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Development of a Standard Model for School Climate and Safety Assessment: Final Report

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ABSTRACT

The purpose of this project was to develop a standard model for the assessment of school climate and safety guided by authoritative school climate theory. We devised and tested student and school staff versions of the Authoritative School Climate Survey in a series of statewide surveys over a four-year period (2013-2016). In collaboration with the Virginia Department of Criminal Justice Services and Department of Education, the project collected data from more than 700 secondary schools including 200,501 student surveys and 45,793 staff surveys. Participation rates were 98% for schools, 85% for students in grades 7-12, and 61% for teachers and other school staff invited to participate.

A series of multi-level factor analytic studies established strong evidence of factor structure, reliability, and convergent validity for key scales measuring disciplinary structure, academic expectations, student support, student engagement, and prevalence of teasing and bullying. Scales were developed for both student and staff versions of the survey at both individual (student or staff) and school levels of analysis. Secondary scales to measure student aggressive attitudes, positive values, bullying victimization, and bullying by teachers were also developed. Project findings have been reported in 27 refereed journal articles to date, with additional articles in progress. An authoritative school was characterized by high expectations for students, as reflected in high disciplinary structure (strict but fair discipline) and high academic expectations for students, and high support for students (adults are respectful and caring toward students). The primary project findings were that characteristics of an authoritative school climate were associated with positive academic and behavioral outcomes at individual and/or school levels. The academic outcomes included higher student engagement, higher grades, higher standardized test passing rates, and lower dropout rates. The behavioral outcomes included lower student aggression toward both peers and teachers as well as less student involvement in risk behaviors of self-reported alcohol and marijuana use, bullying, fighting, weapon-carrying at school, interest in gang membership, and suicidal thoughts and behavior.

All of the published studies included racial/ethnic and socioeconomic status variables in their analyses as student- or school-level measures. These analyses generally demonstrated that the primary findings of the study were not confounded by race/ethnicity or socioeconomic status. Additional analyses showed comparable criterion validity on key measures for Black, Hispanic, and White student groups. Furthermore, schools with authoritative characteristics had lower overall suspension rates and a lower gap between Black and White suspension rates.

The results of this study will help move the field toward consensus on a theoretically-grounded and more psychometrically sound model for school climate and safety assessment.

EXECUTIVE SUMMARY

The purpose of this project was to develop a standard model for the assessment of school climate and safety guided by authoritative school climate theory. Authoritative school climate theory is derived from child development research which has found that effective parenting is characterized by a combination of high parental expectations and responsive emotional support for their children. A substantial body of educational research has found that effective schools have a climate of high disciplinary and academic expectations for students, as well as supportive teacher-student relationships. This project built upon previous educational research by developing and testing survey instruments that specifically measure an authoritative school climate, and by demonstrating its linkages to multiple positive student outcomes.

Student and school staff versions of the Authoritative School Climate Survey were tested in a series of statewide surveys over a four-year period (2013-2016). Schools with grades 7-8 were surveyed in 2013 and 2015, and schools with grades 9-12 were surveyed in 2014 and 2016. In collaboration with the Virginia Department of Criminal Justice Services and Department of Education, the project collected data from more than 700 secondary schools, cumulatively including 200,501 student surveys and 45,793 staff surveys. Participation rates were 98% for schools, 85% for students, and 61% for teachers and other school staff invited to participate. The surveys were administered anonymously online at password-protected websites. Student surveys of approximately 100 items had median completion times of approximately 12 minutes for grades 9-12 and 17 minutes for grades 7-8. Staff surveys of approximately 70 items were completed in a median of 9 minutes. Each school received a 28-page report of its survey results with comparisons to regional and state norms.

The project set high standards for the psychometric properties of survey scales, and used some innovative statistical methods, including multi-level multivariate structural modeling in order to demonstrate that scales measured school-level as well as individual-level (student or staff) characteristics. Separate analyses were conducted for student and staff surveys and for middle school and high school grades. All analyses also investigated the influence of student and school demographic variables. For both student and staff surveys, there was strong evidence of factor structure, reliability, and convergent validity for key scales measuring disciplinary structure, academic expectations, student support, student engagement, and prevalence of teasing and bullying. Scales were developed for both student and staff versions of the survey at both individual (student or staff) and school levels of analysis. Secondary scales to measure student aggressive attitudes, positive values, bullying victimization, and bullying by teachers were also developed.

Project findings have been reported in 27 refereed journal articles to date, with additional articles in progress. Seven papers established the factor structure and convergent validity of the key scales in the authoritative school climate model in statewide samples (Huang & Cornell, 2016; Huang et al., 2014; Konold, in press; Konold & Cornell, 2015a, 2015b; Konold et al., 2014; Konold & Shukla, in press). Notably, these studies examined both student-level and school-level properties of these scales, using both student and teacher survey data. After demonstrating evidence of reliability and validity of the authoritative school climate scales in grades 7-8, a separate set of studies found comparable support for grades 9-12.

An authoritative school was characterized by high *expectations* and *support* for students. High expectations were indicated by high disciplinary structure (strict but fair discipline) and high academic expectations for students. High *support* for students was indicated by the teachers and other adults at school demonstrating respect and concern for students. Three studies investigated the theory that an authoritative school climate is conducive to positive academic adjustment. Among the findings from these studies were that higher disciplinary structure and student support were associated with higher student engagement in school, higher course grades, and higher educational aspirations in both middle school and high school samples (Cornell, Shukla, & Konold, 2016). In addition, academic expectations and student support were most highly associated with grades for students not living with their parents (Huang, Eklund, & Cornell, 2016). A third study found that when students perceive their teachers as supportive, high academic expectations

are associated with lower high school dropout rates (Jia, Konold, & Cornell, 2015). These results were not attributable to school demographics of school enrollment size, percentage of low-income students, percentage of minority students, or urban location.

Another series of three studies found that an authoritative school climate was associated with positive student behavioral adjustment. A middle school study found that higher disciplinary structure was associated with lower levels of the prevalence of teasing and bullying (PTB), as well as fewer self-reports of being bullied and victimized in general (Cornell, Shukla, & Konold, 2015). Higher support was associated with lower PTB and general victimization. Among the contributions of this study were to show that the association between authoritative school climate and student aggression was present at both student and school levels of analysis, that it extended across varied forms of peer aggression, and that it was found for self-reports of victimization as well as perceptions of others being victimized. A second study of high school students found that schools with an authoritative school climate had lower levels of student-reported alcohol and marijuana use; bullying, fighting, and weapon carrying at school; interest in gang membership; and suicidal thoughts and behavior (Cornell & Huang, 2016). These results controlled for demographic variables of student gender, race, grade, and parent education level as well as school size, percentage of minority students, and percentage of low income students. Finally, a third study reported that, in schools with high structure and support, teachers felt safer, reported lower levels of student aggression toward themselves, and had less distress in reaction to those experiences (Berg & Cornell, 2016).

Three studies examined the prevalence of student attitudes that supported aggressive behavior, such as the belief that bullying and fighting were sources of peer status. Although the majority of students in a school tend to reject these attitudes, these studies found that a relatively small proportion of students with aggressive attitudes is associated with more dangerous school conditions. One study found that schools with more prevalent aggressive attitudes had higher rates of bullying, peer aggression, gang activity, and disciplinary infractions for aggressive behavior (Huang, Cornell, & Konold, 2015). A second study found that schools with more prevalent aggressive attitudes had fewer students who were willing to stand up against bullying (Datta, Cornell, & Huang, 2016). A third study found that students in schools with more prevalent aggressive attitudes were generally less likely to report that student had brought a gun to school or talked about killing someone (Millspaugh, Cornell, Huang, & Datta, 2015). These studies supported the importance of efforts to change attitudes among students that aggressive behavior is a source of popularity and status.

All of the published studies included racial/ethnic and socioeconomic status variables in their analyses as student- or school-level measures. These analyses generally demonstrated that the primary findings of the study were not confounded by race/ethnicity or socioeconomic status. Additional analyses showed comparable criterion validity on key measures for Black, Hispanic, and White student groups (Konold, Cornell, Shukla, & Huang, 2016). In other words, although Black, Hispanic, and White students have some differences in their perceptions of school climate, their perceptions were equally valid as predictors of student outcomes such as student engagement in school. Huang and Cornell (in press) found Black students were three times as likely as White students to receive an out-of-school suspension in Virginia high schools. Their analyses found that the Black-White suspension gap could not be explained by racial differences in student risk behaviors, aggressive attitudes, or student characteristics such as family socioeconomic status and student grade point average. Another study found that schools with high levels of student- and teacher-reported disciplinary structure had lower overall suspension rates and a lower gap between Black and White suspension rates (Heilbrun, Cornell, & Konold, under review).

Limitations and Future Directions. Large-scale surveys provide a wealth of cross-sectional data for correlational analyses, but cannot establish causal effects. Within the framework of a cross-sectional design, it was possible in this project to demonstrate the strength and consistency of correlational relationships across samples, to control for potentially confounding variables, and to show similarity of findings across measures and informants. However, a cross-sectional design cannot establish causal effects. Future studies using a longitudinal design would provide stronger evidence of causal effects. Repeated assessments of schools would allow researchers to track changes over time and show how school climate changes are associated with student outcomes. The most effective way to demonstrate causal effects is

to undertake a randomized control trial with an intervention designed to enhance school climate and thereby improve student outcomes. Other limitations and directions for future study are described in the report.

School climate has emerged as an essential factor in school effectiveness. A safe, orderly, and supportive school climate facilitates student engagement in learning and healthy social development. Although educators cannot change the risk factors of poverty, stressful events, or family problems that affect their students, they can create a positive school climate that engages students and gives them opportunities to be successful. Consistent with this view, the 2015 Every Student Succeeds Act (ESSA, Public Law 114-95) has made it a national priority to measure school climate and safety as an indicator of school quality.

Despite the promise of school climate research, the field has been limited by a multitude of measures that do not clearly define school climate and lack strong evidence of validity as school-level measures. In order to improve their school climate, educators need practical and efficient tools to examine school conditions and assess the impact of their interventions. Researchers need reliable and valid measures to gain greater understanding of school functioning and develop more effective educational strategies and practices.

This project demonstrated that the Authoritative School Climate Survey is an efficient way to gather statewide information from students and school staff that meets high standards of reliability and validity. The developing theoretical model of authoritative school climate has the potential to bring greater clarity and coherence to school climate research. Overall, the results of this project will help move the field toward consensus on a theoretically-grounded and more psychometrically sound model for school climate and safety assessment.

OVERVIEW OF THE PROBLEM

The purpose of this project was to develop a standard model for the assessment of school climate and safety. A conceptual model guided by authoritative school climate theory was used to construct surveys of students and school staff that were tested and refined in a series of statewide surveys of more than 700 Virginia public secondary schools (grades 7-12) over a four year period (2013-2016). A series of studies (abstracts in Appendix A) reported on the development and validation of key survey scales, their psychometric properties across demographic groups, and their relations to important academic and behavioral outcomes.

School Climate

There is abundant evidence that students have better social, behavioral, and emotional adjustment in schools with a positive school climate (Bradshaw, Koth, Thornton, & Leaf, 2009; Gage, Larson, Sugai, & Chafouleas, 2016; Gottfredson, Gottfredson, Payne, & Gottfredson, 2005; Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). Students attending schools with a more positive climate engage in less bullying and other forms of peer aggression (Gregory, Cornell, Fan, Sheras, Shih, & Huang, 2010; Wilson, 2004), are less likely to participate in problem behaviors such as substance use and fighting (Fletcher, Bonell, & Hargreaves, 2008; Gottfredson et al., 2005; Loukas & Murphy, 2007; Wang & Dishion, 2011), and experience fewer internalizing and externalizing problems (Hawkins, Oesterle, Brown, Abbott, & Catalano, 2014; Henrich, Brookmeyer, & Shahar, 2005; Huang, Luebbe, & Flaspohler, 2015; Kuperminc, Leadbeater, & Blatt, 2001). Although most studies are correlational and cross-sectional, there are longitudinal studies and intervention studies that provide stronger evidence of a causal link between school climate and student adjustment (Bradshaw et al., 2009; Kidger, Araya, Donovan, & Gunnell, 2011; Sznitman & Romer, 2014).

There is also extensive evidence that students attending schools with a positive school climate have higher academic achievement (Goddard et al., 2000; Lacey, Cornell, & Konold, 2015; Pellerin, 2005; Wang & Holcomb, 2010; Wang & Huguley, 2012; but see also a skeptical view by Benbenishty, Astor, Roziner, & Wrabel, 2016). There is considerable research contending that a positive climate can mitigate the adverse effects of poverty on achievement, although again a caveat is that most of this research is correlational (Berkowitz, Moore, Astor, & Benbenishty, 2016; Brand, Felner, Shim, Seitsinger, & Dumas, 2003; Schagen & Hutchison, 2003).

The voluminous research on the benefits of a positive school climate has made it a national priority to assess school climate and find ways to improve it. The 2015 Every Student Succeeds Act (ESSA, Public Law 114-95) encourages schools to measure "school climate and safety" as a non-academic indicator of school quality or student success. The indicator must be "valid, reliable, comparable, and statewide" (p. 35). The current project preceded the ESSA, but contributes to the effort to develop reliable and valid measures that can be used for statewide comparisons of schools.

Under Section 4108, Activities to Support Safe and Healthy Students, ESSA directs schools to "develop, implement, and evaluate comprehensive programs and activities that…foster safe, healthy, supportive, and drug-free environments that support student academic achievement" (p. 177). ESSA specifically refers to "school-based violence prevention strategies" and "bullying and harassment prevention." Violence prevention is defined as "the promotion of school safety, such that students and school personnel are free from violence and disruptive acts, including sexual harassment and abuse, and victimization associated with prejudice and intolerance, on school premises, going to and from school, and at school-sponsored activities, through the creation and maintenance of a school environment that is free of weapons and fosters individual responsibility and respect for the rights of others" (pp. 168-169). The current project included the creation of scales to measure bullying, harassment, and other forms student aggression and to examine their associations with school climate measures.

Conceptual Problems

The nationwide efforts to improve school climate make it essential to define the construct clearly so that it can be measured accurately. School climate has been broadly defined by many different authorities. Three prominent examples illustrate its conceptual breadth and complexity. First, an influential review article concluded that "School climate refers to the quality and character of school life" and is "based on patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures" (Cohen, McCabe, Michelli, & Pickeral, 2009, p. 182). Second, a review of school climate research found that definitions of school climate "encompass just about every feature of the school environment that impacts cognitive, behavioral, and psychological development" (Wang & Degol, 2016, p. 3). Finally, the U.S. Department of Education (2013, p. 2) described school climate as "a multi-faceted concept that describes the extent to which a school community creates and maintains a safe school campus, a supportive academic, disciplinary, and physical environment, and respectful, trusting, and caring relationships throughout the school community."

The broad definitions of school climate have the virtue of being comprehensive, but may risk over-inclusiveness and lose meaningfulness. If every aspect of a school is part of its climate, then it is not clear what the concept means and how it can be related to other important school characteristics. Reviews of school climate measures have lamented the amorphous nature of the construct, the absence of guiding theory, and the need for rigorous validity research (Johnson, 2009; Ramelow, Currie, & Felder-Puig, 2015; Wang & Degol, 2016).

School climate is a metaphorical term that needs a clearer conceptual foundation (Cornell & Huang, in press). By comparison, the meteorological climate of Washington, DC refers to the patterns of weather that characterize the region and distinguish it from other regions. The buildings and streets of the capitol are not part of its climate but one can study how climate affects them. Analogously, the concept of school climate refers to the patterns of daily social interactions in the school that distinguish it from other schools. The school's climate should be distinguishable from other elements of the school environment, such as the condition of the building, the quality of its teachers, its curriculum, and the demographics of its students. Otherwise, the term "school climate" means little more than "the school."

Furthermore, climate is not a single entity, but a system with interacting components. A meteorological climate has features such as temperature, humidity, and precipitation that interact with one another, e.g., a sufficiently cold temperature turns precipitation from rain to snow. Similarly, it should be possible to distinguish components of a school climate that interact with one another in a predictable manner. This perspective reflects the approach taken by the current project to conceptualize school climate as a complex system of interacting components that are distinguishable from other features of a school.

Authoritative School Climate Theory

Authoritative school climate theory provides a conceptual framework for school climate that can help to identify key features of school climate and their association with positive student outcomes. This developing theory is derived from work by Baumrind (1968) on authoritative parenting that stimulated a large body of child development research (Larzelere, Morris, & Harrist, 2013). Parenting research has found that authoritative parents provide a combination of high expectations (also called "demandingness") and emotional support (also called "responsiveness") for their children. High expectations are often measured as strict discipline but can refer to high expectations in other domains such as school achievement. Parents are less effective when they have high expectations but are not supportive (authoritarian), emotionally supportive but lacking high expectations (permissive), or lacking in both expectations and support (disengaged or neglectful). Although there is no expectation that an authoritative school climate is conceptually concordant with authoritative parenting in all respects, there are some parallels that help to organize research on school climate.

The authoritative school climate theory posits a model for school climate that centers around two key domains[1] of school climate that promote a safe and supportive environment conducive to learning (Gill, Ashton, & Algina, 2004; Gregory & Cornell 2009; Lee, 2012; Pellerin, 2005). The first domain concerns high disciplinary and academic expectations for students, which has been referred to as the demandingness or *structure* of the school climate. Do teachers and other school staff members enforce discipline in a strict but fair manner, and do they have high academic expectations for all students to learn and achieve? The second domain concerns the responsiveness or *supportiveness* of teacher-student relationships. Do teachers and other school staff members interact with students in a respectful, caring, and helpful manner? Although these two domains do not encompass all aspects of school climate, there is considerable evidence that they deserve a central role in research on school climate and can provide an assessment of school conditions that is related to student engagement, academic achievement, and positive behavior.

Many studies support the idea that school structure and support deserve a central role in research on school climate. For example, Johnson's (2009) review of 25 studies concluded that "schools with less violence tend to have students who are aware of school rules and believe they are fair" and "have positive relationships with their teachers" (p. 451). Several school climate surveys measure these two domains in some capacity (Bear, Gaskins, Blank, & Chen, 2011; Brand, Felner, Shim, Seitsinger, & Dumas, 2003), but authoritative school climate theory gives them special prominence.

Pellerin (2005) found that high schools using authoritative practices had less truancy and fewer dropouts than schools using an authoritarian approach. An analysis of NELS data found that authoritative schools, characterized as both demanding and responsive, had higher levels of student engagement (Gill, Ashton, & Algina, 2004). Lee (2012) found that an authoritative school climate was associated with higher student engagement and reading achievement.

Other studies have used different conceptual frameworks that nevertheless reflect the role of authoritative characteristics. For example, Wang and Eccles (2013) investigated how school climate characteristics were associated with different types of student engagement in a sample of 1,157 middle school students. Most notably, "school structure support" (defined as the clarity and consistency of teacher expectations) and "teacher emotional support" (defined as level of care and support from teachers) were associated with behavioral, emotional, and cognitive engagement.

Prior to the current project, our research group at the University of Virginia began work to develop scales to measure authoritative school climate. This effort was undertaken in a statewide survey of 7,318 ninth grade students and 2,922 teachers in 290 Virginia high schools conducted in the spring of 2007. Confirmatory factor analyses identified two factors consistent with the authoritative model (Gregory et al., 2010). Student survey measures of disciplinary structure and student support were associated with less peer victimization (Gregory et al., 2010), lower levels of student aggression toward teachers (Gregory et al., 2012), and lower suspension rates (Gregory et al., 2011). These studies demonstrated positive associations between school climate and student outcomes across a large and diverse group of schools, controlling for school demographics of enrollment size, ethnic and racial composition, and percentage of students receiving a free or reduced price meal (a commonly used proxy for school-level socioeconomic status).

Measurement Problems

Many reviewers have noted the lack of sufficient evidence for the validity of school climate scores (Cornell & Huang, in press; Ramelow, Currie, & Felder-Puig, 2015; Wang & Degol, 2016). This is a multi-faceted problem. An over-arching weakness is that the lack of a well-defined theoretical framework for the concept of school climate undermines its construct validity. There are few criterion-related validity studies that show how school climate is related to other school qualities or student outcomes. An underlying measurement problem, however, is that school climate scales are often constructed as individual-level measures rather than school-level measures. The concept of school climate implies qualities that are properties of the school and not of any single individual reporter (Griffith, 1997; van Horn, 2003). Based

[1] Authoritative school climate theory uses terms such as *disciplinary structure* and *academic expectations* to refer to constructs that parallel what parenting researchers have labeled *demandingness* or *control*. The school climate terms *student support* or *positive teacher-student relationships* refer to constructs that parallel what parenting researchers have labeled *warmth* or *responsiveness*.

on research on organizational climate decades ago, Sirotnik (1980) concluded that the unit of analysis should be the organization (i.e., the school) and not the individual (e.g., the student). However, a majority of school climate instruments have examined their psychometric properties solely at the individual level (Ramelow et al., 2015; Wang & Degol, 2016). Raudenbush and Sampson (1999, p. 3) called for research on *ecometric* measures or the "psychometric properties of ecological measures."

Factor analysis. Factor analytic techniques are widely used to provide an empirical basis for combining individual survey items to form school climate scales. However, most studies conduct factor analyses on responses from individuals, ignoring that individuals are nested within schools. Surveys collected within the same school have shared properties of the school that distinguish them from surveys collected in different schools. This is both inherent in the concept of school climate and a critical measurement problem. Analytic techniques that do not account for the nested nature of the data fail to recognize that individual surveys within the same school are not independent observations. As a result, analyses that ignore nesting can have biased parameter estimates, deflated standard errors, and generally distorted results (Kaplan & Elliott, 1997; Muthen & Satorra, 1995). Julian (2001, p. 342) concluded that "the application of covariance models to multilevel data without accounting for the dependencies among observations is a potentially dangerous practice." Equally important is the fact that multilevel latent variable modeling techniques allow for investigation of the degree to which reports obtained by individuals within a school are useful for measuring their intended school level constructs.

Few studies have examined psychometric properties of school climate scales at both the school and individual level using a multilevel framework (see Huang et al., 2015; Konold et al., 2014). Indeed, the evaluation criteria for reliable and valid school climate scales used by the National Center on Safe Supportive Learning Environments (NCSSLE, 2016) make no reference to this problem. The NCSSLE evaluation criteria set a lower standard. The criteria state that the "minimum evidence requirements" for a survey include that it must be evaluated in *at least one* of four ways: construct validity (through convergent validity or factor analysis), scale/item reliability (internal consistency, test-retest), dimensionality (factor analysis, IRT), or measurement equivalence across subgroups. All four of these criteria are valuable qualities, but they are not interchangeable and none of them alone are sufficient in demonstrating an instrument's psychometric quality. Higher standards are needed.

When factor analyses are appropriately conducted on multiple levels (e.g., student and school levels),[2] there is an additional concern that student-level constructs can differ from school-level constructs, both statistically and conceptually. The factor structure at the student level may not be same at the school level and conceptually might not be equivalent. For example, personality traits measured at the student level have no comparable meaning at the school level. Conversely, school-level characteristics such as the racial diversity of the student body are emergent properties of the race of each individual student. Other constructs may be more readily translated across levels; for example, individual student feelings of safety at school might be aggregated into an overall school safety scale. A construct may have different interpretations depending on the level of analysis (Bliese, 2000) and the relations among variables within schools may not be the same as the relations among variables between schools (Huang & Cornell, 2016b; Huang, Cornell, & Konold, 2014). From a statistical perspective, factor structures can differ across levels (i.e., have invariant cross-level factor structures) and constructs formulated on the student level can lead to erroneously formed school climate composites (Schweig, 2013).

Reliability. Another measurement problem for school climate surveys is the lack of appropriate reliability measures. Cronbach's alphas are widely used as a reliability measure and these are readily calculated at the student level. However, the reliability of a scale score based on an individual unit of analysis (e.g., student or teacher responses) does not represent its ecometric properties at the school level. Scores may be reliable at the individual level but not at the school level or vice versa (Zyphur, Kaplan, & Christian, 2008). Geldhof, Preacher, and Zyphur (2014, p. 72) asserted that "reliability estimates are only as trustworthy as the information used to estimate them, however, and estimating reliability

[2] These observations are concerned with student and school levels of analysis, but could be applied to classroom, grade cohort, or other groupings of students.

from data collected from multistage sampling [e.g., surveying students within schools] necessarily confounds the within- and between-cluster item variance…single-level reliability estimates therefore do not necessarily reflect true scale reliability at any single level of analysis."

There are several possible multilevel reliability measures that can be calculated. Geldhof et al. (2014) recommended the use of multilevel α or composite reliability ω, depending on the size of the clusters. Others recommend the use of the Spearman-Brown formula to measure the reliability of an aggregate score (Bliese, 2000; Dedrick & Greenbaum, 2011). Properly constructed, group-level reliabilities tend to be higher than individual-level reliabilities as a result of the scale being constructed from multiple informants (Byrne, 2012; Zyphur et al., 2008).

Even when calculated on the school level, Cronbach's alpha is a limited measure of reliability (see Sijtsma, 2009) because it assesses the internal consistency of a scale and does not encompass other forms for reliability such as its test-retest stability. In some cases internal consistency is not a necessary or desirable quality, and the pursuit of high internal consistency can damage a scale's validity (Streiner, 2003). Although high reliability estimates are desirable in general, alpha should not be too high (e.g., > .90) because this may reflect unnecessary duplication of items to the point of redundancy (Streiner, 2003).

