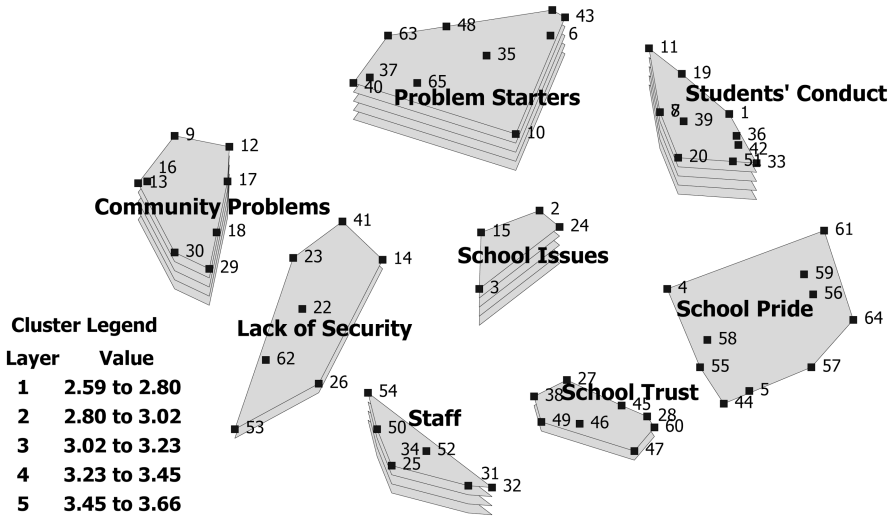


Figure 1. Comparison of Relative Cluster Rating Maps for Initiation

High indicates a rating value of between 3.77-4.73. Moderate indicates a rating value of 2.80-3.76. Low indicates a rating value of 1.82-2.79. Asterisks indicate statements added by researcher.

Height of cluster visually demonstrates relative importance; higher clusters were rated by students as more important than lower clusters.