Streiner (2003) distinguishes between *scales*, which should have some degree of internal consistency, and *indices*, which are composed of items that need not have internal consistency. For example, an index of life stress may contain an assortment of stressful life experiences (e.g., illness, accidents, divorce, loss, unemployment) that are not correlated with one another and would not be expected to demonstrate high internal consistency. Similarly, a measure such as Student Aggression Toward Teachers is more properly regarded as an index than a scale because the various kinds of aggression that students might direct toward teachers (ranging from disrespectful language to property damage to physical assault) are not highly correlated with one another (e.g., most instances of disrespectful language are not associated with a physical assault). Another example is that a physical school safety index may be comprised of a list of safety features present at the school (e.g., surveillance system, metal detectors, door locks, bullet-proof glass) that are not necessarily correlated with each other.

Shared method variance. Because school climate surveys usually are administered on an anonymous basis, researchers are unable to link student responses with non-survey criteria. Instead, researchers chiefly rely on inter-correlations among scales contained within a single survey, which lack independence and may be inflated by shared method variance (Chan, 2009). This approach is convenient, but less rigorous than comparing scores with independent criteria derived from other sources of information. This is a common weakness in many school climate studies (Cornell & Huang, in press).

When surveys are aggregated to the school level and used to measure school characteristics, it is possible to compare them to independent sources of information. For example student or teacher reports of school climate can be correlated with school dropout rates, schoolwide test scores, suspension rates, or other indicators of school outcomes. It is also possible to compare informants (e.g., students and teachers) within schools to assess the relative contributions of method or informant effects versus trait effects (Konold & Cornell, 2015b). In conclusion, school-level scores can be used for more rigorous tests of survey validity than individual (e.g., student, teacher) informant-level scores.

Validity screening. An important but often neglected aspect of school climate research is the use of validity screening. Adolescents who do not take school climate surveys seriously may answer carelessly or dishonestly and compromise study results (Fan et al., 2006; Furlong et al., 2004). A small percentage of invalid responders can produce erroneous findings with serious policy implications. For example, the finding that adopted adolescents have high rates of maladjustment was found to be an artifact of a small group of adolescents who falsely claimed to be adopted (Fan et al., 2002). Adolescents identified as invalid responders tend to provide exaggerated reports of risk behaviors and consistently more negative views of school climate compared to other students (Cornell, Lovegrove, & Baly, 2014).

Inclusion of surveys completed by invalid responders can also affect reliability and validity in unexpected ways. If invalid responders provide more exaggerated responses, score variability increases and can inflate reliability estimates (Streiner, 2003). The resulting extreme scores can produce *higher* factor loadings and the appearance of a stronger factor structure (Cornell, Klein, Konold, & Huang, 2012).

Determining the honesty or accuracy of a student's responses with certainty is rarely possible, but several techniques have been used to improve the general quality of survey data. One method is to ask directly whether the respondent is telling the truth (e.g., "I am telling the truth on this survey" and/or "How many items on this survey did you answer truthfully?"; Cornell et al., 2012). This approach will not detect students who purposely conceal whether they were answering inappropriately, but a sizeable number of students can still be identified. When these kind of validity screening items were used with middle and high school students in two studies, invalid responders ranged from approximately 4 to 12% (Cornell et al., 2012). Another simple method to improve data quality is to identify surveys completed so quickly that a participant could not have read the questions (Jia, Konold, Cornell, & Huang, 2016; Meade & Bartholomew, 2012). This approach eliminates a small percentage of surveys that also contribute error to the dataset. When used together, these two approaches can improve the reliability and validity of survey results.

STUDY METHODS

Study Goals

The current study had three over-arching goals:

Goal 1: Develop improved measures of school climate and safety.

Goal 2: Investigate the associations between authoritative school climate and safety using the improved measures.

Goal 3: Identify school climate features that are associated with lower rates of school exclusion and dropout, especially among disproportionately punished minority students.

Study goals were achieved by administering a statewide school climate survey each spring for four years starting in 2013. Each year, survey scales were tested and refined in order to develop high quality measures of school climate and safety. Research on the reliability and validity of the measures is summarized in a series of tables below. Consistent with Goal 2, scale development was guided by authoritative school climate theory, which allowed us to test hypotheses about authoritative school climate and a variety of positive student outcomes including measures of bullying and peer aggression, aggression toward teachers, and student risk behaviors. In addition, authoritative school climate was linked to academic outcomes such as school engagement and grades. Goal 3 was investigated by examining student suspension and dropout rates across racial/ethnic groups in a series of studies. Findings in support of all three goals are summarized in this report and elaborated in a series of published journal articles (see Appendix A).

The Virginia School Safety Audit program

Surveys were conducted under the auspices of the Virginia School Safety Audit program. This program was established in 1997 for the purpose of assessing the safety conditions of Virginia public schools, including both physical safety and student safety concerns (§ 22.1-279.8). In 2005, responsibility for the development, standardization, and analysis of the safety audit was assigned to the Virginia Center for School and Campus Safety (VCSCS) in the Department of Criminal Justice Services (DCJS). All Virginia public schools are required by state law to participate in the annual school safety audit in order to assess school safety conditions. The first on-line Virginia School Safety Survey was conducted by the VCSCS in 2005 using information obtained from school principals. However, it was judged that the safety audit should include a broader assessment of school safety conditions from students and school staff.

In 2007, the School Safety Audit included an online survey of 9th grade students and teachers. This project supported by grant 2006-MU-FX-0066 awarded from the Office of Juvenile Justice and Delinquency Prevention of the U.S. Department of Justice to the University of Virginia. Ninth grade was selected as a critical year for high school success. The results of the 9th grade survey demonstrated the value of obtaining a more comprehensive assessment of safety conditions and student safety concerns. This survey found that student and teacher perceptions of school climate could be reliably measured and were strongly related to safety conditions, including levels of bullying, violence, and serious disciplinary infractions. School climate and safety conditions were further predictive of student academic engagement, school performance on Virginia's state-mandated Standards of Learning (SOL) examinations, and high school graduation rates. These findings are elaborated in a series of papers prepared by the Virginia Youth Violence Project of the Curry School of Education at the University of Virginia (see list in appendix A).

The current study began by instituting surveys of secondary school students and staff in 2013. Again, VCSCS used completion of the Virginia Secondary School Safety Surveys as one component of the audit. The Virginia Department of Education (VDOE) and DCJS worked in collaboration to encourage school participation.

To limit the burden on schools, the surveys were administered on a biannual basis. Schools with grades 7-8 were surveyed in 2013 and 2015, and schools with grades 9-12 were surveyed in 2014 and 2016. Participating schools received

a report comparing individual school results to state and regional averages to help them identify strengths as well as areas in need of improvement.

The surveys were labeled "Virginia Secondary School Climate Survey" (VSSCS) because it was administered to Virginia public schools as part of the state's safety audit program. However, the core of this survey is the Authoritative School Climate Survey. The VSSCS survey included the Authoritative School Climate Survey and some additional items, such as risk behavior items from the Center for Disease Control's (CDC) Youth Risk Behavior Surveillance Survey and questions requested by the VDOE or DCJS. Each spring, items and scales that seemed less useful were dropped from the survey and new items were tested. Copies of the surveys used each year are found in the annual technical reports, available here: http://curry.virginia.edu/research/projects/virginia-secondary-school-climate-study. Unless indicated otherwise, all references to surveys in this report refer to the Authoritative School Climate Survey

Survey planning was undertaken by representatives from the University of Virginia, VDOE, and DCJS. Survey instructions and administration procedures were revised each year in response to principal feedback. A primary concern was to minimize the burden on school personnel and loss of instructional time for students. In response to feedback from principals, the spring survey was announced in the fall and instructions were made available in December.

Procedure

The surveys were administered online through a secure Qualtrics platform. Schools were asked to administer all surveys during a 2 to 3-week period of their choice from February 1 to April 1. This flexibility allowed schools to choose a time period suitable for their school schedule. However, each year the survey window was extended for several more weeks in response to requests from school divisions and VDOE. The majority of schools chose to administer the survey in March. The distributions of survey completion times for each year are presented in the four technical reports. Correlational analyses indicated little or no difference in survey results associated with taking the survey earlier or later in the survey time period.

Individual reports were prepared for each school. For the first two years, reports were generated using software developed by the Ann Bevans Collective. During the final two years, the reports were generated using software developed by Professor J. Patrick Meyer of the Curry School of Education at the University of Virginia. The reports were placed on a password protected website of the DCJS. Schools were notified and given the password for their reports.

Only surveys with all items completed were used for data analysis. This eliminated surveys that were opened by a school administrator for inspection as well as surveys that were abandoned without completion, surveys where the Internet connection was interrupted, etc. In order to assure complete surveys, the Qualtrics system required participants to complete each item before advancing to the next page.

School Sample

All Virginia public schools serving general education students in the targeted grade levels (grades 7-8 in 2013 and 2015, grades 9-12 in 2014 and 2016) were eligible for the survey. Although most of the schools were traditional middle schools with grades 6-7-8 and high schools with grades 9-12, there were a wide variety of schools with other grade configurations (e.g., K-8, 7-12) that were included. The survey did not include schools located in juvenile detention and correctional facilities, centers providing part-time or temporary services such as suspension centers, facilities exclusively serving students with disabilities, or programs specifically for adults. Nearly all eligible schools (98%) participated in the survey by asking their students and teachers/staff to complete the survey. However, individual student and staff participation was voluntary. See Table 1 for school-level demographics for the participating schools.

Table 1. School Demographic Characteristics

School Characteristics	2013 Survey of Grades 7-8	2014 Survey of Grades 9-12	2015 Survey of Grades 7-8	2016 Survey of Grades 9-12
Number of eligible schools	430 schools	324 schools	420 schools	322 schools
Number of participating schools	423 schools	323 schools	415 schools	320 schools
Participation rate	98.4%	99.7%	98.8%	99.3%
Average enrollment	708 students	1,178 students	733 students	1,221 students
School regions				
Urban	21.9%	20.7%	18.1%	20.3%
Suburban	29.3%	31.6%	31.6%	32.2%
Town	6.9%	4.6%	4.6%	4.7%
Rural	41.9%	43.0%	45.8%	42.8%
FRPM (percentage of students eligible for free or reduced-price meals)	45.2%	38.0%	46.4%	39.7%
Race/Ethnicity				
White/Caucasian	61.1%	60.5%	60.1%	59.2%
Black/African-American	22.6%	23.0%	22.0%	22.7%
Hispanic	8.6%	8.7%	9.7%	9.7%
Asian	3.6%	4.1%	4.0%	4.2%
Other minority group	4.1%	3.8%	4.5%	4.1%

Note. School regions refer to U.S. census classification for school attendance zone. FRPM and race/ethnic percentages refer to the total school enrollment.

Student Sample

Schools were given two options for sampling students: (1) invite all eligible students in the target grades (grades 7-8 or 9-12) to take the survey, with a goal of surveying at least 70% of all eligible students (whole grade option); (2) use a random number list to select at least 25 students from each target grade to take the survey (random sample option). Schools were given these options in order to give administrators the flexibility to choose a more or less comprehensive assessment of their students. Schools choosing the random sample option were provided with a random number list along with instructions for selecting students (see Appendix D). The random numbers were tailored to the enrollment size of each target grade. Principals were advised to invite up to 50 students in each grade to take the survey in order to have a pool of alternates in the event that any of the first 25 selected students were unable or unwilling to participate.

All students were eligible to participate except those unable to complete the survey because of limited English proficiency or an intellectual or physical disability. The principal sent an information letter to the parents of each student invited to participate in the survey. The letter explained the purpose of the survey and offered them the option to decline participation.

Student participation. Student participation rate was defined as the total number of students across all schools who participated in the survey divided by the total number invited to take the survey. To assist in estimating participation rates, principals were asked to complete an online Participation Survey reporting how many students (and teachers) they invited to participate and how many of those invited to participate declined or did not participate for some other reason. Principals were also asked to identify the reasons for nonparticipation from a checklist of possible reasons (e.g., the student was sick at the time of the survey). Some of the school principals did not complete the Participation Survey despite repeated requests from DCJS (Table 2). Consequently, participation rates were extrapolated from the available sample of principals. In addition, we estimated the participation rates for other schools based on known information (such as school enrollment records and whether the school used a random or whole sample option). Across the four years, the average student participation rate was 85.0% (Table 3).

Table 2. Principal Completion of the Participation Survey

Principal Participation Survey	2013 Survey of Grades 7-8	2014 Survey of Grades 9-12	2015 Survey of Grades 7-8	2016 Survey of Grades 9-12
Participating schools	430	324	420	322
Number of principals completing survey	335	299	387	250
Principal completion rate	77.9%	92.3%	92.1%	77.6%

Note. Principals were asked to complete a brief survey that tabulated the participation rate for their students and staff.

Table 3. Student Survey Participation Rates Across All Schools

Student Participation Rates	2013 Survey of Grades 7-8	2014 Survey of Grades 9-12	2015 Survey of Grades 7-8	2016 Survey of Grades 9-12
Participating schools	430	324	420	322
Number of students invited to participate	51,638	58,613	61,683	63,990
Number of students completing survey	43,805	52,012	49,695	54,989
Student participation rate	85.3%	88.7%	80.5%	85.9%

Whole grade participation rate. Approximately 27% of the participating schools used the whole grade sampling method in which they invited all eligible students in each target grade to complete the survey. Table 4 presents whole grade student participation rates and reasons for non-participation across all four years.

Table 4. Student Survey Participation Rates for Schools Using Whole Grade Sampling

Participation Rates	2013 Survey of Grades 7-8	2014 Survey of Grades 9-12	2015 Survey of Grades 7-8	2016 Survey of Grades 9-12
Number of schools using whole grade	149	45	169	44
Number of students surveyed	28,582	21,530	37,072	32,583
Student participation rate	85.3%	82.9%	80.9%	82.0%
Number who did not participate	4,912	4,453	8,717	7,130
Reasons for non-participation				
Student absence	41%	64%	58%	71%
Student declined	5%	4%	3%	9%
Schedule conflict	8%	11%	7%	6%
Student disability	5%	4%	6%	4%
Language barrier	NA*	5%	2%	6%
Parents declined	28%	3%	15%	1%
Student was suspended	3%	5%	4%	1%
Other (e.g. computer problem, student moved)	10%	5%	4%	2%

Note. Percentages refer to the total number who did not participate. *Language barrier was combined with "other" in 2013.

Random sample participation rate. Most schools used the random sampling option. In these schools, principals were advised to recruit more than 25 students in each grade so that alternates could be used in the event some of the first 25 selected students declined to participate or were unable to participate for some other reason. Participation rates for these schools are based the number of students who completed the survey divided by the sum of the number of students who completed and did not complete the survey. Table 5 presents random sample participation rates and reasons for non-participation among selected students across all four years.

Table 5. Student Survey Participation Rates for Schools Using Random Sampling

Participation Rates	2013 Survey of Grades 7-8	2014 Survey of Grades 9-12	2015 Survey of Grades 7-8	2016 Survey of Grades 9-12
Number of schools using random sample	274	254	218	206
Number of students surveyed	15,223	30,482	12,623	22,406
Student participation rate	83.9%	93.8%	79.4%	92.2%
Number who did not participate	2,921	2,149	3,271	1,871
Reasons for non-participation				
Student absence	20%	35%	21%	43%
Student declined	9%	19%	32%	13%
Schedule conflict	10%	19%	27%	16%
Student disability	NA*	4%	4%	3%
Language barrier	NA*	2%	2%	2%
Parents declined	12%	4%	5%	6%
Student was suspended	2%	3%	2%	2%
Other (e.g. computer problem; student moved)	47%	11%	4%	10%

Note. Percentages refer to the total number who did not participate. * In 2013 principals choosing the random sample option excluded students with a disability (n = 107) or language barrier (n = 44) before inviting them to participate.

Each year, survey results for schools that used the random sampling option were compared with those for schools that used whole grade sampling. These results are reported in each of the annual technical reports. As might be expected, schools choosing to use whole grade sampling tended to be smaller than those choosing the random sample option. For schools with fewer than 50 students per grade, there is little to be gained from using the random sample option. However, there were no statistically significant differences between the two groups of schools in percentage of students receiving free or reduced-priced meals (FRPM) or urbanicity (population density obtained from the U.S. census).

Student Survey Completion Time and Validity Screening

The length of time that students spent completing the survey varied widely. In a few extreme cases the survey was started and left incomplete for many hours, possibly because the student failed to click the submit button and left the computer. At the other extreme, some students completed the survey so quickly that it would have been impossible to have read and answered all of the questions.

Based on experience with the prior surveys and an examination of the distribution of completion times, we found that approximately 6 minutes was a reasonable threshold between participants who read the survey and completed it quickly and those who probably did not read the survey and simply checked off answers very rapidly. As described in the 2014 technical report, the empirical basis for using a threshold of approximately 6 minutes was determined by a two-component finite normal mixture model that was applied to the log response time distribution.

Removing extremely short and long completion times gives a more realistic picture of how long it takes for students to complete the survey. For example, of the 62,679 students in 2016 who completed the survey in more than 6 minutes and less than 60 minutes, the median completion time was 11.8 minutes. Approximately 80% of the surveys were completed between 7.8 and 21.8 minutes. See Table 6 for detailed completion time for each year.

Table 6. Student Survey Completion Times

Completion Time	2013 Survey of Grades 7-8	2014 Survey of Grades 9-12	2015 Survey of Grades 7-8	2016 Survey of Grades 9-12
Excluded because completion judged to be too fast(< ~6 minutes)	301	649	482	1,626
Median completion time in minutes	18.5	14.4	17.1	11.8
Range for 80% of surveys in minutes	12.1 to 35.2	9.4 to 27.6	11.2 to 32.8	7.8 to 21.8
Number of items in survey*	101	113	110	94

Note. *Students who reported no victimization experiences were asked fewer questions because they were not asked about their response to victimization.

Validity screening items. The survey included two validity-screening items to identify students who admitted that they were not answering truthfully. The first item, "I am telling the truth on this survey," had four response options: *Strongly Disagree*, *Disagree*, *Agree*, and *Strongly Agree*. Students answering *Strongly Disagree* or *Disagree* were omitted from the sample. At the end of the survey, the second item was "How many of the questions on this survey did you answer truthfully?" This item had five response options: *All of them, All but 1 or 2 of them, Most of them, Some of them,* and *Only a few or none of them.* Students answering *Some of them* or *Only a few or none of them* were omitted from the sample. Our previous research found that the use of validity screening items can identify students who tend to give exaggerated reports of risk behavior and hold more negative views of school conditions than other students (Cornell et al., 2012; Cornell, Lovegrove, & Baly, 2014).

Each year the preliminary sample was screened on two criteria: (1) the time it took students to complete the survey and (2) responses to the two validity screening questions. For example, in 2016, 1,626 students (2.4% of the sample) were excluded because it was judged that they would not have been able to read and carefully answer each question so quickly. An additional 4,646 students (6.7% of the sample) responded to the validity questions that they were not telling the truth on the survey and also were excluded. This reduced the sample from 68,951 to 62,679 cases that were used for survey reporting purposes. See Table 7 for information on each year.

Table 7. Student Survey Validity Screening

Validity Screening	2013 Survey of Grades 7-8	2014 Survey of Grades 9-12	2015 Survey of Grades 7-8	2016 Survey of Grades 9-12
Preliminary sample of all completed surveys	42,480	52,012	60,695	68,951
Excluded for completing the survey too quickly	301 (0.7%)	649 (1.3%)	482 (0.8%)	1,626 (2.4%)
Excluded based on validity screening items	2,796 (6.6%)	3,336 (6.4%)	3,705 (6.1%)	4,646 (6.7%)
Screened analytic sample	39,364	48,027	56,508	62,679

Note. In 2013, 19 8th grade students were dropped because they were identified by their password as attending a school with no 8th grade. However, it was subsequently learned that the school had given them the password for the wrong school.

Each year, a comparison of valid and invalid responders revealed statistically significant differences on most survey items. Using conventional standards for interpreting effect size measures (e.g., 0.20 = small, 0.50 = moderate, 0.80 = large), the differences between valid and invalid responders for a large majority of item responses were practically meaningful. For example, in 2016, compared to valid responders, invalid responders were consistently less engaged (d = 0.46), had consistently higher overall levels of aggressive attitudes (d = 0.68), reported lower levels of the prevalence of teasing and bullying by students (d = 0.21), and higher incidents of bullying others (d = 0.43). Detailed findings are reported in each year's technical report. A more extensive evaluation of these comparisons can be found in Jia et al. (2016).

Overall, invalid responders generally gave less favorable appraisals of school climate and safety conditions than valid responders. For example, in 2016, invalid responders were more likely than valid responders to report:

- Less school engagement (Not liking school, not being proud of school, feeling school is boring, getting good grades not important, not wanting to learn as much as can, not feeling like belong at this school);
- Less satisfaction with school discipline (less likely to report that school rules are fair, that punishment for breaking rules is the same for all, that students are only punished when they deserve it, that accused students get a chance to explain, that students are treated fairly regardless of race or ethnicity; more likely to report that adults at school are too strict, and that students can get suspended without good reason);
- Less perception of support by adults at school (less likely to agree that most teachers care about all students, want all students to do well, listen to what students have to say, and treat students with respect);
- Less willingness to seek help from teachers (less likely to agree that there are adults to talk with about a personal problem, a teacher will do something to help with bullying, would tell a teacher about another student who brought a gun to school or talked about killing someone, feel comfortable asking for help with school work, at least one teacher wants them to do well);
- Lower academic expectations from teachers (less likely to report that teachers expect them to work hard, want them to learn a lot and attend college, more likely to report that teachers do not really care how much they learn).

Invalid responders reported observing less bullying than valid responders, perhaps because they identified with these activities and did not want to convey that they were a problem to authorities. Compared to valid responders, invalid responders reported less teasing at school because of clothing or physical appearance or sexual topics. They were less likely to report that bullying was a problem at school.

When asked about gangs at school, invalid responders were less likely than valid responders to say that there were gangs at school or that gangs were involved in fights or drug sales. In response to questions about peer aggression, invalid responders were more likely than valid responders to endorse aggressive attitudes, including:

- If someone threatens you, it is okay to hit that person;
- Bullying is sometimes fun to do;
- It feels good when I hit someone;
- If you fight a lot, everyone will look up to you;
- If you are afraid to fight, you won't have many friends;
- Students who are bullied or teased mostly deserve it.

Invalid responders were more likely than valid responders to report being physically attacked and being threatened, but less likely to report being bullied and someone saying mean or insulting things to them. They reported more physical, social, and cyber bullying but less verbal bullying. This pattern appears contradictory with their responses to items about the prevalence of teasing and bullying they observed among their peers. Invalid responders were less likely than valid responders to report that they observed bullying and teasing at school and had been a victim of bullying, but more likely than valid responders to claim that they had engaged in bullying. Invalid responders were also more likely to report bullying by teachers.

Student Characteristics

Because the surveys were anonymous, all individual student demographic information was based on student self-report. Students were asked to provide their gender, grade, and best description of their race/ethnicity. Students also provided information about the education level for their parent or guardian with the highest education and if they speak a language other than English at home. Student sample demographics are displayed in Table 8.

Table 8. Student Sample Demographics

Student Sample	2013 Survey of Grades 7-8	2014 Survey of Grades 9-12	2015 Survey of Grades 7-8	2016 Survey of Grades 9-12
Gender				
Female	51.7%	51.4%	51.1%	49.8%
Male	48.3%	48.6%	48.9%	50.2%
Grade				
7th Grade	52.1%	--	52.1%	--
8th Grade	47.9%	--	47.9%	--
9th Grade	--	26.1%	--	26.9%
10th Grade	--	26.0%	--	26.0%
11th Grade	--	24.9%	--	24.7%
12th Grade	--	23.1%	--	22.4%
Race/ethnicity				
White/Caucasian	52.4%	56.7%	51.8%	59.2%
Black/African American	18.2%	17.9%	15.1%	22.7%
Hispanic	12.8%	10.5%	13.7%	9.7%
Asian	3.4%	3.8%	5.2%	4.2%
American Indian	1.6%	1.2%	1.8%	0.3%
Hawaiian	0.5%	0.6%	0.5%	0.1%
Mixed Race	15.6%	9.3%	13.7%	3.7%
Respondents speak language other than English at home	21.6%	18.9%	25.0%	23.9%
Parent education				
Post-graduate studies	24.5%	19.9%	26.0%	24.8%
4-year college degree	23.7%	24.1%	26.4%	26.3%
2-year college degree	14.3%	16.0%	13.9%	14.5%
High school diploma	28.8%	31.2%	26.2%	26.8%
No diploma	8.7%	8.8%	7.5%	7.6%

Teacher and Staff Sample

In 2013 and 2014, teachers in each school were invited to participate in the study by a letter from the school principal. Starting in 2015, other school staff members were also invited to participate. The survey was voluntary for teachers and other staff members. The estimated teacher and staff participation rate was 60.5% among the participating schools across all four years. One reason for the lower rates is that a few school principals chose not to encourage their teachers and staff to complete the survey. On the principal completion survey, these principals reported that their teachers felt overworked and that they did not have the time to take a survey. Some principals pointed out that their school had completed multiple surveys during the school year. See Table 9 for the breakdown of teacher/staff participation rates and teacher/staff demographics.