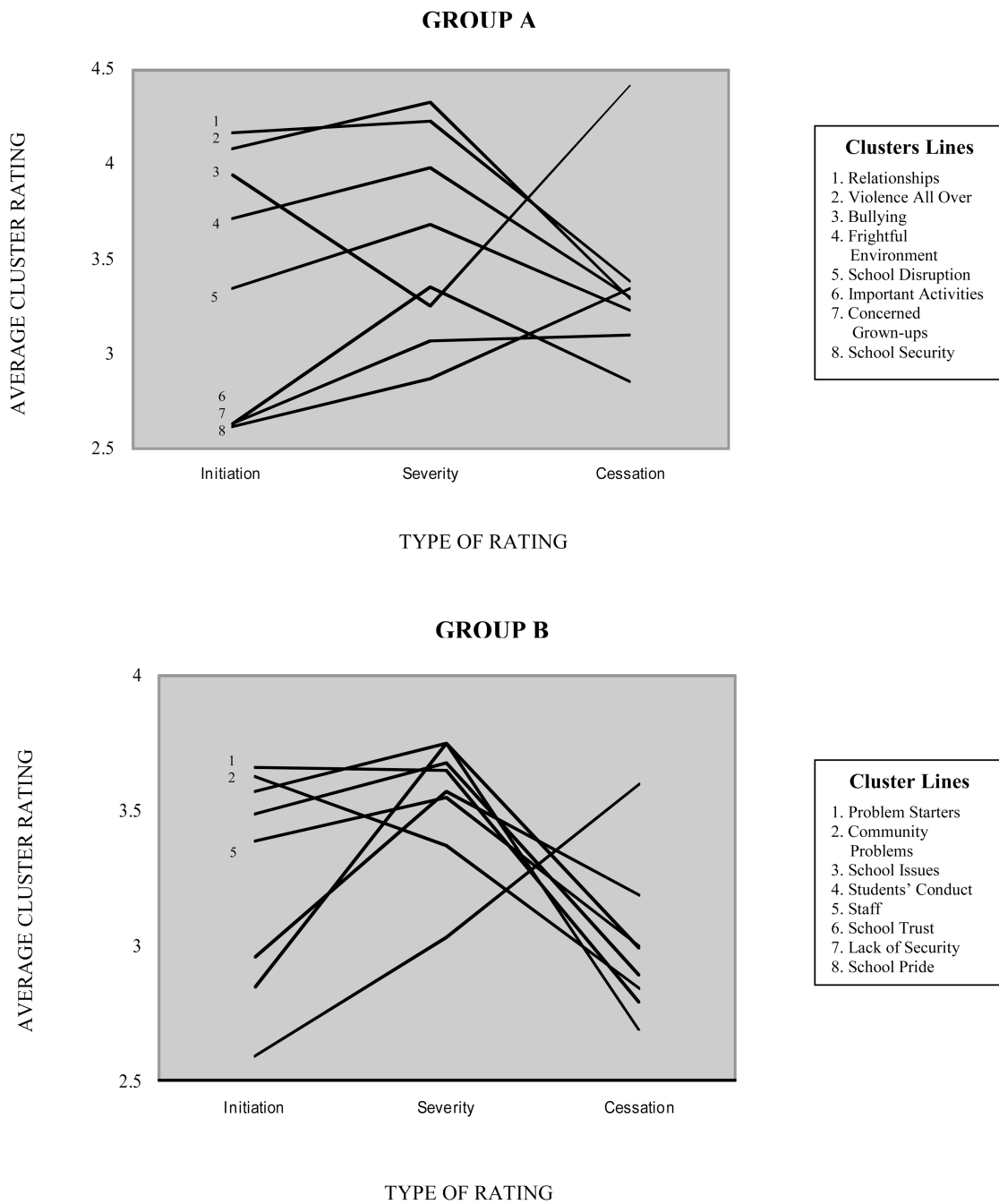


Figure 2. Comparison of Average Cluster Rating Between Initiation and Cessation
 This figure plots the average cluster ratings for Initiation and Cessation. It 1) illustrates that within a cluster ratings were more similar for Initiation and Severity and 2) that cluster ratings were generally lower for Cessation.

Table 1
Rating Statements

School Violence Outcome	Rating Statement
Initiation	<p>Please rate on a scale of 1 to 5 how each item is related to the start of violence.</p> <p>1= No relation; 2= some relation; 3= moderate relation; 4=strong relation; 5= extremely strong relation</p>
Cessation	<p>Please rate on a scale of 1 to 5 how each item is related to the stop of violence.</p> <p>1= No relation; 2= some relation; 3= moderate relation; 4=strong relation; 5= extremely strong relation</p>
Severity	<p>Please rate on a scale of 1 to 5 how each item might make the type of violence experience more dangerous.</p> <p>1= Not make more dangerous; 2= Somewhat likely to make more dangerous; 3= Moderately likely to make more dangerous; 4= Strongly likely to make more dangerous; 5= Extremely likely to make more dangerous</p>

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 2
Sample, Baltimore City, and United States Students' Experience with School Violence ⁵

School Violence Experience	Group A Participants	Group B Participants	Baltimore City Students	United States Students
Did not go to school because of safety concerns (past 30 days)				
Yes	8% (1)	7% (1)	9.6%	5.5%
No	92% (11)	93% (14)		
Threatened or injured with a weapon on school property (past 12 months)				
Yes	17% (2)	20% (3)	11.7%	7.8%
No	83% (10)	80% (12)		
Had property stolen or damaged on school property (past 12 months)				
Yes	17% (2)	27% (4)	23.8%	27.1%
No	83% (10)	73% (11)		
In a physical fight on school property (past 12 months)				
Yes	17% (2)	33% (5)	17.5%	12.4%
No	83% (10)	67% (10)		

Table 3

Statement Importance Ratings

GROUP A (Statement numbers correspond to Figure 1)

Statements Grouped By Cluster	Initiation	Severity	Cessation	Statements Grouped by Cluster	Initiation	Severity	Cessation
RELATIONSHIPS							
1. Drama Between Students	High	High	Mod	2. Rumors	High	High	Mod
5. Presence of gangs	High	High	Mod	3. Mixing up words	High	Mod	Mod
13. Food fights	Mod	High	Low	4. He said/She said	High	High	Mod
15. Students' disrespect towards each other	High	High	Mod	6. Gossip	High	High	Mod
29. Gang Graffiti	High	High	Mod	7. Ex-boyfriends and ex-girlfriends being jealous of new relationships	High	High	Mod
31. Forceful students	High	High	Mod	30. Phoniness	High	High	Mod
41. Bullying	High	High	Mod	34. Relationship play that goes too far	Mod	High	Mod
42. Older students having younger student do their dirty work	High	High	Mod	48. Popularity jealousy	High	High	Mod
56. Racism	High	High	Mod	59. Poor communication	High	High	Mod
58. Putdowns	Mod	High	Mod	66. Dishonesty	High	High	Mod
SCHOOL DISRUPTION							
40. Older students thinking younger students are vulnerable	High	Low	High	12. Principal disciplining students in fights	Low	Low	Mod
44. Betting on fights	High	Mod	High	16. Teachers' disrespect towards students	High	High	Mod
45. Crowds forming around fights	High	Mod	High	19. Lack of supervision in certain places	Mod	High	Mod
46. Crowds encouraging people to fight	High	Mod	High	25. Teachers who follow the rules differently	Low	Low	Mod
47. Crowd form in hallways and cafeteria	High	Mod	High	37. Administrators that will act on small acts of violence	Mod	Mod	Mod
51. Students misbehaving in class	High	Mod	High	52. Students not caring about students' safety	High	High	Mod
64. Peer-pressure to act violently	Mod	Mod	High	54. Different consequences for violence at school versus out of school	Mod	High	Mod
IMPORTANT ACTIVITY							
55. Programs that teach students how to better handle potentially violent situations	Mod	Mod	Mod	17. Teachers making sure students are safe	Low	Mod	Mod
68. Know all students*	Low	Mod	Mod	38. Teachers who advise students about appropriate behavior	Mod	Mod	Mod
CONCERNED GROWN-UPS							

GROUP A (Statement numbers correspond to Figure 1)

Statements Grouped By Cluster	Initiation	Severity	Cessation	Statements Grouped by Cluster	Initiation	Severity	Cessation
69. Students and staff focused on learning*	Low	Mod	Low	53. An involved Principal	Mod	Mod	Low
70. After-school activities and sports available*	Low	Mod	Low	73. School rules are fair*	Low	Mod	Mod
71. Students achievements highlighted*	Low	Mod	Low	74. School rules are clear*	Low	Low	Mod
75. Student participation in decision-making*	Low	Mod	Mod				

SCHOOL SECURITY

FRIGHTFUL ENVIRONMENT							
8. Presence of school police	Low	Low	Mod	18. Students rapping	Mod	Mod	Mod
9. School police policies	Mod	Mod	Mod	21. A culture of no "snitching"	High	High	Mod
10. School police who care about students	Low	Low	Mod	22. Students not feeling safe enough to "snitch"	Mod	High	Low
11. School police who make sure students go to class	Low	Low	Mod	32. Family defending family	High	High	Mod
23. School police that are aware	Low	Mod	Mod	33. Inappropriate sexual touching	High	High	Mod
26. Teachers who strictly follow the rules	Low	Low	Mod	43. Drugs	High	High	Mod
27. Enforcement of school policies	Mod	Mod	Mod	49. Homophobia	High	High	Mod
28. Metal detectors	Low	Mod	Mod	50. Homosexuals proving their manliness	Mod	High	Mod
35. Security cameras	Mod	Mod	Mod	60. Teen pregnancy	Mod	Mod	Mod
36. Staff monitoring the security cameras	Low	Mod	Mod	61. Students' maturity.	Mod	Mod	Mod
39. Teachers who care about students	Low	Mod	Mod	62. A wide diversity of students	Mod	Mod	Mod
				63. Girls acting "bougie"	Mod	High	Mod
				65. Bias	Mod	High	Mod
				67. Inappropriate dress by females	Mod	High	Mod

GROUP B (Statement numbers correspond to Figure 1)