Table 9. Teacher/Staff Sample Demographics

Teacher/Staff Sample	2013 Survey of Grades 7-8	2014 Survey of Grades 9-12	2015 Survey of Grades 7-8	2016 Survey of Grades 9-12
Participation	389	310	319	303
Participating schools with teacher/staff	389 (92.0%)	310 (96.0%)	319 (78.0%)	303 (95.0%)
Teacher participation rate	9,134 (79.0%)	13,455 (57.0%)	8,585 (53.0%)	14,619 (53.0%)
Gender				
Female	75.1%	66.8%	76.4%	68.9%
Male	24.9%	33.2%	23.6%	31.1%
Years of Experience				
1-2 years	10.7%	8.7%	9.4%	8.8%
3-5 years	13.2%	11.7%	13.8%	12.2%
6-10 years	23.2%	22.0%	20.4%	18.4%
> 10 years	53.0%	57.6%	56.5%	60.6%
Teacher/Staff position[1]				
Teacher	100.0%	100.0%	82.2%	83.8%
Counselor	-	-	4.0%	4.0%
Administrator	-	-	3.0%	2.5%
Nurse	-	-	0.6%	0.6%
Psychologist	-	-	0.6%	0.2%
School resource officer	-	-	0.5%	0.5%
Social worker	-	-	0.5%	0.3%
Other	-	-	8.1%	8.2%

Note. [1]Only teachers were asked to participate in 2013 and 2014.

The teacher/staff survey was shortened each year based on evaluations of the usefulness of the questions. In 2016 the survey was reduced to approximately 71 items. The median completion time was 8.5 minutes and the mean was 10.8 minutes. Approximately 80% of participants completed the survey in 5.4 to 18.5 minutes.

Survey Measures

The survey was revised each year based on results of statistical analyses of its psychometric properties. New content areas were tested based on input from DCJS, VDOE, and our advisory board. Both the student and teacher surveys covered two domains: school climate and safety conditions. The school climate measures included perceptions of the school's disciplinary practices, student support efforts, and the degree of student engagement in school. The safety conditions covered reports of bullying, teasing, and other forms of peer aggression, including threats of violence, physical assault, and gang activity. Students were also asked about attitudes and values related to safe and appropriate behavior and whether they expected to graduate from high school and pursue higher education. Teachers were asked to evaluate a series of student support efforts and to report any experiences of aggressive behavior by students, parents, or colleagues. Complete copies of the 2016 surveys are found in the appendix and earlier versions are found in the annual technical reports.

FINDINGS

Reliability and Validity

As explained in the *Standards for Educational and Psychological Testing* (American Educational Research Association et al., 2014), reliability and validity are not fixed properties of a test and cannot be reduced to a single set of reliability or validity coefficients. An instrument that is reliable and valid for a specific purpose in a particular population may not have the same reliability and validity when used for a different purpose or in a different population. The information in the tables below provide substantial evidence of the reliability and validity of the scales found on the Authoritative School Climate Survey, but test properties should be reconsidered when any measure is used in new populations and for new purposes. These tables present results of multilevel (student and school) factor analyses to assess the degree to which survey items are useful for measuring constructs at different levels, and whether the measurement of these constructs is consistent across levels. Examination of school climate constructs on both student and school levels is an important advantage of the Authoritative School Climate survey that distinguishes it from many other instruments. There is additional evidence in the published articles summarized later in this report.

Table 10. Reliability for the Secondary School Student Version of Authoritative School Climate Survey

Scale (number of items)	Cronbach's Alpha: Individual Level	Spearman-Brown Reliability: School Level	Construct Validity Coefficients: Pattern Loadings	Samples	Source
Disciplinary Structure (7)	.77	.70	.47 to .72 student level .77 to .95 school level	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
	.78	.95	.36 to .75 student level .74 to .93 school level	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015
Academic Expectations (5)	.72	.86	.48 to .93 student level .65 to .99 school level	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015
Student Support (8)	.85	.78	.51 to .86 student level .64 to .98 school level	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
Student Support subscale – Respect for Students (4)	.87	.72	.81 to .87 student level .95 to .98 school level	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
	.87	.90	.85 to .87 student level .95 to .98 school level	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015
Student Support subscale - Willingness to Seek Help (4)	.69	.61	.58 to .77 student level .67 to .91 school level	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
	.73	.80	.63 to .81 student level .67 to 1.0 school level	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015
Student Engagement (6)	.77	.87	.40 to .89 student level .02 to 1.0 school level	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
Student Engagement subscale – Affective (3)	.85	.87	.77 to .90 student level .97 to 1.0 school level	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
	.89	.95	.84 to .93 student level .97 to 1.0 school level	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015
Student Engagement subscale – Cognitive (3)	.66	.96	.54 to .83 student level .05 to 1.6 school level	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
	.71	.73	.68 to .81 student level .35 to .83 school level	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015
Prevalence of Teasing and Bullying (PTB) (5)	.79	.88	.69 to .77 student level .81 to .97 school level	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
	.85	.93	.74 to .79 student level .87 to .95 school level	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015
Bullying Victimization (5)	.85	-	.75 to .94 student level adjusted for nested data	39,364 students (grades 7-8) 423 schools	Cornell, Shukla, & Konold, 2015
General Victimization (5)	.76	-	.61 to .94 student level adjusted for nested data	39,364 students (grades 7-8) 423 schools	Cornell, Shukla, & Konold, 2015
Aggressive Attitudes (6)	.79	-	.58 to .78 student level .82 to .99 school level	39,364 students (grades 7-8) 423 schools	Huang, Cornell, & Konold, 2015
Positive Values (9)	--	.92	.62 to 1.00	39,364 students (grades 7-8) 423 schools	Huang & Cornell, 2015
Positive Values subscale – Personal Conviction (3)	.81	--	.62 to .80		
Positive Values subscale – Concern for Others (5)	.86	--	.40 to .90		

Table 11. Reliability for the Secondary School Teacher/Staff Version of Authoritative School Climate Survey

Scale (number of items)	Cronbach's Alpha: Individual Level	Spearman-Brown Reliability: School Level k*ICC/(k-1)*ICC+1	Construct Validity Coefficients: Pattern Loadings	Samples	Source
Disciplinary Structure (9)	-	-	No one-factor scale for teachers		
Disciplinary Structure subscale – Fairness (5)	.85	.90	.52 to .89 teacher level .92 to 1 school level	9,099 teachers from 366 middle schools	Huang et al. (2015)
	.83	.92	.63 to .82 teacher level .88 to 1.0 school level	12,808 teachers from 302 high schools	Huang & Cornell (2016a)
Disciplinary Structure subscale – Justness (4)	.63	.53	.48 to .79 teacher level .12 to .97 school level	9,099 teachers from 366 middle schools	Huang et al. (2015)
	.65	.70	.66 to .74 teacher level .61 to 1.0 school level	12,808 teachers from 302 high schools	Huang & Cornell (2016a)
Student Support (10)	-	.74	.54 to .98 school level	9,099 teachers from 366 middle schools	Huang et al. (2015)
	-	.79	.60 to .96 school level	12,808 teachers from 302 high schools	Huang & Cornell (2016a)
Student Support subscale – Respect for Students (4)	.91	-	.90 to .93 teacher level	9,099 teachers from 366 middle schools	Huang et al. (2015)
	.91	-	.92 to .92 teacher level .92 to .94 school level	12,808 teachers from 302 high schools	Huang & Cornell (2016a)
Student Support subscale - Willingness to Seek Help (6)	.78	-	.49 to .76 teacher level	9,099 teachers from 366 middle schools	Huang et al. (2015)
	.81	-	.54 to .80 teacher level .60 to .96 school level	12,808 teachers from 302 high schools	Huang & Cornell (2016a)
Student Engagement (6)	-	.94	.92 to .99 school level	9,099 teachers from 366 middle schools	Huang et al. (2015)
	-	.94	.76 to 1.00 school level	12,808 teachers from 302 high schools	Huang & Cornell (2016a)
Student Engagement subscale – Affective (3)	.82	-	.48 to .93 teacher level	9,099 teachers from 366 middle schools	Huang et al. (2015)
	.74	-	.54 to .93 teacher level .97 to 1.0 school level	12,808 teachers from 302 high schools	Huang & Cornell (2016a)
Student Engagement subscale – Cognitive (3)	.83	-	.53 to .91 teacher level	9,099 teachers from 366 middle schools	Huang et al. (2015)
	.81	-	.58 to .89 teacher level .76 to .90 school level	12,808 teachers from 302 high schools	Huang & Cornell (2016a)
Prevalence of Teasing and Bullying (PTB) (6)	.82	.79	.69 to .77 teacher level .69 to .96 school level	9,099 teachers from 366 middle schools	Huang et al. (2015)
	.89	.84	.78 to .82 teacher level .81 to 1.0 school level	12,808 teachers from 302 high schools	Huang & Cornell (2016a)

Table 12. Test-Retest Reliability for the Secondary School Teacher/Staff Version of Authoritative School Climate Survey

Factor	Test-retest
School Disciplinary Structure scale- Fairness	.80
School Disciplinary Structure scale- Justness	.70
Student Support scale- Respect for Students	.76
Student Support scale- Willingness to Seek Help	.74
Prevalence of Teasing and Bullying scale	.82
Student Engagement scale- Affective	.84
Student Engagement scale- Cognitive	[a]

Note. N = 95 teachers. Test-retest reliabilities estimated using Pearson correlation coefficients. [a]Test-retest not computed as a result of missing retest data on one item. For more information, see Huang and Cornell (2016a)

Table 13. Validity for the Secondary School Student Version of Authoritative School Climate Survey

Scale	Criterion-related Validity: Path Coefficients, Latent Factor Correlations, or Change in R^2	Samples	Source
Disciplinary Structure	-.44 student level and -.41 school level with Prevalence of Teasing and Bullying .35 student level and .79 school level with Affective Engagement .20 student level with Cognitive Engagement	39,364 students (grades 7-8) 423 schools	Konold et al. (2014)
	-.48 school level with Prevalence of Teasing and Bullying -.46 school level with Bullying Victimization -.41 school level with General Victimization	39,364 students (grades 7-8) 423 schools	Cornell, Shukla, & Konold (2015)
	.23 student level and .46 school level with Engagement .09 student level with Self-reported Grades	39,364 students (grades 7-8) 423 schools	Cornell, Shukla, & Konold (2016)
	.23 student level and .26 school level with Engagement .06 student level with Self-reported Grades	48,027 students (grades 9-12), 323 high schools	
	-.45 student level and -.77 school level with Prevalence of Teasing and Bullying .60 student level and .87 school level with Affective Engagement .45 student level and .44 school level with Cognitive Engagement	48,027 students (grades 9-12), 323 high schools	Konold & Cornell (2015)
Academic Expectations	-.20 student level and -.74 school level with Prevalence of Teasing and Bullying .48 student level and .73 school level with Affective Engagement .53 student level and .77 school level with Cognitive Engagement	48,027 students (grades 9-12), 323 high schools	Konold & Cornell (2015)

Table continues on next page.

Student Support	-.27 school level with Prevalence of Teasing and Bullying -.23 school level with General Victimization	39,364 students (grades 7-8) 423 schools	Cornell, Shukla, & Konold (2015)
	.42 student level and .44 school level with Engagement .08 student level and .18 school level with Self-reported Grades .07 student level with Academic Aspirations	39,364 students (grades 7-8) 423 schools	Cornell, Shukla, & Konold (2016)
	.42 student level and .63 school level with Engagement .14 student level and .30 school level with Self-reported Grades .12 student level with Academic Aspirations	48,027 students (grades 9-12), 323 high schools	
Student Support subscale – Respect for Students	.04 student level and -.60 school level with Prevalence of Teasing and Bullying .09 student level and .23 school level with Affective Engagement -.08 student level with Cognitive Engagement	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
	-.37 student level and -.80 school level with Prevalence of Teasing and Bullying .54 student level and .88 school level with Affective Engagement .41 student level and .53 school level with Cognitive Engagement	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015
Student Support subscale - Willingness to Seek Help	-.04 student level with Prevalence of Teasing and Bullying .31 student level with Affective Engagement .47 student level and .66 school level with Cognitive engagement	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
	-.27 student level and -.69 school level with Prevalence of Teasing and Bullying .55 student level and .80 school level with Affective Engagement .52 student level and .73 school level with Cognitive Engagement	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015
Student Engagement	Student level Structure and Support predicted Engagement with $R^2\Delta = .36$ School level Structure and Support predicted Engagement with $R^2\Delta = .69$	39,364 students (grades 7-8) 423 schools	Cornell, Shukla, & Konold (2016)
	Student level Structure and Support predicted Engagement with $R^2\Delta = .34$ School level Structure and Support predicted Engagement with $R^2\Delta = .72$	48,027 students (grades 9-12), 323 high schools	
Student Engagement subscale – Affective	.35 student level and .79 school level with Disciplinary Structure .09 student level and .23 school level with Respect for Students .31 student level with Willingness to Seek Help	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
	.60 student level and .87 school level with Disciplinary Structure .54 student level and .88 school level with Respect for Students .55 student level and .80 school level with Willingness to Seek Help .48 student level and .73 school level with Academic Expectations	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015

Table continues on next page.

Student Engagement subscale - Cognitive	.20 student level with Disciplinary Structure -.08 student level and .47 school level with Respect for Students .47 student level and .66 school level with Willingness to Seek Help	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
	.45 student level and .44 school level with Disciplinary Structure .41 student level and .53 school level with Respect for Students .53 student level and .77 school level with Academic Expectations .52 student level and .73 school level with Willingness to Seek Help	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015
Prevalence of Teasing and Bullying (PTB)	-.44 student level and -.41 school level with Disciplinary Structure .04 student level and -.60 school level with Respect for Students -.04 student level with Willingness to Seek Help	39,364 students (grades 7-8) 423 schools	Konold et al., 2014
	-.45 student level and -.77 school level with Disciplinary Structure -.20 student level and -.74 school level with Academic Expectation -.37 student level and -.80 school level with Respect for Students -.27 student level and -.69 school level with Willingness to Seek Help	48,027 students (grades 9-12), 323 high schools	Konold & Cornell, 2015
	Student-reported PTB predicted 4 year dropout counts with 1.23 Incident Rate Ratio Teacher-reported PTB predicted 4-year dropout counts with 1.07 Incident Rate Ratio	7082 9th grade students and 2,764 teachers 276 high schools	Cornell et al., 2013
	School level PTB correlated .352 with bullying victimization, and two measures of student engagement: -.27 with commitment to school, and -.18 with school involvement HLM found PTB associated with commitment to school -.22 at student level and -.18 at school level; school involvement -.06 at school level	7,058 9th graders in 289 high schools	Mehta, Cornell, Fan, & Gregory, 2013
	School level PTB correlated with short-term suspensions r = .25, teacher reports of gang violence .25, teacher reports of bullying and teasing .30, teacher reports of student help-seeking -.26	7,318 9th grade students in 291 high schools	Bandyopadhyay, Cornell, & Konold, 2009
	School level Structure and Support predicted PTB with $R^2\Delta = .54$	39,364 students (grades 7-8) 423 schools	Cornell, Shukla, & Konold, 2015
Bullying Victimization (BV)	School level Structure and Support predicted BV with $R^2\Delta = .34$	39,364 students (grades 7-8) 423 schools	Cornell, Shukla, & Konold, 2015
General Victimization (GV)	School level Structure and Support predicted GV with $R^2\Delta = .32$	39,364 students (grades 7-8) 423 schools	Cornell, Shukla, & Konold, 2015
Aggressive Attitudes	School level odds ratio = 1.23 for bullying others School level $R^2\Delta = .08$ for bully victimization School level R2Δ = .20 for gang activity School level R2Δ = .18 for PTB (student report) School level R2Δ = .07 for PTB (teacher report) School level R2Δ = .09 for school safety (teacher) School level R2Δ = .05 for school suspensions School level R2Δ = .03 for aggressive infractions	39,364 students (grades 7-8) 423 schools	Huang, Cornell, & Konold, 2015

Table 14. Validity for the Secondary School Teacher/Staff Version of Authoritative School Climate Survey in Middle School Grades

Correlations Among Factors Within Schools as Reported by Middle School Teachers (N = 4677)

		1	2	3	4	5	6	7
1	Structure (Justness factor)							
2	Structure (Fairness factor)	.29						
3	Support (Willingness to Seek Help)	.55	.51					
4	Support (Teacher respect for students)	.46	.40	61				
5	Student aggression toward teachers	-.01	-.40	-.18	-.11			
6	PTB	-.26	-.43	-.44	-.35	-.36		
7	Engagement (Affective)	.26	.52	.43	.38	-.38	-.44	
8	Engagement (Cognitive)	.03	.52	.31	.27	-.37	-.32	.62

Correlations Among Factors Between Schools (N = 183 Middle schools)

		1	2	3	4	5
1	Structure (Justness factor)					
2	Structure (Fairness factor)	.36				
3	Support	.84	.63			
4	Student aggression toward teachers	-.33	-.74	-.67		
5	PTB	-.58	-.75	-.81	.85	
6	Engagement	.54	.58	.69	-.88	-.76

Note. See Huang et al. (2015).

Table 15. Validity for the Secondary School Teacher/Staff Version of Authoritative School Climate Survey in High School Grades

Correlations Among Factors Within Schools as Reported by High School Teachers (N = 12,808)

		1	2	3	4	5	6
1	Structure (Justness factor)						
2	Structure (Fairness factor)	.36					
3	Support (Willingness to Seek Help)	.49	.54				
4	Support (Teacher respect for students)	.49	.42	.59			
5	PTB	-.30	-.39	-.44	-.33		
6	Engagement (Affective)	.29	.54	.49	.42	-.41	
7	Engagement (Cognitive)	.10	.52	.42	.31	-.31	.67

Correlations Among Factors Between Schools (N = 302 high schools)

		1	2	3	4
1	Structure (Justness factor)				
2	Structure (Fairness factor)	.42			
3	Support	.67	.79		
4	PTB	.79	-.49	-.78	
5	Engagement	.53	.58	.85	-.66

Note. See Huang and Cornell (2016a).

Published Research Findings

This section provides an overview of our research findings by summarizing our publications in peer-reviewed journals (see citations and abstracts in Appendix A).

Multi-level Factor Analytic Studies of Authoritative School Climate. The first series of seven papers established the factor structure and convergent validity of the key scales in the authoritative school climate model in statewide samples. Notably, these studies examined both student-level and school-level properties of these scales, using both student and teacher survey data. After demonstrating evidence of reliability and validity of authoritative school climate scales in grades 7-8, *a separate set of studies found comparable support for grades 9-12.*

Middle school analyses. The first paper from this project (Konold et al., 2014) examined the multi-level factor structure of the student version of the Authoritative School Climate Survey for grades 7-8. Consistent with authoritative school climate theory, we hypothesized that two key characteristics of school climate, disciplinary structure and student support, would be associated with two important school climate outcomes, student engagement and prevalence of teasing and bullying in school. Exploratory and confirmatory factor analyses were conducted in a statewide sample of 39,364 students in grades 7-8 who attended 423 schools. These analyses used a multi-level approach to model the nesting of students in schools and demonstrated a stable factor structure on both student and school levels for the four scales. The results also supported the convergent and concurrent validity of the scales and demonstrated structural invariance of the concurrent validity coefficients between gender groups.

The second paper from this project (Huang et al., 2014) conducted a similar study using the teacher version of the Authoritative School Climate Survey, using a sample of 9,099 7^{th} and 8^{th} grade teachers from 366 schools. Consistent with authoritative school climate theory, this study hypothesized that teacher reports of disciplinary structure and student support would be associated with higher student engagement and less teasing and bullying. In addition, it was hypothesized that an authoritative school climate would be associated with lower student aggression toward teachers, a scale not included on the student survey. The study used exploratory and multilevel confirmatory factor analyses (MCFA) that accounted for the nested data structure and allowed for the modeling of the factor structures at teacher and school levels. The results supported the factor structures of all five scales and showed that schools with greater levels of disciplinary structure and student support had higher student engagement, less teasing and bullying, and lower student aggression toward teachers

After the first two papers using the student and teacher surveys separately, a natural next step was to examine them together. This study (Konold & Cornell, 2015b) was limited to three scales that had identical items for students and teachers, using a multilevel, multitrait-multimethod (MTMM) design involving students (N = 35,565) and teachers (N = 9,112) associated with 340 schools. Results from a multilevel correlated trait – correlated method latent variable analysis indicated that ratings of school climate obtained by students and teachers demonstrated high levels of convergent validity, and that school-level ratings obtained by students and teachers were comparable in the assessment of the prevalence of teasing and bullying. Student ratings of support and structure yielded somewhat stronger evidence of convergent validity than ratings obtained by teachers, perhaps because teachers showed higher levels of common method effects than students.

High school analyses. Whereas the first three papers examined 7-8 grade students and teachers, the next set of papers used the high school sample collected in 2014. A paper by Konold and Cornell (2015) conducted multilevel, multivariate structural modeling in a statewide sample of 48,027 students in 323 public high schools. This study added academic expectations as a measure of structure in addition to disciplinary structure. It also separated student support into correlated sub-factors of respect for students and willingness to seek help. As hypothesized, the two measures of structure and two measures of support were associated with higher student engagement (affective engagement and cognitive engagement) and lower reports of teasing and bullying. These findings were obtained on both student and school levels of analysis. Moreover, these analyses controlled for the effects of school demographics, including school size, percentage of minority students, and percentage of low income students.

A paper by Huang & Cornell (2016) conducted a similar study using the high school teacher sample. Multilevel confirmatory factor analyses based on surveys completed by 12,808 high school teachers from 302 schools found that disciplinary structure and student support were associated with student engagement and the prevalence of student teasing and bullying. (A measure of academic expectations was not constructed for teachers, largely because the teachers reported such consistently high levels of academic expectations for their students that there was little variation across teachers.)

After the two high school papers supported the reliability and validity of student and teacher survey scores, a third paper (Konold, in press) combined data from the two surveys again to distinguish informant or method effects from trait effects. The study examined measures of disciplinary structure, student support, student engagement, and prevalence of teasing and bullying in a sample of 45,641 students and 12,808 teachers in 302 high schools. As with the middle school studies, the analyses demonstrated convergent validity at both individual (student and teacher) and school levels of analysis. Also, these results indicated that the percent of students receiving FRPM in schools was associated with both school climate traits and informant-based method factors. School size and the percentage of minority students in schools were associated with some traits, and school size was associated with student method effects. These findings support the need to control for school level contextual factors in school climate research.

Building on the previous multilevel MTMM study, Konold and Shukla (in press) demonstrated the usefulness of a latent variable multilevel MTMM measurement model for extracting trait factors from reports of school climate. This paper demonstrated how this framework could be extended to include assessments of linkages between the resulting trait factors and potential outcomes. The approach was illustrated with data obtained from student and teacher reports of two dimensions of school climate, student engagement, and the prevalence of teasing and bullying in their schools. The resulting models demonstrated that the multi-informant based trait factor of engagement could serve as a mediating variable between trait factors of structure and support, and the prevalence of teasing and bullying.

Finally, we recognized that school climate is not a homogenous experience for all students in a school and that there might be meaningful within-school heterogeneity. Shukla, Konold, and Cornell (2016) used multilevel latent class modeling to identify subgroups of students who share distinctive perceptions of their school climate. Nine school climate scales from the survey of 47,631 high school students in 323 schools were examined. The analyses identified four meaningfully different student profile types labeled positive climate, medium climate-low bullying, medium climate-high bullying, and

negative climate. These profile types were associated with external criteria of race, grade level, parent education level, educational aspirations, and frequency of risk behaviors. For example, students reporting a negative climate were more likely to report carrying a weapon to school, fighting, attempting suicide, and using alcohol and marijuana than students reporting a positive climate within the same schools.

Authoritative School Climate and Student Behavioral Adjustment. Three studies examined the association between characteristics of an authoritative school climate and various indicators of student behavioral adjustment. The first study used multilevel multivariate modeling in a statewide sample of 39,364 7th and 8th grade students attending 423 schools (Cornell, Shukla, & Konold, 2015). This study found that higher disciplinary structure was associated with lower levels of the prevalence of teasing and bullying (PTB), as well as fewer self-reports of being bullied and victimized in general. Higher support was associated with lower PTB and general victimization. Among the contributions of this study were to show that the association between authoritative school climate and student aggression was present at both student and school levels of analysis, that it extended across varied forms of peer aggression, and that it was found for self-reports of victimization as well as perceptions of others being victimized. This study supported and extended a prior study of 9th grade students (Gregory et al., 2010).

A study by Cornell and Huang (2016) tested the hypothesis that an authoritative school climate is conducive to lower risk behavior for high school students. Multilevel regression at student and school levels was conducted using school surveys completed by a statewide sample of 48,027 grade 9-12 students in 323 high schools. Schools with an authoritative school climate had lower levels of student-reported alcohol and marijuana use; bullying, fighting, and weapon carrying at school; interest in gang membership; and suicidal thoughts and behavior. These results controlled for demographic variables of student gender, race, grade, and parent education level as well as school size, percentage of minority students, and percentage of low income students. Overall, these findings show that an authoritative school climate is associated with a variety of indicators of behavioral adjustment.

Berg and Cornell (2016) found that, in schools with high structure and support, teachers felt safer, reported lower levels of student aggression toward themselves, and had less distress in reaction to those experiences. This study was conducted in a sample of 9,134 teachers in 389 middle schools, and is consistent with a prior study of student aggression experienced by 9th grade teachers (Gregory, Cornell, & Fan, 2012).

Authoritative School Climate and Student Academic Adjustment. Three studies investigated the theory that an authoritative school climate characterized by disciplinary structure and student support is conducive to positive academic adjustment. In the first study, academic adjustment was measured with three indicators: student engagement in school, course grades, and educational aspirations, such grading from high school, obtaining a college degree. Hypotheses were tested independently in two statewide samples: 39,364 grade 7-8 students in 423 middle schools and 48,027 grade 9-12 students in 323 high schools (Cornell, Shukla, & Konold, 2016). The same pattern of findings was found in both samples, controlling for student and school demographics. Both higher disciplinary structure and student support were associated with higher student engagement in school, higher course grades, and higher educational aspirations at the student level in both samples. At the school level, higher disciplinary structure was associated with higher engagement, and higher student support was associated with higher engagement and grades in both samples.

A second study tested the hypothesis that an authoritative school climate could serve as a protective factor for students living with one or no parents at home (Huang, Eklund, & Cornell, 2016). In a statewide sample of 56,508 middle school students from 415 public schools, student perceptions of disciplinary structure, academic demandingness, and student support all had positive associations with student self-reported grades. In addition, academic expectations and student support were more highly associated with grades for students not living with any parent, which suggested a positive school climate might be especially important for students living without their parents. These studies replicate a prior California study (O'Malley, Voight, Renshaw, & Eklund, 2015).

A third study by Jia, Konold, and Cornell (2015) used both student and teacher perceptions of school climate to predict dropout rates in 315 high schools. Consistent with authoritative school climate theory, moderation analyses found that when students perceive their teachers as supportive, high academic expectations are associated with lower dropout rates. Notably, these analyses controlled for school demographics of school enrollment size, percentage of low-income students, percentage of minority students, and urbanicity.

Authoritative School Climate and Racial/Ethnic Background. All of the published studies included racial/ethnic variables in their analyses as student- or school-level measures. These analyses generally demonstrated that the primary findings of the study were not confounded by race/ethnicity and removed the variance attributable to either individual student race/ethnicity or the racial/ethnic composition of the school. At the individual level, students were classified by two self-report questions. The first question asked whether the student was Hispanic/Latino and the second question asked the student to select his or her race as American Indian/Alaska Native, Asian, Black or African-American, Native Hawaiian or Pacific Islander, White, or two or more races. In most analyses, these questions were combined to classify students in Black, Hispanic, White, and other groups, because there were too few students in the other groups to conduct meaningful comparisons. At the school level, the analyses could use schoolwide enrollment data to calculate the percentage of minority/non-white students in the school or provide a breakdown of racial/ethnic groups.

A critical issue in developing a school climate measure is whether the instrument functions equally well across racial/ethnic groups. Similarly, it is essential to assess whether findings that support authoritative school climate theory are consistent across racial/ethnic groups. To investigate these issues directly, a study tested first, whether Black, Hispanic, and White students attending the same schools had similar perceptions of school climate and second, whether the associations between school climate and two important outcomes, student engagement and peer aggression, were similar across those racial/ethnic groups (Konold, Cornell, Shukla, & Huang, 2016). These analyses were carried out in a sample of 48,027 students in grades 9–12 (51.4% female; 17.9% Black, 10.5%, Hispanic, 56.7% White, and 14.9% other) attending 323 high schools. Regression models contrasted racial/ethnic groups while controlling for the nesting of students within schools and using student covariates of parent education, student gender, and percentage of schoolmates sharing the same race/ethnicity. In addition, the model controlled for school covariates of school size and percentage of students eligible for FRPM. There were no statistically significant differences between White and Hispanic students in their perceptions of school climate, but Black students reported less favorable perceptions of school climate than White students. Despite these differences, race/ethnicity did not moderate the associations between school climate and either engagement or peer aggression. These results indicate comparable criterion validity for the authoritative

school climate survey across Black, Hispanic, and White groups for student engagement and peer aggression.

A study by Heilbrun, Cornell, and Konold (under review) examined the association between teacher and student perceptions of school climate and suspension rates for Black and White students in 369 middle schools. This study used schoolwide suspension rates obtained from VDOE records. In these schools the mean suspension rate was 6.9% for White students and 14.2% for Black students. Hierarchical regression analyses were conducted on overall suspension rates, White suspension rates, and Black suspension rates. The first block of analyses entered school size and percentage of low-income students in each school, followed by teacher perceptions of disciplinary structure and student support in the second block and then student perceptions of disciplinary structure and student support in the third block. Schools with high levels of student- and teacher-reported structure had lower overall suspension rates and a lower gap between Black and White suspension rates.

Finally, a study (Huang & Cornell, in press) investigated possible reasons for the high suspension rate for Black students compared to White students. The differential involvement hypothesis suggests that disproportionate sanctioning may be a function of racial differences in student misbehavior or characteristics that predispose them to misbehavior. To test this hypothesis, our study used student self-report of being suspended so that suspension rates could be correlated with other student characteristics. A series of school fixed-effect logistic and linear regression models found that racial differences in self-reported suspension could not be explained by different reasons for suspension (such as fighting, threatening others, and substance possession), by socioeconomic status, by aggressive attitudes, or by involvement in high risk behaviors of fighting, bullying, carrying a weapon, consuming alcohol, or using marijuana. Overall, these findings do not support the differential involvement hypothesis and strengthen the concern that racial disparities are likely the result of differential decisions by school authorities.

Aggressive Attitudes Scale. Three studies examined a scale used to measure the prevalence of aggressive attitudes among students. Students' normative beliefs about the social desirability of aggressive behavior are important because they could influence levels of bullying, fighting, and other aggressive behaviors in schools. The first study (Huang, Cornell, & Konold, 2015) established the multi-level factor structure of the aggressive attitudes scale in a sample of 39,364 7th and 8th grade students in 423 schools. The scale showed measurement invariance across gender, grade, and racial/ethnic groups. It also showed good criterion-related validity through associations with bullying, victimization, gang activity, disciplinary infractions for aggressive behavior, and short term-suspensions.

A second study (Millspaugh, Cornell, Huang, & Datta, 2015) found that the prevalence of aggressive attitudes was associated with student willingness to seek help if a student brought a gun to school or talked about killing someone. These effects were observed at both student and school levels, suggesting that efforts to modify aggressive attitudes could be a viable strategy to increase student threat reporting.

A third study (Datta, Cornell, & Huang, 2016) investigated the association between aggressive attitudes and student responses to a peer being bullied. As hypothesized, students were less willing to stand up against bullying in schools where aggressive attitudes were more common.

Prevalence of Teasing and Bullying. Our work prior to this project has found that asking students to report how much teasing and bullying they observe at school is a more useful indicator of school safety conditions than asking them whether they have been bullied themselves. For example, the prevalence of teasing and bullying is associated with school-wide discipline problems (Bandyopadhyay et al., 2009), student engagement in schools (Mehta et al. 2013), and high school dropout rates (Cornell et al., 2013). In the current project we found examined the association between the prevalence of teasing and bullying and schoolwide performance on state-mandated achievement testing (Lacey, Cornell, & Konold, 2015). In a sample of 271 middle schools, this study found that both teacher and student perceptions of schoolwide teasing and bullying were negatively associated with the school's passing rates on standardized testing. This relationship was partially mediated by student engagement.

Positive Values Scale. A positive youth development approach maintains that school climate should facilitate development of prosocial values (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002; Domino, 2013). Accordingly, one component of the project was to construct a scale to measure student endorsement of prosocial values consistent with Virginia's curriculum requirement for character education (VDOE, no date). Using a statewide sample of 39,364 middle school students from 423 schools, the study found support for a two-factor model of positive values on the student level and a one-factor model on the school level (Huang & Cornell, 2016b). In the two-factor model, the first factor was labeled personal conviction and measured the student's endorsement of telling the truth, admitting one's mistakes, and doing the right thing. The second factor was labeled concern for others and measured the student's endorsement of values such as treating others with respect, helping others, and being kind to others.

Measurement of Bullying. There has been much debate in the field about how bullying should be defined for students before they are asked to report whether they have been bullied. Our large sample of schools enabled us to conduct randomized experiments that systematically varied how students within schools were asked about bullying. In one study (Huang & Cornell, 2015a), we examined the effect of presenting a standard definition of bullying to students versus using no definition before asking students to report whether they had been bullied. This study, conducted with a sample of 17,301 students in 119 high schools, found that use of a definition had no effect on school prevalence rates of being bullied. However, in the same study, the order of questions about being bullied was randomized. The study found that asking specific bullying-victimization questions (e.g., "I have been verbally bullied at school") prior to general bullying-victimization questions (e.g., "I have been bullied at school") resulted in a 29-76% increase in victimization-prevalence rates. These findings suggest that surveys that asked general-to-specific bullying-victimization questions, such as those found in national and international surveys, may be underreporting bullying victimization.

A second study in a middle school sample (5,951 students) found a similar question order effect (Huang & Cornell, 2016c). These studies suggest that bullying prevalence studies as well as studies examining the impact of anti-bullying interventions, may produce discrepant results because of seemingly minor differences in survey questions.

Validity Screening. A recurrent concern in survey research is whether a small group of adolescents could compromise survey results by intentionally answering questions in a dishonest or careless manner. Our previous studies demonstrated that a small percentage of adolescents will admit that

they were not truthful in answering survey questions and that their results could skew study findings (Cornell et al., 2012; Cornell, Lovegrove et al., 2014). In addition, some adolescents complete the survey so quickly that it would not have been possible for them to read and answer all of the questions. As a result of these findings, we incorporated validity screening items in the Authoritative School Climate Survey and set a minimum completion time (approximately 6 minutes, depending survey length and student grade level). A study by Jia, Konold, Cornell, and Huang (2016) demonstrated that a relatively small proportion (< 8%) of invalid respondents had a significant impact on survey estimates of the prevalence of risk behavior and student adjustment measures. For example, the prevalence rate for physical fighting increased from 8% in the valid responder group to 10% when the invalid responders were included, producing an inflation of 25%. Another important finding was that the inclusion of invalid responders in the sample affected the associations between bullying victimization (self-reports of being bullied) and student adjustment measures, including negative correlations with GPA and affective engagement in school, and positive correlations with weapon carrying, fighting, alcohol use, and marijuana use.

A second validity study by Shukla and Konold (in press) introduced a new method of validity screening by generating a response inconsistency (RI) score for each participant for each scale (similar to a Cronbach's alpha with the participant removed from the sample). RI scores can be used to identify participants whose response patterns are extremely discrepant because they either marked all responses in the same way or marked them in a highly inconsistent manner. The study showed that latent profile analysis can identify a small group with extreme RI profiles. This initial study will be followed by other studies to investigate the value of this novel and innovative approach.

Statewide Descriptive Results - Students

Some readers may be interested in a descriptive summary of how students perceived their schools using the Authoritative School Climate Survey. The results in this section are statewide averages derived from 62,679 student surveys obtained from 320 public high schools in 2016. In order to determine norms that more closely approximate the state population of 9^{th} - 12^{th} grade students, student responses were weighted by the size of their school and the proportion of students in each school. These results are presented to give an overall description of student perceptions of school climate and safety using the most recent survey year (2016) as an example. Results for prior years are available in the annual technical reports. A sample report can be found in Appendix I.

School climate. The majority of students described positive and supportive relationships with their teachers and other adults at school. Students endorsed the view that most teachers (and other adults at school) want all students to do well (86%), care about all students (75%), and treat students with respect (74%). The vast majority of students (95%) reported that there was at least one teacher or other adult at their school who really wants them to do well and 72% said there was an adult at school they could talk with if they had a personal problem.

Students held widely different views of their school climate, but the majority of students had favorable perceptions of their school's rules and disciplinary procedures. Students reported that their school rules are fair (65%), that the punishment for breaking school rules is the same for all students (60%), and that students are treated fairly regardless of their race or ethnicity (76%). Most students (63%) agreed that students get a chance to explain when they are accused of doing something wrong. A small

but noteworthy group of students felt that adults at their school were too strict (39%) and that students were suspended without good reason (32%).

Strong student engagement in school was reflected in the high percentages of students who said they liked school (83%), were proud to be a student at their school (81%), and felt like they belong at their school (76%). Students overwhelmingly endorsed the idea that getting grades is important to them (95%) and that they wanted to learn as much as they can (93%). When asked about their educational aspirations, 98% of students expected to graduate from high school. The overwhelming majority (87%) expected to obtain some form of post-secondary education, including two-year college (9%), four-year college (38%) and post-graduate studies after graduating from a four-year college (40%).

Overall, students reported high academic expectations from their teachers. A large majority of students said, “teachers expect me to work hard” (96%), “teachers want me to learn a lot” (91%), and “expect me to attend college” (87%). A smaller proportion of students reported that teachers do not really care how much they learn (24%).

Safety conditions. Most students (82%) reported that they feel safe in their school, but this appears to be an area for improvement. One reason why some students might not feel safe is that 36% of all students reported that bullying is a problem at their school and 35% reported being bullied once or more per week at school during the current school year. A number of students reported that another student stole something from them (33%), physically attacked, pushed, or hit them (18%), or threatened to hurt them (23%) at school. Students were asked how they reacted to the worst time that they were bullied or harmed at school. Only 28% of students told a teacher or another adult at school what happened.

Another set of questions asked students about the prevalence of teasing and bullying in their school. A number of the population reported that students “get teased or put down about their sexual orientation” (38%), and “get teased or put down because of their race or ethnicity” (36%). Comparatively, larger numbers of students also agreed that students “often get teased about their clothing or physical appearance” (64%) and that there is “a lot of teasing about sexual topics” (52%).

Students were asked about their experience of sexual harassment at school. Many students reported experiencing unwelcome sexual comments, jokes, and gestures (27%) that made them feel uncomfortable. A smaller percentage reported sexual rumors being spread about them (17%). Students also reported being physically touched or cornered in an unwelcome way (13%). Finally, a group of students were bothered by repeatedly being asked to go out or do something they did not want to do (16%).

A set of questions measured students’ perceptions of bullying by teachers and staff in their school. Many students agreed that, “Some teachers or other adults at this school say things that make students feel badly” (43%) or “pick on certain students” (44%). Additionally, a number of students reported that there are adults at their school who “make fun of other students” (31%) and “bully students” (23%).

Students were also asked to reflect on the prevalence of dating aggression. When students considered their dating partners within the past 12 months, a small proportion reported being physically hurt on purpose (6%) or threatened with being hurt by their partner (6%). A number of students reported their partner called them names and put them down (15%), tried to kiss or touch them against their will

(8%), pressured them to drink alcohol or use drugs against their will (5%), or continued harassment after their relationship had ended (11%).

Student attitudes toward aggressive behavior were also assessed. Although the overwhelming majority of students did not endorse attitudes that support peer aggression, a substantial number agreed that, "If someone threatens you, it is okay to hit that person" (38%) and "It feels good when I hit someone" (19%). A few students said that students who are bullied or teased mostly deserve it (5%), and bullying is sometimes fun to do (5%). When asked about gangs, 15% of students reported gangs at their school and only 3% said that they had considered joining a gang.

In order to understand potential negative outcomes of school bullying and aggression, the survey included a standard set of questions on health-risk behavior. About 3% of students stated that they carried a weapon such as a gun, knife, or club on school property in the past 30 days. A small number of students reported that they were in a physical fight on school property at least once (6%), and had seriously considered attempting suicide (15%) in the past 12 months. Some students reported drinking alcohol (21%) and using marijuana (13%) in the past 30 days.

Statewide Descriptive Results - Teachers and Staff

The results in this section are statewide averages from the sample of 14,619 teachers and staff in 320 public high schools who completed the survey in 2016. All eligible teachers and staff were invited to participate in the survey, so no weighting procedure was used. The degree to which this sample represents the state population of teachers and staff cannot be determined, so some caution is warranted in interpreting these results. Results for other school years are found in the annual technical reports.

School climate. The majority (70%) of teachers and staff reported that the students know rules for conduct, but only 35% agreed or strongly agreed that "the punishment for breaking school rules is the same for all students." Teachers generally did not view rules to be as strictly enforced, as did students. Fewer than half (37%) said they feel that "the disciplinary practices at this school are effective" or agreed that, "students can get away with breaking the rules at this school pretty easily" (22%).

Teachers and staff overwhelmingly characterized the relationships of students with teachers and other adults in their school as supportive. The vast majority said that the teachers and other adults at their school want all students to do well (90%), care about all students (87%), and treat students with respect (80%). Teachers also agreed that students know who to go to for help if they have been treated badly by another student (72%) and that students are encouraged to report bullying and aggression (76%).

Teachers and staff were asked to rate their professional relationships with colleagues at their school. The majority of teachers and staff reported that the teachers at this school "work well with one another" (69%) and with other school staff members (60%). Many teachers and staff also reported that "this school is a collegial environment for teachers and other school staff" (60%) and that faculty members "trust one another" (56%).

In 2013, the Virginia General Assembly passed legislation mandating that public schools establish threat assessment teams. The establishment of these teams is confirmed in the annual safety audit survey of school principals. The teacher and staff survey inquired whether teachers and staff are aware that their school uses a "formal threat assessment process to respond to student threats of violence."

Only 51% of participants were aware that their school uses threat assessment, 3% did not think their school did so, and 47% responded, "I don't know."

Teachers described their students as highly engaged, reporting that students generally liked school (71%) and were proud to be at their school (60%). They were somewhat less likely to agree that getting grades is very important to most students (79%) or that most students at their school finish their homework (58%).

Safety conditions. A large majority of teachers and staff reported that they feel physically safe at their school (92%) and that there is adequate safety and security at their school (80%).

Teachers and staff were asked about the prevalence of teasing and bullying in their school. Nearly 28% of faculty members reported that bullying is a problem at their school. Teachers and staff reported that students "often get teased about their clothing or physical appearance" (38%) and that there is "a lot of teasing about sexual topics" (32%). Teachers and staff also reported that students "get teased or put down because of their race or ethnicity" (23%) and "get teased or put down about their sexual orientation" (26%).

Approximately 87% of teachers and staff reported that they are treated with respect by their students. Like students, some faculty members (23%) reported the presence of gangs at their school.

Teachers and staff were asked about their perceptions of bullying by faculty members in their school. Teacher ratings were somewhat lower than student ratings for the same questions. For instance, "Some teachers or other adults at this school say things that make students feel badly" (26%) or "pick on certain students" (19%). Additionally, some teachers and staff reported that there are adults at their school who "make fun of other students" (17%) and "bully students" (14%).

Teachers and staff were asked about their own experiences of aggressive behavior in their interactions with students, parents, and colleagues. Faculty members reported that a student engaged in the following actions at least once during the school year:

- Said mean or insulting things to them (48%)
- Stole personal property (14%)
- Threatened to harm them (10%)
- Physically attacked, pushed, or hit them (4%)
- Threatened them with a weapon (1%).

Teachers and staff reported that a parent engaged in the following actions at least once during the school year:

- Said rude or insulting things to them (37%)
- Threatened to complain about them to the administration (28%)
- Threatened to harm them (2%)

Some teachers and staff also reported that a colleague said rude or insulting things to them (22%) and a small number (1%) reported that a colleague threatened to harm them.

STUDY LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

There are limitations to this study in design and methodology that indicate directions for future research.

Cross-sectional and Correlational Design

Large-scale surveys provide a wealth of useful data, but most of the analyses in this project were cross-sectional rather than longitudinal. Within the framework of a cross-sectional design, it is possible to demonstrate the strength and consistency of correlational relationships across samples, to control for other potentially confounding variables, and to show similarity of findings across measures and informants. However, a cross-sectional design cannot establish causal effects. For example, our analyses show consistent evidence that a positive school climate is associated with a wide range of favorable student outcomes, such as higher school engagement, higher grades, and less involvement in high-risk behavior. However, there may be bidirectional or reciprocal causal effects between school climate and these outcomes. For example, students who are less engaged in school could report more negative perceptions of their school climate. Their behavior in school also may negatively affect school climate conditions. There are many more complex models that could be hypothesized. One plausible scenario might be that a student's emotional difficulties lead to substance abuse, which impairs academic work and generates negative interactions with teachers. Negative relationships with teachers could exacerbate a student's disengagement from school and lead to academic failure or dropout.

A longitudinal design would provide stronger, albeit not conclusive, evidence of causal effects. Repeated assessments of schools would allow researchers to track changes over time and show how school climate changes are associated with student outcomes. Regression discontinuity analyses and cross-lagged panel models could be helpful in demonstrating the effects of school climate on student outcomes (as well as other effects). Longitudinal assessment of individual students would also be valuable, but is less feasible because surveys are anonymous. The most effective way to demonstrate causal effects is to undertake a randomized control trial with an intervention designed to enhance school climate and thereby improve student outcomes.

Informant Self-Report

Self-report surveys have well-known limitations. Surveys are retrospective and dependent on the memory of participants. In addition to memory difficulties, informants may have incomplete or inaccurate knowledge, and their reports may be skewed by personal biases, social desirability, or other motives. Adolescent reporters may be especially prone to mischievous, careless, or intentionally dishonest reporting. This project made concerted efforts to address the limitations of self-report in several ways. First, surveys were aggregated at the school level, so that errors due to individual differences in perceptions of school climate and safety could be diminished. The aggregation of multiple perceptions of school conditions has the general effect of producing more reliable and valid scores. These scores were examined for the effects of student characteristics such as gender, race, and grade level, and these effects were statistically controlled (e.g., see Konold et al., 2014). Second, student surveys were supplemented with teacher/staff surveys. We conducted a series of analyses comparing student and teacher/staff survey results aggregated at the school level and distinguished informant effects from trait effects on key school climate scales (Konold, in press; Konold & Cornell, 2015b). Third, we used validity screening to identify a small percentage of students who answered carelessly, too quickly, or with admitted dishonesty (Jia et

al, 2016; Shukla & Konold, in press). Finally, it should be noted that the subjectivity of student perceptions of school climate cannot be regarded as merely a source of error. Whether or not a student's perception is objectively accurate, his/her belief that teachers are unfair or unsupportive can have an effect on the student's academic performance and behavior in school. From this perspective, the student's perception of school climate has validity even if it differs from some other more objective standard.

Future studies can continue to improve the use of student self-reports along the lines identified in this project, including the aggregation of surveys within schools, the collection of data from other informants, and the development of validity screening.

Survey Anonymity

Surveys are administered on an anonymous basis in order to encourage broader participation and more truthful responses. However, a consequence of survey anonymity is that it is not possible to link survey results to non-survey data, such as student academic records and staff employment information. Research questions at the individual level of analysis must rely on independent and dependent variables drawn from the same source, and thus there is a potential for correlations to be inflated by shared method variance. Only research questions at an aggregate level, such as the performance of whole schools or demographic subgroups (e.g., racial/ethnic groups and gender differences), can be conducted without this limitation.

One option for future research is to ask survey questions that allow students to create self-generated identification codes (Yurek, Vasey, & Havens, 2008). Identification codes have the potential to allow researchers to link surveys from the same student while protecting the student's identity. This would permit longitudinal analyses that, as noted above, would produce stronger evidence of developmental changes and school climate effects.

Another option is to use confidential rather than anonymous surveys. Students could be required to provide their name or a school identification number that links to their academic records. This would greatly facilitate research on survey validity and linkages between school climate and student outcomes that currently can be examined only at aggregate levels, such as the performance of whole schools or demographic subgroups (e.g., racial/ethnic groups and gender differences). However, use of non-anonymous surveys would almost certainly require affirmative parental permission, which requires much more administrative work by the schools. A requirement for affirmative parent permission would likely reduce participation rates and render the sample less representative.

Survey Administration

The use of online administration has made it much more efficient and practical to collect large-scale surveys. However, there are many extraneous and circumstantial factors that could affect survey participation and results. Many of these factors cannot be readily measured or controlled and represent sources of measurement error.

One potential source of measurement error is that persons not authorized to take the survey could complete it if they obtained the special school password and url. Because participation is anonymous, participants could choose to complete the survey multiple times. There was no indication in the data or report from schools of these problems taking place, but the development of more secure procedures could be considered in future studies.

Online surveys provide a convenient and standardized presentation of questions, and participants can be reminded when they have skipped a question. In this project, participants were required to answer each question on a page before moving to the next page. This requirement eliminated the problem of missing data in otherwise complete surveys, but there may have been some participants who abandoned the survey rather than continue. Incomplete surveys were not analyzed because the reasons for their incomplete status could not be determined. The participant could have lost Internet connection or had some reason to leave the survey that was unrelated to the content of the question (e.g., a fire drill). Some surveys may have been opened by school administrators simply to review the survey process; a question was included at the outset to ask whether the reader was reviewing the survey or taking the survey as a participant.

Schools were given instructions for supervising student administration of the survey, including a description of what to tell students and permission to answer questions about the survey. In a statewide survey involving hundreds of schools, it was not possible to supervise or monitor survey administration. However, a future study could examine whether the classroom climate and supervision provided by the survey administrator has an impact on student responses.

Some principals reported that they were reluctant to ask teachers and other staff members to complete the survey because they had so many other responsibilities or had already been asked to complete other school surveys. The way in which school administrators communicated to their staff about the survey could have affected their participation and attitudes toward the survey.

Teachers and staff were allowed to self-administer the survey at a time and location of their choice. This introduces some uncontrolled variance in survey conditions, but seemed necessary in order to make the survey more convenient and secure their participation. The self-administration option was not extended to students, but might be considered as a way to ease the burden on schools in scheduling group administration. However, self-administration for students could affect participation rates and it would be difficult for schools to verify student participation.

Generalizability

This study was conducted entirely in public schools in the state of Virginia. Virginia is the 12th largest state in population with approximately 8.4 million residents (Joint Legislative Audit and Review Commission, 2016). The state ranks 10th in per capita personal income ($50,345) and 44th in percentage of the population in poverty (11.5%). Virginia's school funding ranks in the middle for per pupil funding (23rd in state and local funding and 39th in state funding), and average teacher salary (28th at $49,826).

Future research could examine the generalizability of study findings to private schools and to schools in other states. Private schools enroll approximately 9% of all elementary and secondary school students in the U.S. (National Center for Education Statistics, 2016a). There may be a number of differences between public and private schools that influence school climate. For example, the pupil/teacher ratio is approximately 16 in public schools compared to 12.5 in private schools. The majority (approximately 77%) of private schools have a religious affiliation, which promotes a shared values orientation (National Center for Education Statistics, 2016b). Private schools have a higher proportion of White students than public schools (72% versus 52%, respectively; Southern Education Foundation, 2016).