Statements Grouped By Cluster	Initiation	Severity	Cessation	Statements Grouped by Cluster	Initiation	Severity	Cessation
1. Students' disrespect to each other	High	High	Mod	4. School not having a reputation- a new school	Mod	Low	Mod
7. Students flashing gang signs	Mod	High	Mod	5. School pride	Low	Low	Mod
8. Students "posing" at being in a gang	High	High	Low	44. School police that care about students	Low	Mod	High
11. Drama between students	High	High	Low	55. Longer school-day	Mod	Mod	Mod
19. Students not following school policies	Mod	Mod	Mod	56. Know all students*	Low	Mod	High

STUDENT'S CONDUCT

SCHOOL PRIDE

GROUP A (Statement numbers correspond to Figure 1)

Statements Grouped By Cluster	Initiation	Severity	Cessation	Statements Grouped by Cluster	Initiation	Severity	Cessation
20. Students sticking up for "their own" against students from other schools	Mod	High	Mod	57. Students and staff focused on student learning*	Low	Mod	Mod
33. Students' maturity	Mod	Low	Mod	58. After-school activities and sports available*	Low	Mod	Mod
36. Students misbehaving in class	Mod	Mod	Mod	64. Programs that teach students how to better handle potentially violent situations*	Low	Mod	Mod
39. Drugs	Low	Mod	Low	59. Students achievements highlighted around school*	Low	Low	High
42. Students not using inside voices	Mod	Mod	Mod	61. Students participation in decision-making	Low	Mod	Mod
51. Students' disrespect towards teachers and staff	Mod	High	Low				
PROBLEM STARTERS							
SCHOOL TRUST							
6. Presence of gangs	High	High	Low	27. Discrimination by school police	Mod	High	Low
10. White students picked to be beaten up/robbed	Mod	Mod	Low	28. School police who are unnecessarily harsh	Mod	High	Mod
21. Rumors	High	Mod	Low	38. Educational posters	Low	Mod	High
35. Trash talk/Taunting/Name calling	High	Mod	Mod	45. School police not actively involved in school	Mod	High	Mod
37. Written/Drawn intimidation	Mod	Mod	Mod	46. Lack of trust of school police	Low	Mod	Mod
40. Drinking	Mod	Mod	Mod	47. School rules to harsh	Low	Mod	Mod
43. Cliques	High	High	Mod	49. An involved Principal	Low	Mod	Mod
48. Peer-pressure to be "bad"	Mod	Mod	Mod	60. School rules are clear*	Low	Mod	Mod
63. Crowds able to form*	Mod	High	Low				
65. Relationship play that goes to far*	High	Mod	Low				
LACK OF SECURITY							
COMMUNITY PROBLEMS							
14. Stores near school not allowing students in	Low	Mod	Mod	9. Racism in neighborhood	High	High	Low
22. Deterioration of school facility	Low	Mod	Low	12. Members of the community threatening/vandalizing the school	High	High	Low
23. Lack of supervision in certain places	Mod	Low	Low	16. Fear for safety in the neighborhood	Mod	Mod	Low
26. Presence of school police	Mod	Mod	Mod	17. No respect for the school environment	Mod	Mod	Mod
41. Driving	Low	Mod	Mod	18. Garbage	Low	Mod	Low
53. Teachers judging students	High	Mod	Low	29. Taking public transportation to school	High	Mod	Mod
62. Security cameras*	Low	Mod	Mod	30. Bus-drivers	Mod	Mod	Low
STAFF							
SCHOOL ISSUES							

GROUP A (Statement numbers correspond to Figure 1)

Statements Grouped By Cluster	Initiation	Severity	Cessation	Statements Grouped by Cluster	Initiation	Severity	Cessation
25. Teachers not out in hallway	Mod	High	Mod	2. Multiple schools in the same building	High	High	Mod
31. Teachers leaving	Mod	Low	Mod	3. People judging your school by the schools in your building	Mod	Mod	Low
32. Teachers caring about watching students grow and graduate	Low	Low	Mod	15. Jealousy from other schools	Mod	Mod	Mod
34. Teachers not caring about students' inappropriate behavior	Mod	Mod	Mod	24. Areas where students can get away with violence	High	High	Low
50. Too much connection to teachers	Low	High	Mod				
52. Teachers' disrespect towards students	High	Mod	Mod				
54. Teachers inappropriately looking at students	High	High	Low				