Limitations in Student Samples

The assessment of school climate in this study was limited to grades 7-12 and conducted in schools on a biannual basis. Furthermore, schools could choose to survey a random sample of 25 students per grade rather than all students in each grade. These limitations were based on practical decisions to minimize the burden on schools, but the demonstrated value of the survey process justifies a more comprehensive approach. Schools should assess their school climate on an annual basis (and perhaps more frequently when there are goals for mid-year improvement). The survey should be offered to all students rather than a sample and should include all grades with adequate reading level. The survey used with grades 7-8 could be readily extended to grade 6. Briefer and simpler surveys could be used for younger grades.

School authorities were given detailed instructions for random sampling and asked to confirm in a follow-up survey that they adhered to the process, but there was no active monitoring to assure that all schools followed the procedures correctly. However, comparisons of schools with random sampling and whole-grade sampling produced similar participation rates and showed similar demographics and school climate results.

Another limitation in the student samples is that some groups were excluded from participation. Students without adequate English language skills could not take the survey, and one improvement would be the use of a Spanish translation. Another omitted group was students with severe handicapping conditions that prevented them from taking the online survey. There were other reasons why students did not participate, such as scheduling conflicts and absence from school. The omission of students who were suspended or truant from school might have biased the sample toward students with more positive perceptions of school climate. Although schools were permitted to let absent students take the survey when they returned to school, there was no requirement to do so. It was judged that such requirements would have placed too great a burden on schools.

Limitations in Adult Samples

The project began with the assessment of teachers, but after two years expanded to include other professional school staff, such as administrators, counselors, nurses, psychologists, school resource officers, and social workers. The participation rates for these groups have been low, despite requests for school principals to encourage their participation. There should be additional concerted efforts to recruit higher participation among these groups. In addition, the survey could be expanded to include other school staff members such as bus drivers, custodians, and volunteers. Research is needed to assess how school climate perceptions differ across staff positions and as a function of experience level, gender, and race/ethnicity.

Many school climate authorities recommend the use of parent surveys (Schueler et al., 2014). There is good reason to seek parental input and encourage their involvement, but limited evidence for the validity of parental perceptions of school climate, and parental participation rates tend to be low. More research is needed to determine how parent surveys can be used to construct a more comprehensive assessment of school climate and safety conditions.

Impact of High Stakes Assessment

Assessment of school climate is becoming increasingly important in the evaluation of school quality. In response to the Every Student Succeeds Act (Public Law 114-95) states may adopt school

climate and safety as a non-academic indicator of school quality. One impact could be increased pressure on schools to present evidence of a positive school climate. As a result, some survey participants may be inclined to give overly positive evaluations of their school (and conceivably, unhappy participants may be motivated to give overly negative evaluations). In addition, recruitment of survey participants could become biased to produce more favorable reports.

Several strategies might be considered to mitigate these potential problems. One strategy is to place greater weight on the consistency of reports across informants (teachers, staff, students, and perhaps parents) as an indicator of the integrity of findings. Second, survey reports might need corroboration with other sources, such as independent observers. Finally, sample selection procedures might need greater oversight so that stakeholders can be assured that survey participants are representative of the school and provide results that can be compared fairly with other schools or expected standards.

Scope of School Climate Assessment

This project used an authoritative school climate model that focused on the central role of high structure or demandingness (high disciplinary and academic expectations) and high responsiveness or support (student perceptions that teachers and other school staff are supportive and willing to help them). These key factors were linked to important student outcomes such as student engagement, risk behaviors, and academic achievement. Future work might consider other school climate characteristics. For example, the U.S. Department of Education devised a Safe and Supportive Schools model of school climate model with 13 components organized into domains of engagement, safety, and environment (Bradshaw, Waasdorp, Debnam, & Johnson, 2014). A longer and more comprehensive survey might include assess additional factors; however, a central problem for future research is to develop a clear and compelling conceptual model of school climate that has good construct validity. Two conceptual challenges are to explain the relationships among school climate characteristics and how they are related to student or school outcomes. As noted earlier in this report, broad definitions of school climate have the virtue of being comprehensive, but may risk over-inclusiveness and lose meaningfulness. Many aspects of the school, such as the training of its teachers, the quality of its curriculum, or the physical features of the school building, might affect school climate but are not a component or dimension of school climate.

The authoritative school climate model is derived from work on authoritative parenting (Larzelere et al., 2013), but there is no expectation that an authoritative school climate will map neatly onto concepts of authoritative parenting. A teacher's relationship with students has some similarities with parental relationships but important differences as well. The high expectations and support that a teacher or other school staff member convey to a student remain in an educational context and are obviously more limited in time, intensity, and scope than parental expectations and support. The authoritative school climate model will likely continue to evolve into a more differentiated theory that has domain-specific qualities.

This project has encountered some limitations in the assessment of authoritative school climate that need further research and measurement development. One concern is that low scores on the scales to assess authoritative school discipline do not adequately measure an *authoritarian* approach to school discipline. High scores on disciplinary structure indicate that the informant views school discipline as fair and appropriate, but low scores do not necessarily indicate an authoritarian approach. An open question is how to best assess school discipline practices that are not authoritative. In school settings, authoritarian discipline would be regarded as excessively strict, rigid, and harsh. It might be characterized by frequent use of school suspension with a zero tolerance philosophy. Another aspect of school discipline that is

important to measure is the extent to which it reflects racial/ethnic or socioeconomic bias. Measures of these aspects of school discipline are needed.

A second concern is that the measures of disciplinary structure and student support are highly correlated. In some statistical analyses it was preferable to combine the scales into a single index of authoritativeness. Conceptually, the two measures can be distinguished, but students might well perceive them as related to one another and in practice, schools which strive to be supportive of their students might also be less harsh in their disciplinary approach. There are both empirical and conceptual aspects of this problem that need further research.

IMPLICATIONS FOR POLICY AND PRACTICE

Effective schools are critical to the prevention of juvenile delinquency. Schools provide society's youth with the knowledge, skills, and opportunities for healthy social development to be successful citizens. Students who fail in school are at high risk for dropout, delinquent behavior, and involvement in the criminal justice system.

School climate has emerged as an essential factor in school effectiveness. A safe, orderly, and supportive school climate facilitates student engagement in learning and healthy social development. Although educators cannot change the risk factors of poverty, stressful events, or family problems that affect their students, they can create a positive school climate that engages students and gives them opportunities to be successful.

Research on school climate has been limited by a multitude of measures that do not clearly define school climate and lack strong evidence of validity as school-level measures. In order to improve their school climate, *educators* need practical and efficient tools to examine school conditions and assess the impact of their interventions. *Researchers* need reliable and valid measures to gain greater understanding of school functioning and develop more effective educational strategies and practices. Both educators and researchers need a meaningful conceptual model of school climate that identifies the critical features of school climate, how they interact with one another, and how they influence student outcomes. This project aimed to equip educators and researchers with measures of school climate that meet these assessment needs.

The Authoritative School Climate Survey (ASCS) is an efficient way to gather information from students and school staff that meets high standards of reliability and validity. Developed through four years of statewide assessments involving more than 700 schools, 200,501 student surveys and 45,793 staff surveys, ASCS scales have demonstrated utility at both student and school levels of analysis. At the student level, the ASCS has been tested across grade (7-12), gender, socioeconomic, and racial-ethnic groups. At the school level, the ASCS has been applied in large and small schools in urban, suburban, and rural settings with widely varying student demographics.

The developing theoretical model of authoritative school climate has the potential to bring greater clarity and coherence to school climate research. An authoritative school climate can be characterized by two key domains. One domain, structure (or demandingness), is the degree to which teachers and other school authorities have high expectations for their students. In an authoritative school climate, students are held to high standards for both their behavior and academic performance. Disciplinary structure refers to the presence of strict but fair discipline, while academic expectations refers to the idea that teachers want their students to excel in their studies. The second domain, support (or responsiveness), is the degree to which students perceive that their teachers and other school authorities respect and care for them, and want them to do well. As another indicator of feeling supported, students are willing to turn to their teachers for help or assistance. This conceptualization has the potential to guide school climate intervention efforts. The impact of a school climate improvement effort can be gauged by the extent to which it improves the structure and support of a school.

The published studies conducted in this project have found that an authoritative school climate characterized by high structure and support is associated with higher student engagement and lower rates

of student aggression. These relations were found in middle and high school samples at both student and school levels of analysis, and using both student and teacher/staff perceptions.

A series of studies reported that authoritative school climate is associated with lower levels of student aggression whether directed toward peers or teachers. Another study found that an authoritative school climate is also associated with lower risk behavior in high school students, including lower levels of student-reported alcohol and marijuana use; bullying, fighting, and weapon carrying at school; interest in gang membership; and suicidal thoughts and behavior. An authoritative school climate is also associated with positive academic outcomes. Students in schools with an authoritative school climate make higher grades and are less likely to drop out.

The 2015 Every Student Succeeds Act (ESSA, Public Law 114-95) has made it a national priority to measure school climate and safety as an indicator of school quality. This project has demonstrated strong evidence that the ASCS produces reliable and valid scores on a statewide basis as the federal law requires (see p. 35). There are some important next steps for the use of the ASCS or other school climate measures to establish state standards for school quality. Future research must address how school climate scores should be used for evaluation purposes. Some of the important questions are:

- Should scores be based on the perceptions of students, teachers and school staff, and/or others, such as parents?
- Should school climate be reduced to a single composite score or a series of scores measuring different aspects of school climate and safety?
- Should scores be adjusted for differences in school demographics such as student poverty level?
- Should scores be norm or criterion referenced?
- What scoring ranges indicate exemplary, acceptable, and deficient levels of school climate?

Finally, as school climate assessment becomes a regular practice, it will be important to examine how school authorities make use of school climate results. What school climate information should be conveyed to school authorities and how should this information be shared with stakeholders (school staff, students, parents, etc.)? Gaining greater awareness of school climate and safety conditions is itself an intervention that could have beneficial effects, but the feedback process has not been studied. Ultimately, the field needs the development of best practices to guide schools in making school climate assessment a central component of their annual school improvement process.

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APPENDICES

APPENDIX A

List of grant-funded publications

1. Konold, T., Cornell, D., Huang, F., Meyer, P., Lacey, A., Nekvasil, E., Heilbrun, A., & Shukla, K. (2014). Multi-level multi-informant structure of the Authoritative School Climate Survey. *School Psychology Quarterly, 29*, 238-255. doi: 10.1037/spq0000062

   The Authoritative School Climate Survey was designed to provide schools with a brief assessment of 2 key characteristics of school climate—disciplinary structure and student support—that are hypothesized to influence 2 important school climate out- comes—student engagement and prevalence of teasing and bullying in school. The factor structure of these 4 constructs was examined with exploratory and confirmatory factor analyses in a statewide sample of 39,364 students (Grades 7 and 8) attending 423 schools. Notably, the analyses used a multilevel structural approach to model the nesting of students in schools for purposes of evaluating factor structure, demonstrating convergent and concurrent validity and gauging the structural invariance of concurrent validity coefficients across gender. These findings provide schools with a core group of school climate measures guided by authoritative discipline theory.

2. Huang, F., Cornell, D., Konold, T., Meyer, P., Lacey, A., Nekvasil, E., Heilbrun, A., & Shukla, K. (2014). Multilevel factor structure and concurrent validity of the teacher version of the Authoritative School Climate Survey. *Journal of School Health, 85*, 843-859.

   School climate is well recognized as an important influence on student behavior and adjustment to school, but there is a need for theory-guided measures that make use of teacher perspectives. Authoritative school climate theory hypothesizes that a positive school climate is characterized by high levels of disciplinary structure and student support. A teacher version of the Authoritative School Climate Survey (ASCS) was administered to a statewide sample of 9099 7th- and 8th-grade teachers from 366 schools. The study used exploratory and multilevel confirmatory factor analyses (MCFA) that accounted for the nested data structure and allowed for the modeling of the factor structures at 2 levels. Multilevel confirmatory factor analyses conducted on both an exploratory (N = 4422) and a confirmatory sample (N = 4677) showed good support for the factor structures investigated. Factor correlations at 2 levels indicated that schools with greater levels of disciplinary structure and student support had higher student engagement, less teasing and bullying, and lower student aggression toward teachers. The teacher version of the ASCS can be used to assess 2 key domains of school climate and associated measures of student engagement and aggression toward peers and teachers.

3. Huang, F., Cornell, D., & Konold, T. (2014). Aggressive attitudes in middle schools: A factor structure and criterion-related validity study. *Assessment, 22,* 497-512. 1073191114551016

   Student attitudes toward aggression have been linked to individual aggressive behavior, but the relationship between school-wide normative beliefs about aggression and aggressive behavior poses some important measurement challenges that have not been adequately examined. The current study investigated the factor structure, measurement invariance, and criterion-related validity of a six-item Aggressive Attitudes scale using a large sample of seventh- and eighth-grade students (n = 39,364) from 423 schools. Analytic procedures accounted for the frequently ignored modeling problems of clustered and ordinal data to provide more reliable and accurate model estimates and standard errors. The resulting second-order factor structure of the Aggressive Attitudes scale demonstrated measurement invariance across gender, grade, and race/ethnicity groups. Criterion-related validity was supported with eight student- and school-level indices of aggressive behavior.

4. Lacey, A., & Cornell, D. (2014). School administrator assessments of bullying and state-mandated testing. *Journal of School Violence*. Advance online publication: doi: 10.1080/15388220.2014.971362

   Bully victimization is associated with lower academic performance for individual students; however, less is known about the impact of bullying on the academic performance of the school as a whole. This study examined how retrospective administrator reports of both the prevalence of teasing and bullying (PTB) and the use of evidence-based bullying prevention efforts might be associated with schoolwide performance on 11 state-mandated achievement tests. Hierarchical regression analyses conducted at the school level with 301 Virginia high schools found that principal reports of both PTB and bullying prevention efforts were associated with the proportion of students that passed achievement testing. Findings could not be attributed to the proportion of White students in the school, student poverty, school size, or urban location, which were statistically controlled.

5. Cornell, D., Shukla, K., & Konold, T. (2015). Peer victimization and authoritative school climate: A multilevel approach. Journal of Educational Psychology, 107, 1186-1201. http://dx.doi.org/10.1037/edu0000038

   School climate is widely recognized as an important influence on peer victimization in schools. The purpose of this study is to examine how authoritative school climate theory provides a framework for conceptualizing 2 key features of school climate—disciplinary structure and student support—that are associated with 3 measures of peer victimization. Multilevel multivariate modeling in a statewide sample of 39,364 7th- and 8th-grade students attending 423 schools revealed meaningful associations at both the student and school levels of analysis. Higher disciplinary structure was associated with lower levels of prevalence of teasing and bullying, bullying victimization, and general victimization. Higher student support was associated with lower prevalence of teasing and bullying and general victimization. Overall, these findings add new evidence to the theory that an authoritative school climate is conducive to lower peer victimization.

6. Huang, F., & Cornell, D. (2015). Multilevel factor structure, concurrent validity, and test-retest reliability of the high school teacher version of the Authoritative School Climate Survey. *Journal of Psychoeducational Assessment, 34,* 536-549. doi: 10.1177/0734282915621439

   Although school climate has long been recognized as an important factor in the school improvement process, there are few psychometrically supported measures based on teacher perspectives. The current study replicated and extended the factor structure, concurrent validity, and test–retest reliability of the teacher version of the Authoritative School Climate Survey (ASCS) using a statewide sample of high school teachers. Multilevel confirmatory factor analyses based on surveys completed by 12,808 high school teachers from 302 schools found that factors of disciplinary structure and student support were associated to varying degrees with the teacher reports of the prevalence of student teasing and bullying and student engagement. These findings provide some empirical support for the use of the teacher version of the ASCS in high schools.

7. Huang, F., & Cornell, D. (2015). Using multilevel factor analysis with clustered data: Investigating the factor structure of the Positive Values Scale. *Journal of Psychoeducational Assessment, 34,* 3-14. doi: 10.1177/0734282915570278

   Advances in multilevel modeling techniques now make it possible to investigate the psychometric properties of instruments using clustered data. Factor models that overlook the clustering effect can lead to underestimated standard errors, incorrect parameter estimates, and model fit indices. In addition, factor structures may differ depending on the level of analysis. The current study illustrates the application of multilevel factor analytic techniques using a large statewide sample of middle school students (n = 39,364) from 423 schools. Both multilevel exploratory and confirmatory factor analyses were used to investigate the factor structure of the Positive Values Scale (PVS) as part of a school climate survey. Results showed that for the PVS, a two-correlated factor model at Level 1 and a one-factor model at Level 2 best fit the data. Implications and guidance for applied researchers are discussed.

8. Jia, Y., Konold, T., & Cornell, D. (2015). Authoritative school climate and high school dropout rates. *School Psychology Quarterly, 31,* 289-303. http://dx.doi.org/10.1037/spq0000139

   This study tested the association between school-wide measures of an authoritative school climate and high school dropout rates in a statewide sample of 315 high schools. Regression models at the school level of analysis used teacher and student measures of disciplinary structure, student support, and academic expectations to predict overall high school dropout rates. Analyses controlled for school demographics of school enrollment size, percentage of low-income students, percentage of minority students, and urbanicity. Consistent with authoritative school climate theory, moderation anal- yses found that when students perceive their teachers as supportive, high academic expectations are associated with lower dropout rates.

9. Konold, T., & Cornell, D. (2015). Measurement and structural relations of an Authoritative School Climate model: A multi-level latent variable investigation. *Journal of School Psychology, 53,* 447-461. http:/dx.doi.org/10.1016/j.jsp.2015.09.001

   This study tested a conceptual model of school climate in which two key elements of an authoritative school, structure and support variables, are associated with student engagement in school and lower levels of peer aggression. Multilevel multivariate structural modeling was conducted in a statewide sample of 48,027 students in 323 public high schools who completed the Authoritative School Climate Survey. As hypothesized, two measures of structure (Disciplinary Structure and Academic Expectations) and two measures of support (Respect for Students and Willingness to Seek Help) were associated with higher student engagement (Affective Engagement and Cognitive Engagement) and lower peer aggression (Prevalence of Teasing and Bullying) on both student and school levels of analysis, controlling for the effects of school demographics (school size, percentage of minority students, and percentage of low income students). These results support the extension of authoritative school climate model to high school and guide further research on the conditions for a positive school climate.

10. Konold, T., & Cornell, D. (2015). Multilevel, multitrait - multimethod latent analysis of structurally different and interchangeable raters of school climate. *Psychological Assessment,* 27, 1097-1109. doi: 10.1037/pas0000098

    Informant-based systems of assessment are common platforms for measuring a variety of educational and psychological constructs where the use of multiple informants is considered best practice. In many instances, structurally different informant types (e.g., students and teachers) are solicited on the basis of their unique roles with the target of measurement. The use of multiple informants provides an opportunity to evaluate the degree to which the obtained ratings are influenced by the trait of focus and extraneous sources that can be attributed to the rater. Data from a multilevel multitrait–multimethod design in which students (*N* 35,565) and teachers (*N* 9,112), from 340 middle schools, responded to items measuring 3 dimensions of school climate were evaluated through a multilevel correlated trait– correlated method latent variable model. Results indicated that ratings of school climate obtained by students and teachers demonstrated high levels of convergent validity, and that school-level ratings obtained by students and teachers were equitable in the assessment of teasing and bullying. Student ratings of support and structure yielded somewhat stronger evidence of convergent validity than ratings obtained by teachers as revealed by their respective trait factor loadings. This was explained in part by the higher levels of common method effects that were observed for teachers.

11. Lacey, A., Cornell, D., & Konold, T. (2015). The relations between teasing and bullying and middle school standardized exam performance. *The Journal of Early Adolescence.* Advance online publication. doi: 10.1177/0272431615596428

    This study examined the relations between the schoolwide prevalence of teasing and bullying (PTB) and schoolwide academic performance in a sample of 271 Virginia middle schools. In addition, the study examined the mediating effects of student engagement. A three-step sequence of path models investigated associations between schoolwide PTB and state-mandated Standards of Learning test pass rates, with effects examined both directly and indirectly through student engagement while controlling for important school-level characteristics. Separate models were examined for two 7th-grade and four 8th-grade tests. Results indicated that higher levels of both teacher and student perceptions of schoolwide teasing and bullying were significantly associated with lower achievement pass rates and student engagement. The relationship between perceptions of schoolwide teasing and bullying and achievement was partially mediated by student engagement. These findings bring new support for the need for schoolwide interventions to reduce teasing and bullying among middle school students.

12. Millspaugh, S. B., Cornell, D. G., Huang, F. L., & Datta, P. (2015). Prevalence of aggressive attitudes and willingness to report threats in middle school. *Journal of Threat Assessment and Management, 2,* 11-22. doi: http://dx.doi.org/10.1037/tam0000031

    Violence prevention strategies such as threat assessment rely on information from students; however, students are often unwilling to report threats of violence to school authorities. The current study investigated the hypothesis that middle school students are less likely to report threats of violence when they perceive aggressive behavior as a source of status and popularity among their peers. Our statewide sample consisted of 39,364 7th and 8th graders who completed school climate surveys in 423 schools. Students completed a measure of aggressive attitudes and were asked how much they agreed or disagreed with 2 statements concerning threats of violence: (a) "If another student brought a gun to school, I would tell one of the teachers or staff at school," and (b) "If another student talked about killing someone, I would tell one of the teachers or staff at school." Multilevel logistic regression analyses, which controlled for student and school demographics, found that higher levels of aggressive attitudes at both the school and student level were associated with a lower likelihood of reporting threat behavior.

13. Berg, J., & Cornell, D. (2016). Authoritative school climate, aggression toward teachers, and teacher distress in middle school. *School Psychology Quarterly, 31,* 122-139. http://dx.doi.org/10.1037/spq0000132

    Aggression toward teachers is linked to burnout and disengagement from teaching, but a positive school climate may reduce aggression and associated teacher distress. Using authoritative school climate theory, the study examined whether schools with high disciplinary structure and student support were associated with less aggression and less distress. The sample of 9,134 teachers in 389 middle schools came from the Virginia Secondary School Climate Survey, a statewide survey administered to all public schools with 7th and 8th grade enrollment. The majority of teachers (75%) were female. More than half (53%) reported that they had more than 10 years of teaching experience; 23% reported 6 to

10 years; 24% reported 1 to 5 years. Students reported on the degree to which their schools were structured and supportive. Teachers reported on their experiences of aggression by students, their level of distress, and their feelings of safety. Staff-related infractions computed from Department of Education records were also used. Multilevel modeling revealed that teachers in authoritative schools experienced less aggression and felt safer and less distressed. Lower aggression by students mediated the association between more authoritative schools and lower dis- tress such that more structured and supportive schools had greater teacher safety and, in turn, less distress. The findings support the idea that more structured and supportive schools relate to greater safety for teachers and, in turn, less distress. Research limitations and implications for practice are discussed.

14. Shukla, K., Konold, T., & Cornell, D. (2016). Profiles of student perceptions of school climate: Relations with risk behaviors and academic outcomes. *American Journal of Community Psychology, 57,* 291-307. doi: 10.1002/ajcp.12044

    School climate has been linked to a variety of positive student outcomes, but there may be important within- school differences among students in their experiences of school climate. This study examined within-school heterogeneity among 47,631 high school student ratings of their school climate through multilevel latent class modeling. Student profiles across 323 schools were generated on the basis of multiple indicators of school climate: disciplinary structure, academic expectations, student willingness to seek help, respect for students, affective and cognitive engagement, prevalence of teasing and bullying, general victimization, bullying victimization, and bullying perpetration. Analyses identified four meaningfully different student profile types that were labeled positive climate, medium climate-low bullying, medium climate-high bullying, and negative climate. Contrasts among these profile types on external criteria revealed meaningful differences for race, grade-level, parent education level, educational aspirations, and frequency of risk behaviors.

15. Cornell, D., Shukla, K., & Konold, T. (2016). Authoritative school climate and student academic engagement, grades, and aspirations in middle and high schools. *AERA Open, 2,* 1-18, doi: 10.1177/2332858416633184

    This study tested the theory that an authoritative school climate characterized by disciplinary structure and student support is conducive to positive academic outcomes for middle and high school students. Multilevel multivariate modeling at student and school levels was conducted using school surveys completed by statewide samples of 39,364 students in Grades 7 and 8 in 423 middle schools and 48,027 students in Grades 9 through 12 in 323 high schools. Consistent with authoritative school climate theory, both higher disciplinary structure and student support were associated with higher student engagement in school, higher course grades, and higher educational aspirations at the student level in both samples. At the school level, higher disciplinary structure was associated with higher engagement, and higher student support was associated with higher engagement and grades in both samples. Overall, these findings add new evidence that an authoritative school climate is conducive to student academic success in middle and high schools.

16. Cornell, D., & Huang, F. (2016). Authoritative school climate and high school student risk behavior. A cross-sectional multi-level analysis of student self-reports. *Journal of Youth and Adolescence, 45,* 2246-2259, doi: 10.1007/s10964-016-0424-3

    Many adolescents engage in risk behaviors such as substance use and aggression that jeopardize their healthy development. This study tested the hypothesis that an authoritative school climate characterized by strict but fair discipline and supportive teacher-student relationships is conducive to lower risk behavior for high school students. Multilevel logistic regression models were used to analyze cross-sectional, student-report survey data from a statewide sample of 47,888 students (50.6% female) in 319 high schools. The students included ninth (26.6%), tenth (25.5%), eleventh (24.1%) and twelfth (23.8%) grade with a racial/ethnic breakdown of 52.2% White, 18.0% Black, 13.1% Hispanic, 5.9% Asian, and 10.8% reporting another or two or more race/ethnicities. Schools with an authoritative school climate had lower levels of student-reported alcohol and marijuana use; bullying, fighting, and weapon carrying at school; interest in gang membership; and suicidal thoughts and behavior. These results controlled for demographic variables of student gender, race, grade, and parent education level as well as school size, percentage of minority students, and percentage of low income students. Overall, these findings add new evidence that an authoritative school climate is associated with positive student outcomes.

17. Huang, F. & Cornell, D. (2015). The impact of definition and question order on the prevalence of bullying victimization using student self-reports. *Psychological Assessment, 27,* 1484-1493. http://dx.doi.org/10.1037/pas0000149

    Accurate measurement is essential to determining the prevalence of bullying and evaluating the effectiveness of intervention efforts. The most common measurement approach is through anonymous self-report surveys, but previous studies have suggested that students do not adhere to standard definitions of bullying and may be influenced by the order of questions about types of victimization. In the current study, we have presented findings from 2 randomized experiments designed to determine (a) the impact of using or not using a definition of bullying and (b) asking about general versus specific types of bullying victimization and how the order of these questions affects victimization-prevalence rates. The study was conducted using a sample of 17,301 students attending 119 high schools. Findings indicate that the use of a definition had no impact on prevalence rates, but asking specific bullying-victimization questions (e.g., “I have been verbally bullied at school”) prior to general bullying-victimization questions (e.g., “I have been bullied at school”), resulted in a 29–76% increase in victimization-prevalence rates. Results suggest that surveys that ask general-to-specific bullying-victimization questions, such as those found in national and international surveys, may be underreporting bullying victimization.

18. Nekvasil, E., & Cornell, D. (2015). Student threat assessment associated with positive school climate in middle schools. *Journal of Threat Assessment and Management 2,* 98-113. http://dx.doi.org/10.1037/tam0000038

    Authorities in law enforcement and education have recommended the use of threat assessment to prevent violence, but few studies have examined its usefulness in middle schools. This retrospective, quasi-experimental study compared middle schools that use the Virginia Student Threat Assessment Guidelines (Cornell & Sheras, 2006; N = 166) to

schools that either do not use threat assessment (N = 119) or use an alternative model of threat assessment (school- or district-developed; N = 47). Based on school records, schools using the Virginia Guidelines reported lower short-term suspension rates than both groups of schools. According to a statewide school climate survey, schools using the guidelines also had fairer discipline and lower levels of student aggressive behaviors, as reported by students. Finally, teachers reported feeling safer in schools using the Virginia Guidelines, as opposed to both groups of schools. Additional analyses of school records found that the number of years a school used the Virginia Guidelines was associated with lower long-term suspension rates, student reports of fairer discipline, and lower levels of student aggressive behaviors. All analyses controlled for school size, minority composition, and socioeconomic status of the student body. These findings suggest that use of a threat assessment approach to violence prevention is associated with lower levels of student aggression and a more positive school climate.

19. Huang, F., & Cornell, D. (2015). Question order affects the measurement of bullying victimization. *Educational and Psychological Measurement, 76,* 724-740, doi: 10.1177/0013164415622664

    Bullying among youth is recognized as a serious student problem, especially in middle school. The most common approach to measuring bullying is through student self- report surveys that ask questions about different types of bullying victimization. Although prior studies have shown that question-order effects may influence participant responses, no study has examined these effects with middle school students. A randomized experiment (n = 5,951 middle school students) testing the question- order effect found that changing the sequence of questions can result in 45% higher prevalence rates. These findings raise questions about the accuracy of several widely used bullying surveys.

20. Datta, P., Cornell, D., & Huang, F. (2016). Aggressive attitudes and prevalence of bullying bystander behaviors in middle schools. *Psychology in the Schools, 53,* 804-816. doi: 10.1002/pits.21944

    Separate lines of research find that proaggressive attitudes promote peer aggression and that bystanders play a pivotal role in deterring or facilitating bullying behavior. The current study hypothesized that proaggressive attitudes in middle school would deter students from standing up to bullying and encourage them to reinforce bullying behavior. Middle school students (*n* = 28,765) in 423 schools completed a statewide school climate survey that included an aggressive attitudes scale and their bystander response to a recent episode of bullying, which was categorized as upstanding, reinforcing, or passive. Multilevel logistic regressions indicated that higher aggressive attitudes were associated with less upstanding behavior at the school level and less upstanding behavior and more reinforcing behavior at the individual level, while controlling for other school and student demographic variables. These findings suggest that antibullying programs might address student attitudes toward aggression as a means of boosting positive bystander intervention.

21. Jia Y., Konold R. T., Cornell D., & Huang F. (2016) The impact of validity screening on associations between self-reports of bullying victimization and student outcomes. *Educational and Psychological Measurement, 0,* 1-23, doi: 10.1177/0013164416671767

    Self-report surveys are widely used to measure adolescent risk behavior and academic adjustment, with results having an impact on national policy, assessment of school quality, and evaluation of school interventions. However, data obtained from self-reports can be distorted when adolescents intentionally provide inaccurate or careless responses. The current study illustrates the problem of invalid respondents in a sample (N = 52,012) from 323 high schools that responded to a statewide assessment of school climate. Two approaches for identifying invalid respondents were applied, and contrasts between the valid and invalid responses revealed differences in means, prevalence rates of student adjustment, and associations among reports of bullying victimization and student adjustment outcomes. The results lend additional support for the need to screen for invalid responders in adolescent samples.

22. Konold, T., Cornell, D., Shukla, K., & Huang, F. (2016). Racial/ethnic differences in perceptions of school climate and its association with student engagement and peer aggression. *Journal of Youth and Adolescence.* Advance online publication. doi: 10.1007/s10964-016-0576-1

    Research indicates that a positive school climate is associated with higher levels of student engagement and lower rates of peer aggression. However, less attention has been given to whether such findings are consistent across racial/ethnic groups. The current study examined whether Black, Hispanic, and White high school students differed in their perceptions of school climate, student engagement, and peer aggression as measured by the Authoritative School Climate survey. In addition, the study tested whether the associations between school climate and both student engagement and peer aggression varied as a function of racial/ethnic group. The sample consisted of 48,027 students in grades 9–12 (51.4 % female; 17.9 % Black, 10.5 % Hispanic, 56.7 % White, and 14.9 % other) attending 323 high schools. Regression models that contrasted racial/ethnic groups controlled for the nesting of students within schools and used student covariates of parent education, student gender, and percentage of schoolmates sharing the same race/ethnicity, as well as school covariates of school size and school percentage of students eligible for free- or reduced-price meals. Perceptions of school climate differed between Black and White groups, but not between Hispanic and White groups. However, race/ethnicity did not moderate the associations between school climate and either engagement or peer aggression. Although correlational and cross-sectional in nature, these results are consistent with the conclusion that a positive school climate holds similar benefits of promoting student engagement and reducing victimization experiences across Black, Hispanic, and White groups.

23. Malone, M., Cornell, D., & Shukla, K. (2016). Association of grade configuration with school climate for 7th and 8th grade students. *School Psychology Quarterly*. Advance online publication. http://dx.doi.org/10.1037/spq0000174

    Educational authorities have questioned whether middle schools provide the best school climate for 7th and 8th grade students, and proposed that other grade configurations such as K–8th grade schools may provide a better learning environment. The purpose of this study was to compare 7th and 8th grade students' perceptions of 4 key features of school climate (disciplinary structure, student support, student engagement, and prevalence of teasing and bullying) in middle schools versus elementary or high schools. Multilevel multivariate modeling in a statewide sample of 39,036 7th and 8th grade students attending 418 schools revealed that students attending middle schools had a more negative perception of school climate than students in schools with other grade configurations. Seventh grade students placed in middle schools reported lower disciplinary structure and a higher prevalence of teasing and bullying in comparison to those in elementary schools. Eighth grade students in middle schools reported poorer disciplinary structure, lower student engagement, and a higher prevalence of teasing and bullying compared to those in high schools. These findings can guide school psychologists in identifying aspects of school climate that may be troublesome for 7th and 8th grade students in schools with different grade configurations.

24. Huang, F., Eklund, K., & Cornell, D. (in press). Authoritative school climate, number of parents at home, and academic achievement. *School Psychology Quarterly.* Advance online publication. http://dx.doi.org/10.1037/spq0000182

    School climate is widely recognized as an important factor in promoting student academic achievement. The current study investigated the hypothesis that a demanding and supportive school climate, based on authoritative school climate theory, would serve as a protective factor for students living with one or no parents at home. Using a statewide sample of 56,508 middle school students from 415 public schools in one state, results indicated that student perceptions of disciplinary structure, academic demandingness, and student support all had positive associations with student self-reported grade point average (GPA). In addition, findings showed that academic expectations and student support were more highly associated with GPA for students not living with any parent. Implications for policy and practice are discussed.

25. Konold, T.R. (in press). A multilevel MTMM approach to estimating the influences of contextual factors on trait and informant based method effects in assessments of school climate. *Journal of Psychoeducational Assessment*.

    School level contextual factors have been found to influence reports of school climate. The purpose of the current study was to evaluate the extent to which these associations are related to the school climate traits being measured or the methods (i.e., informants) used to obtain them. Data from a multilevel MTMM design in which structurally different and interchangeable students (N = 45,641) and teachers (N = 12,808), residing within 302 high schools, responded to items measuring four dimensions of school climate were evaluated through a multilevel CT - CM latent analysis that allowed for the estimation of both school level trait and informant based method factors. The resulting trait and method factors were regressed on several school level contextual variables. Results indicated that the percent of

students receiving FRPM in schools was associated with both school climate traits and informant based method factors, school size and the percentage of minority students in schools were associated with some traits, and school size was associated with student method effects. Findings support the use of controlling for school level contextual factors in school climate research.

26. Konold, T.R., & Shukla, K. (2016). Estimating school climate traits across multiple informants: An illustration of a multi-trait multi-method validation through latent variable modeling. *Educational Assessment.* Online advanced publication. http://dx.doi.org/10.1080/10627197.2016.1271705

    The use of multiple informants is common in assessments that rely on the judgments of others. However, ratings obtained from different informants often vary as a function of their perspectives and roles in relation to the target of measurement, and causes unrelated to the trait being measured. We illustrate the usefulness of a latent variable multilevel MTMM measurement model for extracting trait factors from reports of school climate obtained by students (N = 45,641) and teachers (N = 12,808) residing within 302 high schools. We then extend this framework to include assessments of linkages between the resulting trait factors and potential outcomes that might be used for addressing questions of substantive interest or providing evidence of concurrent validity. The approach is illustrated with data obtained from student and teacher reports of two dimensions of school climate, student engagement, and the prevalence of teasing and bullying in their schools.

27. Cornell, D., & Huang, F. (in press). Collecting and analyzing local school safety and climate data. In Mayer, M., & Jimerson, S. (Eds.) *School safety and violence prevention: Science, practice, and policy driving change*. Washington, DC: American Psychological Association.

    This chapter describes key issues in the collection and analysis of data measuring school safety and climate. It begins with an analysis of the multidimensional nature of school safety and the different sources of data used to measure it. Next, the chapter critically examines the concept of school climate and how authoritative school climate theory can help clarify research findings and guide future research. Finally, the chapter reviews the limitations of current psychometric standards for the assessment of school climate and safety and makes recommendations for improvement.

28. Heilbrun, A., Cornell, D., & Konold, T. (under review). Linkages between authoritative school climate and suspension rates in middle schools.

    The over-use of school suspensions has been linked to a host of negative outcomes, including racial disparities in discipline. School climate initiatives have shown promise in reducing these disparities. The present study used the Authoritative School Climate Survey—which measures disciplinary structure and student support as key measures of school climate—to investigate an association between teacher and student perceptions of school climate and suspension rates in a statewide sample of middle schools. Regression analyses controlling for school-level poverty and school size found that elements of authoritative climate, particularly structure, distinguish high-and-low suspending schools. Schools with high levels of student- and teacher-reported structure had lower overall suspension rates and a lower gap between

Black and White suspension rates. These findings can be used to guide school climate initiatives to reduce racial disparities in school discipline.

29. Huang, F. & Cornell D. (in press). Student attitudes and behaviors as explanations for the Black-White suspension gap. *Children and Youth Services Review*.

    Purpose: Although studies have documented that Black students receive out-of-school suspensions (OSS) at much higher rates than White students, few studies have investigated possible explanations for this disparity. The differential involvement hypothesis suggests that disproportionate sanctioning may be a function of racial differences in student misbehavior or characteristics that predispose them to misbehavior.
    Method: Suspension data, risk behaviors, and aggressive attitudes from self-report surveys were collected from a statewide sample of 38,398 students attending 236 racially-diverse high schools. A series of school fixed-effect logistic and linear regression models were used to test behavioral and attitudinal forms of the differential involvement hypothesis.
    Results: Racial differences in self-reported suspension could not be explained by different behavioral reasons for suspension (such as fighting, threatening others, and substance possession), by involvement in high risk behaviors of fighting, bullying, carrying a weapon, consuming alcohol, or using marijuana, or by aggressive attitudes that lead to hostile behavior. Conclusions: Overall, these findings do not support the differential involvement hypothesis and although they do not establish the presence of bias, they strengthen concern that racial disparities are likely the result of differential decisions by school authorities.

30. Shukla, K., & Konold, T. (in press). A two-step latent profile method for identifying invalid respondents in self-reported survey data. *The Journal of Experimental Education.*

    Insincere respondents can have an adverse impact on the validity of substantive inferences arising from self-administered questionnaires (SAQs). The current study introduces a new method for identifying potentially invalid respondents with response patterns that are typically associated with a lack of cognitive engagement. The two-step procedure involves generating a response inconsistency (RI) score for each participant and scale on the SAQ, and subjecting the resulting scores to latent profile analysis to identify latent classes of respondents with atypical RI profiles. In contrast to other popular approaches for identifying invalid respondents, the proposed procedure can be applied post-data collection without built in validity items or other design features (e.g., recording of response time). The procedure is illustrated through a survey of school climate that was administered to N = 52,102 high school students. Results of this screening procedure revealed high levels of specificity and expected levels of sensitivity when contrasted with results that would be obtained through the use of screening items or response time. Contrasts between valid and invalid respondents revealed similar patterns of differences across the three screening procedures when compared across external measures of academics and risk behaviors. The proposed procedure is advocated as a supplement to other available forms of screening for invalid respondents.

APPENDIX B

Conference Presentations

1. Konold, T.R., Klein, J., & Cornell, D. (2013, April). The psychometric temperature of the School Climate and Bullying Survey and linkages to risk behavior. American Education Research Association (Division D). San Francisco, CA.

2. Cornell, D. (2013, June). Bullying and school climate. Invited presentation for Bullying and sexual harassment: Managing both effectively in schools. Virginia Department of Education. Charlottesville, VA.

3. Cornell, D. (2013, August). School climate and safety in Virginia schools. School and Campus Safety Training Forum, Virginia Department of Criminal Justice Services. Hampton, VA.

4. Cornell, D. (2013, November). Threat assessment, bullying, and school climate. Workshop for Norfolk Public Schools. Norfolk, VA.

5. Cornell, D. (2014, February). Key characteristics of a safe and welcoming school climate. Keynote address for Third Annual Safe and Welcoming Schools Conference. College of Education, University of Georgia. Athens, GA.

6. Cornell, D. (2014, April). School climate research and student aggression. Invited presentation for Virginia Center for School and Campus Safety Threat Assessment Conference. Richmond, VA.

7. Konold, T.R., Cornell, D., Huang, F., & Shukla, K. (2014, April). Dimensions of school climate: A unified student and school level measurement framework. American Education Research Association (Division D). Philadelphia, PA.

8. Shukla, K., & Konold, T.R. (2014, April). Fondness of math and science as measured by the TIMMS student questionnaire: Invariance across U.S. ethnic groups. American Education Research Association (Division D). Philadelphia, PA.

9. Cornell, D. (2014, April). School climate characteristics associated with lower levels of bullying. American Educational Research Association. Philadelphia, PA.

10. Cornell, D. (2014, May). Good schools are like good parents: Demanding, but supportive. Presentation for the Progressive Schools Association of Gurgaon. Delhi, India.

11. Cornell, D. (2014, May). Virginia School Climate Survey: Findings on the Prevention of Bullying. Invited presentation for the Annual Virginia Prevention Conference. Richmond, VA.

12. Berg, J., Huang, F., & Cornell, D. (2014, July). The influence of ethnicity in context on middle school students' perceptions of teasing and bullying. Paper presented at the World Meeting of the International Association of Research on Aggression. Atlanta, GA.

13. Cornell, D. (2014, July). School climate and bullying research in the USA. International Congress of Applied Psychology. Paris, France.

14. Cornell, D., Shukla, K., Konold, T., Huang, F. (2014, July). Authoritative school climate and peer victimization. Paper presented at the World Meeting of the International Association of Research on Aggression. Atlanta, GA.

15. Datta, P., Cornell, D., & Huang, F. (2014, July). Aggressive attitudes and prevalence of bullying bystander behaviors in middle schools. Poster presented at the World Meeting of the International Association of Research on Aggression. Atlanta, GA.

16. Millspaugh, S., Cornell, D., Datta, P., Heilbrun A., & Huang, F. (2014, July). Prevalence of aggressive attitudes in middle schools and student willingness to report threats of violence. Poster presented at the 21st World Meeting of the International Society for Research on Aggression. Atlanta, GA.

17. Cornell, D. (2014, September). School climate data collection, reporting, and use. National Leadership Summit on School Discipline and Climate. U.S. Department of Education and Department of Justice. Washington, DC.

18. Cornell, D. (2014, December). School climate and safety in Virginia high schools: Perceptions of students and teachers. Keynote presentation for Strengthening Connections Climate Forum. Virginia Center for School and Campus Safety. Midlothian, VA.

19. Shukla, K., & Konold, T.R. (2015, March). Identifying non-reliable respondents in self-reports: A novel application of latent profile analysis. Curry Research Conference. Charlottesville, VA.

20. Huang, F., Cornell, D., & Konold, T. (2015, April). Multilevel factor structure and concurrent validity of a teacher-based school climate survey. Paper presented at the American Educational Research Association Annual Meeting. Chicago, IL.

21. Shukla, K., Konold, T., & Cornell, D. (2015, April). School climate and student engagement: A concurrent validity investigation through a multilevel multivariate approach. Paper presented at the American Educational Research Association Annual Meeting. Chicago, IL.

22. Cornell, D., Konold, T.R., & Maeng, J. (2015, May). Statewide implementation of student threat assessment in Virginia public schools. Society for Prevention Research. U.S. Capital Building. Washington, DC.

23. Cornell, D. (2015, June). School climate and bullying. Keynote address at Bullying in Diverse School Settings: Data Driven Approaches to Prevention and Intervention sponsored by Boston University. Boston, MA.

24. Cornell, D. (2015, July). School climate and safety. Presentation for School Safety Institute. Virginia Center for School and Campus Safety. Mechanicsville, VA.

25. Cornell, D. (2015, August). School climate and safety in Virginia schools. Keynote presentation for the Virginia School Safety Conference. Hampton Roads, VA.

26. Cornell, D. (2015, August). School climate and safety in Virginia secondary schools. Workshop for the Virginia School Safety Conference. Hampton Roads, VA.

27. Cornell, D. (2015, August). What kind of climate does your school have? Invited presentation for Back to school safety and security workshop. Richmond, VA.

28. Malone, M., Cornell, D., & Shukla, K. (2015, August). Grade configuration is associated with school climate for 7th and 8th grade students. Poster presented at the Annual Meeting of the American Psychological Association. Toronto, Canada.

29. Cornell, D. (2015, November). School climate and safety. Presentation for School Safety Institute. Virginia Center for School and Campus Safety. Richmond, VA.

30. Cornell, D. (2015, December). School climate and safety in Virginia schools. Presentation at the Strengthening connections conference. Richmond VA.

31. Huang, F., & Cornell, D. (2016, April). Investigating question order effects on the prevalence of bullying victimization of middle school students. Paper presented at the annual meeting of the American Education Research Association. Washington, DC.

32. Jia, Y., Konold, T.R., & Cornell, D. (2016, April). The role of informants on associations among school climate, dropout rates, and academic expectations. American Education Research Association (Division D). Washington, DC.

33. Konold, T.R., & Shukla, K. (2016, April). Multilevel multitrait-multimethod latent analysis of structurally different and interchangeable raters of school climate. In New Developments in Psychometrics, Measurement, and Assessment. American Education Research Association (Division D). Washington, DC.

34. Malone, M., Cornell, D., & Shukla, K. (2016, August). Grade configuration is associated with standardized test pass rates for 7th and 8th grade students. Poster presentation at the American Psychological Association annual convention. Denver, Colorado.

35. Shukla, K., Konold, T., & Cornell, D. (2016, August). Profiles of student perceptions of school climate: Relations with risk behaviors and academics. American Psychological Association annual convention. Denver, Colorado.

36. Jia, Y., Konold, T.R., Cornell, D., & Huang, F. (2017). The impact of validity screening on associations between self-reports of bullying victimization and student outcomes. American Education Research Association. San Antonio, TX.

37. Konold, T.R. (2017). A Multilevel MT-MM Approach for estimating contextual influences on informant effects. National Council for Measurement in Education (NCME). San Antonio, TX.

38. Konold, T.R., Shukla, K., Cornell, D., & Huang, F. (2017). Racial differences in perceptions of school climate and their associations with student outcomes. American Education Research Association. San Antonio, TX.

APPENDIX C

Student Survey

This is a review copy, not for circulation or use. The actual survey is online with formatting for easier reading. Names of scales and the scoring weights in each cell are not used when the survey is administered. This survey includes core scales and some optional supplementary scales. Users can choose the scales that best suit their purposes.

Student Version

Instructions for students:

This survey is being given to students in grades 7-12. The questions will ask how you feel about your school and how students get along with one another and their teachers. We want to know your opinion in order to learn ways to improve your school.

Your individual answers to the survey are anonymous, which means that no one will know how you answered. Student answers will be summarized in a report to the school that will not include anyone's name.

It should take about 15-25 minutes to complete the survey.

What is your code number for taking this survey? Your teacher should have this number for you. Many students will have the same number, so you will not be identified by this number. _____

1. Are you a student taking this survey?	
	Yes
	No (someone just looking over the survey)

2. What is the name of your school?

Student Engagement Scale

How do you feel about going to this school?	Strongly Disagree	Disagree	Agree	Strongly Agree
3. I like this school.	1	2	3	4
4. I am proud to be a student at this school.	1	2	3	4
5. I feel like I belong at this school.	1	2	3	4
6. I usually finish my homework.	1	2	3	4
7. I want to learn as much as I can at school.	1	2	3	4
8. Getting good grades is very important to me.	1	2	3	4

*The score for this scale is the sum of items 3-8 using the weights 1-4 in the cells above.

School Disciplinary Structure Scale

Thinking about your school, would you agree or disagree with the statements below? Pick the answer that is closest to how you feel.	Strongly Disagree	Disagree	Agree	Strongly Agree
9. The school rules are fair.	1	2	3	4
10. The punishment for breaking school rules is the same for all students.	1	2	3	4
11. Students at this school are only punished when they deserve it.	1	2	3	4
12. Students are suspended without a good reason.	1	2	3	4
13. When students are accused of doing something wrong, they get a chance to explain.	1	2	3	4
14. Students are treated fairly regardless of their race or ethnicity.	1	2	3	4
15. The adults at this school are too strict.	1	2	3	4

*The score for this scale is the sum of items 9-15 using the weights 1-4 in the cells above.

Student Support Scale – Respect for Students subscale

Most teachers and other adults at this school …	Strongly Disagree	Disagree	Agree	Strongly Agree
16. …care about all students.	1	2	3	4
17. …want all students to do well.	1	2	3	4
18. …listen to what students have to say.	1	2	3	4
19. …treat students with respect.	1	2	3	4

*The score for this scale is the sum of items 16-19 using the weights 1-4 in the cells above.

Student Support Scale – Willingness to Seek Help subscale

How much do you agree or disagree with these statements?	Strongly Disagree	Disagree	Agree	Strongly Agree
20. There are adults at this school I could talk with if I had a personal problem.	1	2	3	4
21. If I tell a teacher that someone is bullying me, the teacher will do something to help.	1	2	3	4
22. I am comfortable asking my teachers for help with my schoolwork.	1	2	3	4
23. There is at least one teacher or other adult at this school who really wants me to do well.	1	2	3	4

*The score for this scale is the sum of items 20-23 using the weights 1-4 in the cells above. A total Student Support score is obtained by summing the two subscales.

Additional items not included in Support scale

How much do you agree or disagree with these statements?	Strongly Disagree	Disagree	Agree	Strongly Agree
24. If another student talked about killing someone, I would tell one of the teachers or staff at school.	1	2	3	4
25. If another student brought a gun to school, I would tell one of the teachers or staff at school.	1	2	3	4
26. I feel safe in this school.	1	2	3	4

*These items do not load high enough onto the Support scale but they have important content and are used on an individual basis.

Academic Expectations scale

How much do you agree or disagree with these statements?	Strongly Disagree	Disagree	Agree	Strongly Agree
27. My teachers expect me to work hard.	1	2	3	4
28. My teachers really want me to learn a lot.	1	2	3	4
29. My teachers expect a lot from students.	1	2	3	4
30. My teachers do not really care how much I learn.	1	2	3	4
31. My teachers expect me to attend college.	1	2	3	4

*The score for this scale is the sum of items 27-31 using the weights 1-4 in the cells above.

Prevalence of Teasing and Bullying scale

These questions are about teasing and bullying you see at your school. Do not include friendly teasing that does not hurt anyone's feelings.	Strongly Disagree	Disagree	Agree	Strongly Agree
32. Students in this school are teased about their clothing or physical appearance.	1	2	3	4
33. Students in this school are teased or put down because of their race or ethnicity.	1	2	3	4
34. There is a lot of teasing about sexual topics at this school.	1	2	3	4
35. Bullying is a problem at this school.	1	2	3	4
36. Students in this school are teased or put down about their sexual orientation.	1	2	3	4
Validity screening item	1	2	3	4
37. I am telling the truth on this survey.	1	2	3	4

*The score for PTB is the sum of items 32-36 using the weights 1-4 in the cells above. Item 37 is used to screen the surveys for invalid responders. Students are omitted from the sample if they answer 1 or 2 to item 37.

Bullying by Teachers

A teacher or other adult at school bullies a student by repeatedly punishing or criticizing a student unfairly. This goes beyond what is normal discipline in the school. Use this definition in answering the next set of questions.	Strongly Disagree	Disagree	Agree	Strongly Agree
38. There are teachers or other adults at this school who bully students.	1	2	3	4
39. There are teachers or other adults at this school who make fun of students.	1	2	3	4
40. Some teachers or other adults at this school say things that make students feel badly.	1	2	3	4
41. Some teachers or other adults at this school pick on certain students.	1	2	3	4

*The score for Bullying by Teachers is the sum of items 38-41 using the weights 1-4 in the cells above. Research supporting this scale is under way.

Gang Activity

Now, we'd like to know about gangs at your school this year. You may know these as street gangs, fighting gangs, crews, or something else. Gangs may use common names, signs, symbols, or colors. For this survey we are interested in all gangs.	Yes	No	I don't know
42. Are there gangs at your school this year?	1	0	0
43. Have gangs been involved in fights or other violence at your school this year?	1	0	0
44. Have gangs been involved in the sale of drugs at your school this year?	1	0	0
45. Have you considered joining a gang?	1	0	0

Questions 42-44 are from School Crime Supplement to the 2013 National Crime Victimization Survey.

Aggressive Attitudes scale

Do you agree or disagree with these statements?	Strongly Disagree	Disagree	Agree	Strongly Agree
46. If someone threatens you, it is okay to hit that person.	1	2	3	4
47. It feels good when I hit someone.	1	2	3	4
48. If you fight a lot, everyone will look up to you.	1	2	3	4
49. If you are afraid to fight, you won't have many friends.	1	2	3	4
50. It is your own fault if you let someone bully you.	1	2	3	4
51. Bullying is sometimes fun to do.	1	2	3	4

*The score for this scale is the sum of items 46-51 using the weights 1-4 in the cells above.

Victim Experiences scale

Have any of the following happened to you personally at school this year? This includes while you are going to or from school. This also includes school events like field trips, school dances, and sports events.	No	One time	More than once
52. A student stole my personal property.	1	2	3
53. A student physically attacked, pushed, or hit me.	1	2	3
54. A student threatened to hurt me.	1	2	3
55. A student threatened me with a weapon.	1	2	3
56. A student said mean or insulting things to me.	1	2	3

*The score for this scale is the sum of items 52-56 using the weights 1-3 in the cells above.

Bullying Experiences scale

Use this definition of bullying to answer the questions below: • Bullying is the repeated use of one's strength or popularity to injure, threaten, or embarrass another person on purpose. • Bullying can be physical, verbal, or social. • It is not bullying when two students who are about the same in strength or popularity have a fight or argument.	Never	Once or twice	About once per week	More than once per week
57. I have been bullied at school **this year** (since school started last fall).	1	2	3	4
58. I have bullied others at school this year.	1	2	3	4
Physical bullying involves repeatedly hitting, kicking, or shoving someone weaker on purpose.				
59. I have been physically bullied or threatened with physical bullying at school this year.	1	2	3	4
Verbal bullying involves repeatedly teasing, putting down, or insulting someone on purpose.				
60. I have been verbally bullied at school this year.	1	2	3	4
Social bullying involves getting others repeatedly to ignore or leave someone out on purpose.				
61. I have been socially bullied at school this year.	1	2	3	4
Cyber bullying involves using technology (cell phone, email, Internet, etc.) to tease or put down someone.				
62. I have been cyberbullied at school this year.	1	2	3	4
A teacher or another adult at school bullies a teacher by repeatedly punishing or criticizing a student unfairly. This goes beyond what is normal discipline in the school.				
63. I have been bullied by teachers or other adults at school this year.	1	2	3	4

The score for Bullying Victimization is the sum of items 57, 59, 60, 61, and 62. Research on item 63 is under way.

(If answered positively to one of questions above:) You have just answered some questions about being teased or bullied in some way.	
64. Did you tell a teacher or another adult at school what happened?	
	Yes
	No
65. (If answer above is yes:) One extra question: Did it help to tell the teacher or another adult at school what happened?	
	It seemed to help the situation get better.
	It seemed to make the situation worse.
	It made no difference.

Dating Aggression index

During the past 12 months how many times has someone you dated or went out with …	Never	Once	Twice	Three times	Four or more times
66. …physically hurt you on purpose? (for example, hit, pushed, or shook you)	1	2	3	4	5
67. …threaten to hurt you?	1	2	3	4	5
68. …call you names or put you down?	1	2	3	4	5
69. …try to kiss you or touch you against your will?	1	2	3	4	5
70. …try to make you drink alcohol or use drugs?	1	2	3	4	5
71. …continue to bother you or harass you after you stopped going out?	1	2	3	4	5
72. …I have dated or gone out with someone in the past 12 months.	1	2	3	4	5

*Research on the new Dating Aggression index is under way.

Sexual Harassment index

During the past 12 months, how often did another student…	Never	Once	Twice	Three times	Four or more times
73. ….make unwelcome sexual comments, jokes, or gestures *that made you feel uncomfortable.*	1	2	3	4	5
74. …spread sexual rumors about you.	1	2	3	4	5
75. …touch, brush up against you, grab, or pull your clothing, or corner you in a sexual and unwelcome way.	1	2	3	4	5
76. ….bother you by repeatedly asking you to go out or do something with him/her that you did not want to do.	1	2	3	4	5

*Research on the new Sexual Harassment index is under way. These questions not used in grades 7-8.

Demographic and School Attendance questions

These next questions are used to count how many males and females took the survey, what grades they were in, and their different backgrounds. These questions are necessary so that we can show that students from many different backgrounds took this survey.

77. Are you male or female?	
	Male
	Female
78. What grade level are you in?	
	6th (Use of this survey with 6th grade is under investigation.)
	7th
	8th
	9th
	10th
	11th
	12th
79. What grades did you make on your last report card?	
	Mostly A's
	Mostly A's and B's
	Mostly B's
	Mostly B's and C's
	Mostly C's
	Mostly C's and D's
	Mostly D's and F's
80.	Do you receive a free or reduced-price meal at school?
	Yes
	No

81. How many days have you been suspended out of school this year?	
0	I have not been suspended from school this year.
1	I have been suspended for one day.
2	I have been suspended for two days.
3	I have been suspended for three days.
4	I have been suspended four days.
5	I have been suspended five or more days.

Ethnicity and Race Demographic questions

82. Does your family speak a language other than English at home?	
	Yes
	No
83. Is your ethnic background Hispanic or Latino?	
	Yes
	No
84. What is the best description of your race? (All students can answer this question.)	
	American Indian or Alaska Native
	Asian
	Black or African American

	Native Hawaiian or Pacific Islander
	White
	2 or more races

Educational Aspirations

85. How far do you expect to go in school?	
0	I do not expect to graduate from high school.
1	I might or might not graduate from high school.
2	I expect to graduate from high school.
3	I expect to graduate from a two-year college or technical school.
4	I expect to graduate from a four-year college.
5	I expect to complete post-graduate studies (such as a master's degree or doctoral degree) after graduating from a four-year college.

Parent Educational Attainment

86. How far did your mother, father, or other guardian go in school? (Pick the one who went furthest.)	
0	Did not graduate from high school.
1	Graduated from high school.
2	Graduated from a two-year college or technical school.
3	Graduated from a four-year college.
4	Completed post-graduate studies (such as a master's degree or doctoral degree) after graduating from a four-year college.

Number of Parents in Home

87. How many of your parents live with you? Include biological parents and adoptive parents.	
2	Two parents
1	One parent
0	No parents

88. How many of the questions on this survey did you answer truthfully?	
A	All of them
B	All but 1 or 2 of them
C	Most of them
D	Some of them
E	Only a few or none of them

*Students are omitted from the sample if they answer D or E to item 88.

Supplementary Scales

Youth Risk Behavior Surveillance Survey questions (Centers for Disease Control and Prevention, 2015)

These items were used for grades 9-12.

76. During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club on school property?	
	0 days
	1 day
	2 or 3 days
	4 or 5 days
	6 or more days
77. During the past 12 months, how many times were you in a physical fight on school property?	
	0 times
	1 time
	2 or 3 times
	4 or 5 times
	6 or 7 times
	8 or 9 times
	10 or 11 times
	12 or more times
78. During the past 12 months, did you ever seriously consider attempting suicide?	
	Yes
	No
79. During the past 12 months, how many times did you actually attempt suicide?	
	0 times
	1 time
	2 or 3 times
	4 or 5 times
	6 or more times
80. During the past 30 days, on how many days did you have at least one drink of alcohol?	
	0 days
	1 or 2 days
	3 to 5 days
	6 to 9 days
	10 to 19 days
	20 to 29 days
	All 30 days
81. During the past 30 days, how many times did you use marijuana?	
	0 times
	1 to 2 times
	3 or 9 times
	10 to 19 times
	20 to 39 times
	40 or more times

Positive Values scale

How important are these values to you?	Not Important	Slightly Important	Somewhat Important	Definitely Important	Highly Important	Extremely Important
Telling the truth, even when it is difficult.	1	2	3	4	5	6
Treating others with respect and being considerate of their feelings.	1	2	3	4	5	6
Doing what is right, even if my friends disagree.	1	2	3	4	5	6
Admitting my mistakes when I do something wrong.	1	2	3	4	5	6
Respecting the views of people of a different race or culture.	1	2	3	4	5	6
Helping others who are less fortunate than me.	1	2	3	4	5	6
Being kind to others.	1	2	3	4	5	6
Doing my part to make the world a better place.	1	2	3	4	5	6
Obeying the law.	1	2	3	4	5	6

*The score for this scale is the sum of all items using the cell weights. For additional information, see Huang and Cornell (2016b).

APPENDIX D

Teacher/Staff Survey

This is a review copy, not for circulation or use. The actual survey is online with formatting for easier reading. Names of scales are not used when the survey is administered. This version has been shortened from the previous version.

Instructions for teachers:

This survey is being given statewide to teachers and other school staff in grades 6-12. The purpose of the survey is to help schools maintain a positive school climate that is conducive to learning.

Teacher and staff answers will be summarized in a report to the school that will not include anyone's name. Your individual answers to the survey are anonymous, which means that no one will know how you answered.

The survey should take about 10 minutes to complete.

What is your code number for taking this survey? Your principal should have this number for you. Many teachers and staff members will have the same number, so you will not be identified by this number. The researchers for this survey are obligated to protect your identity and will not share individual surveys with anyone. Only group data will be reported.

1. Are you taking this survey as part of the school safety audit or simply looking it over? (This question for online administration only)	
	Yes, taking this survey for my school.
	No, just reviewing the survey.

2. What is your staff position in this school? In order to protect your anonymity, reports concerning an individual school will combine all staff members into a single group. Your individual answers will not be released to anyone. For statewide reports, however, we want to compare different school roles.	
	Administrator (e.g., principal or assistant principal)
	Counselor
	Nurse
	Psychologist
	School resource officer or security officer
	Social worker
	Teacher
	None of above

3. What is the name of your school?

Student Engagement in School scale

How do students feel about going to this school? Although there will be differences among students, how do most students generally feel?	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
4. Students generally like this school.	1	2	3	4	5	6
5. Students are proud to be at this school.	1	2	3	4	5	6
6. Students hate going to school. (reverse coded)	1	2	3	4	5	6
7. Students finish their homework at this school.	1	2	3	4	5	6
8. Getting good grades is very important to most students here.	1	2	3	4	5	6
9. Most students want to learn as much as they can at this school.	1	2	3	4	5	6

*The score for this scale is the sum of items 4-9 using the weights 1-6 in the cells above.

School Disciplinary Structure scale

Thinking about your school, would you agree or disagree with the statements below? Pick the answer that is closest to your view.	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
10. The punishment for breaking school rules is the same for all students.	1	2	3	4	5	6
11. Students at this school only get punished when they deserve it.	1	2	3	4	5	6
12. Students here know the school rules for student conduct.	1	2	3	4	5	6
13. If a student does something wrong, he or she will definitely be punished.	1	2	3	4	5	6
14. Students can get away with breaking the rules at this school pretty easily. (reverse coded)	6	5	4	3	2	1
15. Students get suspended without good reason. (reverse coded)	6	5	4	3	2	1
16. Students get suspended for minor things. (reverse coded)	6	5	4	3	2	1
17. When students are accused of doing something wrong, they get a chance to explain.	1	2	3	4	5	6
18. The adults at this school are too strict. (reverse coded)	6	5	4	3	2	1

*The score for this scale is the sum of items 10-17 using the weights 1-6 in the cells above.

Teacher Respect for Students subscale

Most teachers and other adults at this school …	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
19. …care about all students.	1	2	3	4	5	6
20. …want all students to do well.	1	2	3	4	5	6
21. …listen to what students have to say.	1	2	3	4	5	6
22. …treat students with respect.	1	2	3	4	5	6

*The score for this scale is the sum of items 19-22 using the weights 1-6 in the cells above.

Student Willingness to Seek Help from Teachers scale

Do you agree or disagree with the following statements about your school?	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
23. Students know who to go to for help if they have been treated badly by another student.	1	2	3	4	5	6
24. Students feel comfortable asking for help from teachers if there is a problem with a student.	1	2	3	4	5	6
25. Students report it when one student hits another.	1	2	3	4	5	6
26. Students are encouraged to report bullying and aggression.	1	2	3	4	5	6
27. Teachers take action to solve the problem when students report bullying.	1	2	3	4	5	6
28. Teachers know when students are being picked on or being bullied.	1	2	3	4	5	6

*The score for this subscale is the sum of items 23-28 using the weights 1-6 in the cells above. The total for Student Support is the sum of items for both subscales, 19-28.

Prevalence of Teasing and Bullying

These questions are about teasing and bullying you see at your school. Do not include friendly teasing that does not hurt anyone's feelings.	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree
29. Students in this school are teased about their clothing or physical appearance.	1	2	3	4
30. Students in this school are teased or put down because of their race or ethnicity.	1	2	3	4
31. There is a lot of teasing about sexual topics at this school.	1	2	3	4
32. Bullying is a problem at this school.	1	2	3	4
33. Students in this school are teased or put down about their sexual orientation.	1	2	3	4
A teacher or other adult at school bullies a student by repeatedly punishing or criticizing a student unfairly. This goes beyond what is normal discipline in the school. Use this definition in answering the next set of questions.				
34. There are teachers or other adults at this school who bully students.	1	2	3	4
35. There are teachers or other adults at this school who make fun of students.	1	2	3	4
36. Some teachers or other adults at this school say things that make students feel badly.	1	2	3	4
37. Some teachers or other adults at this school pick on certain students.	1	2	3	4

*The score for Prevalence of Teasing and Bullying (PTB) is the sum of items 29-33 using the weights 1-4 in each cell. The score for the Bullying by Teachers scale is the sum of items 34-37 also using the weights 1-4 in each cell.

Teacher/Staff Concerns about Safety and Discipline

How much do you agree or disagree with these statements?	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
38. I am treated with respect by students at this school.	1	2	3	4	5	6
39. I feel physically safe at this school.	1	2	3	4	5	6
40. I feel that there is adequate safety and security in this school.	1	2	3	4	5	6
41. The disciplinary practices at this school are effective.	1	2	3	4	5	6
42. Disciplinary policies are clear to school staff members.	1	2	3	4	5	6

*Research on these items is under way.

Student Aggression toward Teachers/Staff

Have any of the following happened to you personally at school this year? This includes school events like field trips, school dances, and sports events.	No	One time	More than once	Many times
43. A student stole my personal property.	0	1	2	3
44. A student said mean or insulting things to me.	0	1	2	3
45. A student threatened to hurt me.	0	1	2	3
46. A student threatened me with a weapon.	0	1	2	3
47. A student physically attacked, pushed, or hit me.	0	1	2	3

*The total for this scale is the sum for items 48-52 using the cell weights.

Parent or Staff Conflict

Have any of the following happened to you personally at school this year? This includes school events like field trips, school dances, and sports events.	No	One time	More than once	Many times
48. A parent said rude or insulting things to me.	0	1	2	3
49. A parent threatened to complain about me to the administration.	0	1	2	3
50. A parent threatened to harm me.	0	1	2	3
51. A colleague said rude or insulting things to me.	0	1	2	3
52. A colleague threatened to harm me.	0	1	2	3

*The total for this scale is the sum for items 48-52 using the cell weights.

Teacher Reactions to Aggression scale

(If any of the above occurred:) You have just answered some questions about being insulted, threatened, or harmed in some way at school. Think about the overall impact of these experiences. How did they affect you?	Not true	A little true	Somewhat true	Definitely true
53. They bothered me a lot.	1	2	3	4
54. I felt frustrated.	1	2	3	4
55. I felt sad.	1	2	3	4
56. I felt angry.	1	2	3	4
57. I felt burned out about my job.	1	2	3	4
58. It made me think about whether to continue my work in the schools.	1	2	3	4

*The total for this scale is the sum of items 53-58 using the cell weights.

Teacher /Staff Collegiality

How much do you agree or disagree with these statements?	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
59. Teachers and other school staff work well with one another at this school.	1	2	3	4	5	6
60. There is a strong sense of mutual support among the teachers and other staff at this school.	1	2	3	4	5	6
61. Teachers and other school staff members trust one another at this school.	1	2	3	4	5	6
62. This school is a collegial environment for teachers and other school staff members.	1	2	3	4	5	6

*Research on this scale is under way.

Demographic items

These final questions are used for demographic purposes to identify any trends associated with gender, race, and years of experience. Reports concerning an individual school will not include gender, race, or experience breakdowns in order to protect anonymity.

63. Are you male or female?	
	Male
	Female
64. How many years have you been working in the school as a teacher or in another professional capacity?	
	1-2 years
	3-5 years
	6-10 years
	More than 10 years

The new government standard is to ask a separate question about Hispanic or Latino ethnic background because ethnic background is not the same as race. 65. Is your ethnic background Hispanic or Latino?	
	Yes
	No
66. What is the best description of your race?	
	American Indian or Alaska Native
	Asian
	Black or African American
	Native Hawaiian or Pacific Islander
	White
	2 or more races

Thank you for taking this survey.

APPENDIX E

Principal Survey of Participation

The principal survey on the following pages was completed after the student and teacher surveys in order to obtain information about participation rates.

Participation Survey 2016 (Some of the questions on this survey are being simplified for future use).

1. For confirmation purposes, please write your school division and school name in the spaces below.
   - School division
   - School name

2. Please write your name.

3. Please enter your email address.

4. Enter the date when the first student took the survey. Use the format mm/dd/yyyy.

5. Enter the date when the last student took the survey. Use the format mm/dd/yyyy

6. Did you use the Whole Grade Option or the Random Sample Option to survey students?
   - ❍ Whole Grade Option (invited all students in each grade)
   - ❍ Random Sample Option (selected 25 students per grade)

7. For schools using the Whole Grade Option: The following questions are used to determine the student participation rate for your school. Keep in mind that Rows 2 + 3 must equal Row 1.

	9th Grade	10th Grade	11th Grade	12th Grade
Row 1. How many students in this grade were in your school when the survey began?	•	•	•	•
Row 2. How many students in this grade completed the survey? (Should be at least 80% of Row 1)	•	•	•	•
Row 3. How many students in this grade were asked to complete the survey but did not complete it? (Students who declined or were absent or for some other reason did not complete the survey.) Note that Rows 2 + 3 must equal Row 1.	•	•	•	•

8. All of the remaining survey questions are on this page. For schools using the Random Sample Option: The following questions are used to determine the student participation rate for your school. Keep in mind that Rows 3 + 4 + 5 must equal Row 2.

	9th Grade	10th Grade	11th Grade	12th Grade
Row 1. How many students in this grade were in your school when the survey began?	•	•	•	•
Row 2. How many students in this grade were asked to take the survey? (Could be as many as 50.) NOTE: Do not include students who were not eligible to begin with (e.g., because of a disability, no longer enrolled, or could not complete the survey in English)	•	•	•	•
Row 3. How many students in this grade were asked to take the survey but were not needed to reach your school quota (typically 25) and so did not take the survey?	•	•	•	•
Row 4. How many students in this grade completed the survey? (Should be approximately 25)?	•	•	•	•
Row 5. How many students in this grade were asked to complete the survey but did not complete it? (Students who declined or were absent or for some other reason did not complete the survey.)	•	•	•	•

9. The following questions are used to determine the reasons why students did not participate in the survey. Use the student record form from the instructions materials you downloaded from the survey website to answer these questions. (These questions are being simplified for future use.)

	9th Grade	10th Grade	11th Grade	12th Grade
Number of students in this grade who were asked to complete the survey but did not complete it. Just to make these instructions clear, this is the same number used in the final row of the question above. The numbers in the rows below must sum to equal this number.	•	•	•	•
Parent declined to permit the student to participate in the survey.	•	•	•	•
Student declined to participate in the survey.	•	•	•	•
Student absent from school when the survey was administered.	•	•	•	•
Student suspended from school when the survey was administered.	•	•	•	•
Schedule conflict prevented student from completing the survey.	•	•	•	•
Student moved or transferred to another school.	•	•	•	•
Disability or handicapping condition prevented student from completing the survey.	•	•	•	•
Language barrier prevented student from completing the survey.	•	•	•	•
Some other reason prevented student from completing the survey.	•	•	•	•

10. If you had students who did not complete the survey for "some other reason" above, please describe here 1-2 of the most common other reasons. Do not include any of the reasons already listed in the question above.

11. These questions are used to determine the participation rate for teachers and certain designated staff members in your school. In addition to all teachers, the designated staff members are all who hold one of the following positions (including part-time positions): school administrator (principal or assistant principal), school counselor, school nurse, school psychologist, school resource officer, school security officer, and school social worker. How many of the following positions were invited to take the survey?

	Number invited to take the survey:	Were there any teachers or staff members who were not invited to take the survey? Put numbers below:
Administrator (such as principal or assistant principal)	•	•
School counselor	•	•
School nurse	•	•
School psychologist	•	•
School resource officer	•	•
School security officer	•	•
School social worker	•	•
School teacher	•	•

12. What other staff positions were invited to take the survey in your school?

13. If some of your teachers or designated staff members were not asked to participate in the survey, please explain the circumstances.

14. Please provide any positive or negative feedback you have about the survey process. Suggestions for improvement are welcome.

Thank you for your efforts to assure the quality of the survey process. Your school climate report will be made available to you online. Look for an email notification before the end of the school year.

APPENDIX F

Student Statewide and Regional Breakdown for 2016

Student Engagement and Educational Expectations

	Percent Agree or Strongly Agree								
	Region								State
Student attachment to school	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
I like this school.	80%	78%	78%	86%	83%	83%	84%	63%	83%
I am proud to be a student at this school.	78%	75%	76%	83%	80%	81%	83%	62%	81%
I feel like I belong at this school.	72%	69%	71%	79%	74%	76%	78%	58%	76%
Academic commitment									
Getting good grades is very important to me.	96%	96%	95%	95%	94%	95%	95%	96%	95%
I want to learn as much as I can at school.	92%	93%	91%	92%	91%	91%	93%	92%	93%
I usually finish my homework.	81%	78%	80%	80%	80%	80%	86%	80%	80%
Academic expectations (Teacher expectations)									
My teachers expect me to work hard.	95%	96%	96%	97%	96%	96%	96%	94%	96%
My teachers really want me to learn a lot.	90%	91%	90%	91%	90%	90%	91%	87%	91%
My teachers expect a lot from students.	90%	90%	90%	92%	89%	90%	90%	87%	91%
My teachers do not really care how much I learn.	27%	25%	25%	25%	23%	25%	22%	31%	24%
My teachers expect me to attend college.	86%	85%	84%	89%	82%	87%	86%	85%	87%

Educational expectations How far do you expect to go in school?	**Region**								**State**
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
I do not expect to graduate from high school.	<1%	<1%	<1%	<1%	<1%	1%	1%	1%	<1%
I might or might not graduate from high school.	1%	2%	2%	1%	1%	1%	2%	2%	1%
I expect to graduate from high school.	10%	13%	13%	8%	13%	11%	12%	15%	11%
I expect to graduate from a two-year college or technical school.	9%	9%	12%	6%	13%	11%	14%	13%	9%
I expect to graduate from a four-year college.	39%	38%	39%	39%	39%	39%	34%	35%	38%
I expect to complete post-graduate studies after graduating from a four-year college.	40%	38%	33%	44%	33%	37%	37%	35%	40%

Student Perceptions of School Discipline

Support items	Percent Agree or Strongly Agree								
	Region								State
	1	2	3	4	5	6	7	8	
Most teachers and other adults at this school...Care about all students.	71%	70%	74%	77%	75%	74%	77%	61%	75%
Most teachers and other adults at this school...Want all students to do well.	83%	83%	85%	85%	85%	84%	87%	80%	86%
Most teachers and other adults at this school...Listen to what students have to say.	58%	57%	60%	66%	61%	63%	67%	49%	62%
Most teachers and other adults at this school...Treat students with respect.	69%	69%	71%	77%	72%	74%	74%	60%	74%
I am comfortable asking my teachers for help with my schoolwork.	81%	83%	83%	83%	83%	83%	84%	81%	84%
There are adults at this school I could talk with if I had a personal problem.	70%	71%	72%	71%	72%	74%	79%	70%	72%
There is at least one teacher or other adult at this school who really wants me to do well.	94%	95%	95%	94%	95%	95%	96%	95%	95%
If I tell a teacher that someone is bullying me, the teacher will do something to help.	78%	77%	78%	84%	80%	79%	79%	70%	81%
If another student brought a gun to school, I would tell one of the teachers or staff at school.	85%	84%	87%	91%	89%	91%	92%	80%	88%
If another student talked about killing someone, I would tell one of the teachers or staff at school.	78%	77%	79%	83%	82%	83%	85%	73%	81%
Disciplinary structure items									
The school rules are fair.	57%	57%	59%	73%	63%	62%	63%	42%	65%
The punishment for breaking school rules is the same for all students.	55%	55%	54%	67%	53%	54%	51%	43%	60%
Students are treated fairly regardless of their race or ethnicity.	73%	73%	73%	77%	75%	80%	81%	60%	76%
When students are accused of doing something wrong, they get a chance to explain.	56%	56%	61%	67%	64%	64%	71%	52%	63%
The adults at this school are too strict.	44%	43%	39%	38%	36%	36%	33%	49%	39%
Students are suspended without a good reason.	36%	36%	56%	28%	32%	31%	29%	43%	32%
Students at this school are only punished when they deserve it.	56%	56%	56%	66%	58%	59%	62%	48%	61%

Student Responses to Aggression and Attitudes towards Aggressive Behavior

You have just answered some questions about being teased or bullied in some way. Did you tell a teacher or another adult at school what happened?	Percent True or "Yes"								
	Region								State
	1	2	3	4	5	6	7	8	
Did you tell a teacher or another adult at school what happened?	27%	28%	28%	27%	28%	28%	33%	33%	28%
Did it help to tell the teacher or another adult at school what happened?									
It seemed to help the situation get better.	60%	59%	57%	64%	57%	59%	63%	51%	62%
It seemed to make the situation worse.	7%	6%	6%	6%	7%	6%	6%	10%	5%
It made no difference.	34%	35%	37%	31%	36%	35%	31%	38%	33%
Attitudes about aggressive behavior	**Percent Agree or Strongly Agree**								
If someone threatens you, it is okay to hit that person.	42%	45%	42%	37%	43%	43%	44%	54%	38%
It feels good when I hit someone.	24%	24%	23%	18%	22%	22%	21%	32%	19%
If you fight a lot, everyone will look up to you.	11%	12%	11%	9%	10%	9%	9%	17%	10%
If you are afraid to fight, you won't have many friends.	14%	15%	14%	11%	12%	13%	12%	19%	12%
Students who are bullied or teased mostly deserve it.	7%	6%	7%	6%	6%	6%	6%	9%	5%
Bullying is sometimes fun to do.	6%	6%	6%	6%	6%	7%	5%	8%	5%

Student Reports of Bullying, Aggression, and Perceived Safety

Perceived prevalence of teasing and bullying	Percent Agree or Strongly Agree								
	Region								State
	1	2	3	4	5	6	7	8	
Bullying is a problem at this school.	39%	40%	39%	29%	39%	66%	45%	56%	36%
Students in this school are teased about their clothing or physical appearance.	67%	70%	68%	56%	65%	35%	65%	80%	64%
Students in this school are teased or put down because of their race or ethnicity.	39%	36%	36%	35%	38%	58%	34%	47%	36%
There is a lot of teasing about sexual topics at this school.	54%	54%	54%	48%	55%	60%	60%	61%	52%
Students in this school are teased or put down about their sexual orientation.	42%	41%	39%	32%	44%	43%	50%	52%	38%
Personal experiences of bullying	**Percent reporting once or more per week**								
I have been bullied at school this year.	7%	6%	8%	5%	7%	7%	8%	8%	6%
I have bullied others at school this year.	3%	2%	3%	2%	2%	3%	2%	4%	2%
I have been physically bullied or threatened with physical bullying at school this year.	2%	2%	2%	2%	2%	3%	2%	4%	2%
I have been verbally bullied at school this year.	9%	9%	10%	8%	10%	10%	11%	12%	8%
I have been socially bullied at school this year.	7%	6%	7%	6%	7%	7%	8%	9%	6%
I have been cyberbullied at school this year.	4%	4%	4%	4%	4%	4%	5%	5%	3%
I have been bullied by teachers or other adults at school this year.	5%	5%	5%	5%	4%	5%	5%	6%	4%
Feeling safe at school	**Percent Agree or Strongly Agree**								
I feel safe in my school.	80%	74%	79%	86%	83%	81%	82%	64%	82%

Student experience of teacher bullying	Percent Agree or Strongly Agree								
	Region								State
	1	2	3	4	5	6	7	8	
There are teachers or other adults at this school who bully students.	25%	25%	24%	24%	24%	25%	23%	31%	23%
There are teachers or other adults at this school who make fun of students.	33%	34%	32%	32%	30%	32%	29%	38%	31%
Some teachers or other adults at this school say things that make students feel badly.	44%	45%	43%	43%	44%	43%	40%	49%	43%
Some teachers or other adults at this school pick on certain students.	45%	45%	44%	44%	43%	42%	42%	47%	44%
Peer aggression (at school this year)	**Percent reporting at least one time**								
A student stole my personal property.	32%	34%	34%	33%	32%	34%	31%	44%	33%
A student physically attacked, pushed, or hit me.	19%	19%	18%	17%	18%	19%	19%	24%	18%
A student threatened to hurt me.	24%	24%	26%	19%	25%	26%	28%	30%	23%
A student threatened me with a weapon.	6%	7%	8%	5%	6%	7%	7%	9%	6%
A student said mean or insulting things to me.	50%	49%	52%	50%	54%	53%	54%	52%	51%
Gangs at school	**Percent reporting "Yes"**								
Are there gangs at your school this year?	19%	20%	13%	13%	14%	12%	8%	18%	15%
Have gangs been involved in fights or other violence at your school this year?	15%	14%	8%	8%	12%	8%	5%	12%	11%
Have gangs been involved in the sale of drugs at your school this year?	16%	14%	11%	13%	12%	11%	8%	16%	12%
Have you considered joining a gang?	4%	4%	5%	3%	4%	4%	5%	6%	3%

Sexual Aggression and Harassment

During the past 12 months how many times did someone you dated or went out with …	Percent Reporting One Time or More than Once								
	Region								State
	1	2	3	4	5	6	7	8	
…physically hurt you on purpose?	7%	7%	6%	5%	6%	6%	7%	9%	6%
…threaten to hurt you?	7%	7%	7%	5%	7%	7%	8%	10%	6%
…called you names or put you down?	16%	16%	17%	12%	17%	17%	20%	20%	15%
…tried to kiss you or touch you against your will?	9%	8%	9%	7%	8%	9%	10%	11%	8%
…tried to make you drink alcohol or use drugs?	6%	5%	6%	5%	5%	7%	6%	7%	5%
…continued to bother you or harass you after you stopped going out?	12%	12%	11%	8%	11%	11%	14%	14%	11%
I have dated or gone out with someone in the past 12 months.	51%	54%	56%	42%	56%	55%	62%	60%	51%
During the past 12 months, how often did another student …									
… make unwelcome sexual comments, jokes, or gestures *that made you feel uncomfortable*?	27%	27%	27%	26%	28%	28%	28%	27%	27%
… spread sexual rumors about you?	17%	17%	21%	14%	19%	20%	23%	23%	17%
… touch, brush up against you, grab or pull your clothing, or corner you in a sexual and unwelcome way?	14%	15%	14%	12%	12%	13%	13%	16%	13%
… bother you by repeatedly asking you to go out or do something with him/her that you did not want to do?	17%	18%	17%	14%	16%	16%	18%	21%	16%

Disciplinary Experiences and Youth Risk Behaviors

Have you been suspended from school this year?	**Percentage**								
	Region								State
	1	2	3	4	5	6	7	8	
I have not been suspended from school this year.	94%	93%	94%	97%	95%	94%	95%	88%	94%
I have been suspended for one day.	1%	2%	1%	<1%	1%	2%	1%	2%	1%
I have been suspended for two days.	<1%	1%	<1%	<1%	<1%	<1%	<1%	2%	1%
I have been suspended for three days.	<1%	2%	1%	<1%	1%	1%	1%	3%	1%
I have been suspended for four days.	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
I have been suspended for five or more days.	3%	3%	2%	<1%	2%	2%	1%	4%	2%
Risk Behavior	**Percent Once or More**								
During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club on school property?	3%	3%	4%	3%	5%	6%	7%	6%	3%
During the past 12 months, how many times were you in a physical fight on school property?	7%	7%	7%	5%	6%	7%	8%	11%	6%
	Percent Yes								
During the past 12 months, did you ever seriously consider attempting suicide?	15%	16%	17%	15%	15%	16%	16%	18%	15%
	Percent Once or More								
During the past 12 months, how many times did you actually attempt suicide?	7%	8%	8%	6%	7%	7%	7%	10%	6%
During the past 30 days, on how many days did you have at least one drink of alcohol?	20%	21%	24%	19%	25%	26%	21%	26%	21%
During the past 30 days, how many times did you use marijuana?	13%	15%	14%	11%	13%	15%	10%	17%	13%

Demographic Information for Student Participants

Demographics	Region								
	1	2	3	4	5	6	7	8	State
Number of schools	42	57	25	79	35	30	39	13	320
Number of student participants	12,643	10,199	4,087	15,575	7,287	6,528	4,405	1,955	62,679
9th grade	3,337	2,751	1,182	4,383	1,971	1,680	1,278	501	17,083
10th grade	3,372	2,516	1,110	4,081	1,882	1,863	1,074	518	16,416
11th grade	3,171	2,672	878	3,891	1,844	1,485	1,043	484	15,468
12th grade	2,763	2,260	917	3,220	1,590	1,500	1,010	452	13,712
Percentage male	49%	48%	48%	50%	49%	49%	47%	46%	49%
Percentage Hispanic or Latino	10%	11%	11%	20%	8%	7%	6%	8%	14%
What is the best description of your race?									
American Indian or Alaska Native	1%	1%	2%	2%	2%	1%	2%	1%	1%
Asian	4%	4%	2%	15%	2%	3%	<1%	1%	7%
Black or African American	28%	33%	18%	10%	12%	11%	2%	35%	20%
Native Hawaiian or Pacific Islander	<1%	1%	<1%	1%	<1%	<1%	<1%	<1%	1%
White	51%	43%	60%	52%	71%	73%	87%	46%	53%
2 or more races	15%	19%	17%	20%	13%	11%	7%	16%	18%
Percentage speak another language at home									
Percentage	19%	19%	16%	42%	16%	14%	10%	17%	27%
How far did your mother, father, or other guardian go in school?									
Did not graduate high school.	6%	6%	9%	9%	8%	6%	8%	12%	8%
Graduated from high school.	25%	28%	34%	20%	30%	27%	36%	39%	26%
Graduated from a two-year college or technical school.	14%	18%	17%	9%	15%	16%	19%	19%	14%
Graduated from a 4-year college.	30%	26%	24%	28%	25%	26%	22%	18%	26%
Completed post-graduate studies	25%	21%	17%	35%	22%	25%	15%	12%	26%

Number of Biological or Adoptive Parents in the Home	Percentage								
	Region								State
	1	2	3	4	5	6	7	8	
Two parents.	67%	63%	68%	76%	69%	69%	68%	57%	69%
One parent.	31%	35%	30%	22%	28%	28%	27%	38%	29%
No parents.	2%	2%	3%	2%	3%	3%	4%	5%	2%
Free/Reduced Price Meal	**Percent Yes**								
Do you receive a free or reduced-price meal at school?	27%	34%	32%	24%	29%	29%	41%	51%	31%
What grades did you make on your last report card?	**Percentage**								
Mostly A's	19%	17%	18%	24%	23%	24%	27%	18%	21%
Mostly A's and B's	42%	40%	41%	42%	40%	42%	43%	41%	41%
Mostly B's	7%	8%	6%	8%	6%	6%	5%	6%	7%
Mostly B's and C's	21%	23%	21%	16%	19%	18%	15%	23%	19%
Mostly C's	4%	4%	4%	3%	4%	3%	2%	4%	4%
Mostly C's and D's	5%	6%	6%	4%	6%	5%	5%	7%	5%
Mostly D's and F's	2%	2%	3%	2%	2%	2%	2%	2%	2%

APPENDIX G

Teacher/Staff Statewide and Regional Breakdown for 2016

Teacher Perceptions of Student Engagement

How do students feel about going to this school?	Percent Somewhat Agree, Agree, or Strongly Agree								
	Region								State
	1	2	3	4	5	6	7	8	
Students generally like this school.	91%	91%	88%	95%	92%	91%	94%	81%	92%
Students are proud to be at this school.	87%	87%	87%	92%	86%	86%	92%	75%	88%
Students finish their homework at this school.	59%	52%	59%	61%	52%	56%	68%	51%	58%
Students hate going to this school.	23%	21%	25%	17%	23%	26%	25%	32%	21%
Getting good grades is very important to most students here.	78%	74%	77%	84%	74%	74%	82%	68%	79%
Most students want to learn as much as they can at this school.	72%	68%	69%	75%	65%	68%	76%	60%	71%

Teacher Perceptions of School Discipline

School Disciplinary Structure	Percent Somewhat Agree, Agree, or Strongly Agree								
	Region								State
	1	2	3	4	5	6	7	8	
The punishment for breaking school rules is the same for all students.	54%	51%	52%	56%	52%	56%	63%	53%	55%
Students at this school are only punished when they deserve it.	76%	75%	78%	79%	77%	78%	89%	79%	78%
Students know the school rules for student conduct.	87%	88%	87%	88%	86%	88%	94%	91%	88%
If a student does something wrong, he or she will definitely be punished.	50%	48%	50%	48%	46%	53%	72%	54%	50%
Students can get away with breaking the rules at this school pretty easily.	50%	48%	46%	50%	52%	47%	32%	48%	48%
Students are suspended without a good reason.	5%	6%	5%	5%	4%	6%	6%	8%	95%
The adults at this school are too strict.	4%	4%	3%	4%	3%	3%	4%	6%	4%
When students are accused of doing something wrong, they get a chance to explain.	96%	96%	97%	96%	96%	96%	96%	96%	96%
Students are suspended for minor things.	6%	8%	10%	5%	6%	6%	6%	8%	6%

Student Willingness to Seek Help

Student willingness to seek help from teachers	Percent Somewhat Agree, Agree, or Strongly Agree								
	Region								State
	1	2	3	4	5	6	7	8	
Students know whom to go to for help if they have been treated badly by another student.	95%	95%	94%	95%	95%	95%	97%	96%	95%
Students feel comfortable asking for help from teachers if there is a problem with a student.	90%	89%	87%	90%	88%	89%	94%	85%	90%
Students report it when one student hits another.	69%	66%	66%	73%	67%	71%	80%	56%	70%
Students are encouraged to report bullying and aggression.	94%	93%	91%	95%	94%	92%	97%	91%	94%
Teachers/staff take action to solve the problem when students report bullying.	94%	94%	94%	94%	92%	92%	98%	93%	94%
Teachers/staff know when students are being picked on or being bullied.	77%	75%	73%	75%	70%	74%	84%	73%	75%
Most teachers and other adults at this school...									
Care about all students.	97%	96%	96%	98%	97%	98%	98%	97%	98%
Want all students to do well.	98%	98%	98%	98%	98%	98%	>99%	98%	99%
Listen to what students have to say.	96%	95%	93%	95%	95%	96%	98%	95%	96%
Treat students with respect.	96%	96%	95%	96%	96%	96%	98%	95%	96%

Prevalence of Teasing and Bullying

These are questions about teasing and bullying you see at your school. Do not include friendly teasing that does not hurt anyone's feelings.	Percent Somewhat Agree, Agree, or Strongly Agree								
	Region								State
	1	2	3	4	5	6	7	8	
Students in this school are teased about their clothing or physical appearance.	41%	41%	40%	32%	46%	41%	38%	52%	38%
Students in this school are teased or put down because of their race or ethnicity.	23%	20%	25%	23%	30%	27%	18%	26%	23%
There is a lot of teasing about sexual topics at this school.	34%	31%	35%	29%	37%	35%	32%	40%	32%
Bullying is a problem at this school.	30%	27%	28%	25%	36%	31%	24%	43%	28%
Students here get teased or put down about their perceived sexual orientation.	27%	24%	26%	22%	33%	31%	30%	38%	26%

Perceptions of Bullying by Teachers/Staff

A teacher or other adult at school bullies a student by repeatedly punishing or criticizing a student unfairly, going beyond what is normal discipline in the school.	Percent Somewhat Agree, Agree, or Strongly Agree								
	Region								State
	1	2	3	4	5	6	7	8	
There are teachers or other adults at this school who bully students.	13%	13%	16%	15%	14%	14%	11%	14%	14%
There are teachers or other adults at this school who make fun of students.	16%	17%	20%	18%	16%	16%	12%	18%	17%
Some teachers or other adults at this school say things that make students feel badly.	25%	26%	29%	26%	29%	25%	18%	29%	26%
Some teachers or other adults at this school pick on certain students.	18%	20%	24%	19%	21%	19%	15%	22%	20%

Aggression toward Teachers/Staff

Student aggression Have any of the following happened to you personally at school this year? This includes school events like field trips, school dances, and sports events.	**Percent reporting that this has NOT happened.**								
	Region								**State**
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
A student stole or damaged my personal property.	84%	84%	87%	88%	86%	85%	88%	80%	86%
A student said rude or insulting things to me.	48%	49%	49%	58%	47%	47%	63%	44%	52%
A student threatened to harm me.	88%	88%	90%	94%	90%	88%	94%	85%	90%
A student threatened me with a weapon.	98%	99%	99%	99%	99%	99%	99%	99%	99%
A student physically attacked, pushed, or hit me.	95%	95%	98%	97%	96%	97%	98%	94%	99%
Parent or staff conflict Have any of the following happened to you personally at school this year? This includes school events like field trips, school dances, and sports events.									
A parent said rude or insulting things to me.	58%	60%	60%	65%	63%	65%	70%	63%	63%
A parent threatened to complain about me to the administration.	71%	68%	67%	74%	73%	73%	75%	69%	72%
A parent threatened to harm me.	98%	98%	97%	98%	98%	98%	97%	98%	98%
A colleague said rude or insulting things to me.	80%	78%	75%	77%	79%	81%	83%	81%	78%
A colleague threatened to harm me.	99%	99%	99%	99%	99%	99%	99%	99%	99%

Teacher Reactions to Aggression

You have just answered some questions about being insulted, threatened, or harmed in some way at school. Think about the overall impact of these experiences. How did they affect you?		Region								State
		1	2	3	4	5	6	7	8	
They bothered me a lot.	**Not true**	34%	34%	34%	34%	31%	34%	39%	35%	34%
	A little true	25%	26%	26%	27%	28%	26%	30%	23%	26%
	Somewhat true	22%	20%	18%	19%	20%	20%	18%	26%	20%
	Definitely true	19%	20%	22%	21%	20%	20%	12%	15%	20%
I felt frustrated.	**Not true**	22%	23%	21%	24%	18%	22%	27%	25%	23%
	A little true	24%	24%	26%	25%	24%	24%	27%	21%	24%
	Somewhat true	24%	21%	21%	22%	23%	22%	22%	26%	22%
	Definitely true	30%	32%	32%	30%	34%	32%	23%	27%	31%
I felt sad.	**Not true**	44%	45%	44%	44%	39%	42%	49%	47%	44%
	A little true	22%	22%	24%	23%	23%	22%	24%	19%	22%
	Somewhat true	17%	15%	15%	16%	18%	18%	15%	20%	16%
	Definitely true	17%	18%	18%	17%	20%	17%	12%	14%	17%
I felt angry.	**Not true**	34%	36%	32%	36%	31%	36%	34%	36%	35%
	A little true	25%	25%	25%	25%	27%	24%	30%	23%	25%
	Somewhat true	21%	18%	21%	18%	21%	20%	19%	25%	19%
	Definitely true	20%	22%	19%	21%	21%	20%	17%	16%	21%
I felt burned out about my job.	**Not true**	37%	37%	36%	38%	34%	38%	46%	35%	37%
	A little true	21%	21%	19%	21%	22%	20%	23%	21%	21%
	Somewhat true	19%	18%	19%	18%	17%	18%	17%	21%	18%
	Definitely true	24%	25%	29%	23%	27%	23%	15%	23%	24%

It made me think about whether to continue teaching.	**Not true**	47%	46%	44%	49%	43%	49%	57%	44%	47%
	A little true	18%	16%	18%	17%	16%	16%	18%	17%	17%
	Somewhat true	15%	14%	15%	13%	18%	13%	12%	17%	14%
	Definitely true	20%	24%	23%	20%	23%	22%	13%	22%	21%

Teacher/Staff Perceptions of Collegiality

	Percent Somewhat Agree, Agree, or Strongly Agree								
	Region								**State**
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
The teachers at this school work well with one another.	94%	91%	90%	91%	91%	91%	94%	90%	92%
There is a strong sense of mutual support among the teachers and other staff at this school.	88%	83%	81%	85%	83%	84%	90%	84%	85%
Teachers and other school staff members trust one another at this school.	87%	80%	80%	84%	81%	82%	89%	83%	83%
The school is a collegial environment for teachers and other school staff members.	87%	82%	84%	85%	83%	83%	90%	82%	85%

Concerns about Discipline and Safety

Concerns about discipline and safety	Percent Somewhat Agree, Agree, or Strongly Agree								
	Region								State
	1	2	3	4	5	6	7	8	
I am treated with respect by students at this school.	85%	85%	86%	90%	84%	83%	93%	82%	87%
I feel physically safe at this school.	90%	90%	92%	94%	91%	89%	97%	88%	92%
I feel that there is adequate safety and security in this school.	81%	73%	77%	82%	78%	79%	88%	75%	80%
The disciplinary practices at this school are effective.	63%	60%	63%	65%	54%	62%	80%	60%	63%
Disciplinary policies are clear to school staff members.	72%	71%	71%	70%	63%	71%	87%	76%	71%

Teacher/Staff Perceptions of Gang Activity

		Region								
		1	2	3	4	5	6	7	8	State
Are there gangs at your school this year?	**I don't know**	52%	48%	55%	52%	45%	39%	28%	53%	49%
	No	23%	18%	27%	26%	31%	46%	69%	21%	28%
	Yes	26%	34%	28%	22%	24%	15%	3%	26%	23%
Have gangs been involved in fights or other violence at your school this year?	**I don't know**	51%	53%	53%	54%	43%	38%	22%	57%	49%
	No	34%	28%	39%	38%	42%	55%	76%	34%	39%
	Yes	15%	19%	8%	8%	15%	7%	1%	9%	11%
Have gangs been involved in the sale of drugs at your school this year?	**I don't know**	64%	65%	63%	65%	57%	46%	31%	66%	61%
	No	25%	21%	28%	26%	31%	44%	67%	22%	29%
	Yes	11%	14%	10%	9%	12%	10%	2%	12%	10%

Teacher/Staff Awareness of Threat Assessment

		Region								
		1	2	3	4	5	6	7	8	State
Does your school use a formal threat assessment process to respond to student threats of violence?	**I don't know**	41%	53%	43%	49%	50%	42%	34%	50%	47%
	No	2%	3%	3%	2%	3%	3%	4%	5%	3%
	Yes	57%	44%	54%	49%	46%	55%	63%	46%	51%
For your formal threat assessment process, does your school follow the guidelines developed by the University of Virginia, *Guidelines for Responding to Student Threats of Violence*?	**I don't know**	70%	68%	76%	67%	76%	71%	65%	66%	69%
	No	<1%	1%	<1%	1%	1%	<1%	1%	2%	1%
	Yes	29%	31%	24%	31%	23%	28%	33%	32%	30%

Demographic information for Teacher/Staff Participants

Demographics	**Region**								**State**
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Number of schools	42	57	25	79	35	30	39	13	320
Number of teacher participants	1,940	2,179	925	4,221	1,076	778	772	359	12,250
Number of staff participants	382	416	193	857	169	197	104	51	2,369
Percentage female	68%	73%	69%	68%	65%	67%	67%	71%	69%
Percentage Hispanic or Latino	2.7%	4.4%	2.0%	4.9%	2.3%	1.8%	0.6%	1.7%	3.5%
How many years have you been working as a teacher or in another professional capacity in schools?									
1-2 Years (%)	9%	8%	11%	9%	8%	10%	7%	12%	9%
3-5 Years (%)	13%	10%	12%	14%	12%	11%	10%	12%	12%
6-10 Years (%)	18%	17%	18%	20%	17%	17%	18%	21%	18%
More than 10 Years (%)	60%	65%	59%	58%	63%	62%	65%	56%	61%
What is the best description of your race?									
American Indian or Alaska Native	0.4%	0.1%	0.4%	0.4%	0.1%	0%	0.2%	0.2%	0.3%
Asian	1.2%	0.8%	0.3%	2.3%	0.4%	.6%	0.3%	2.2%	1.3%
Black or African American	14.1%	17.5%	7.9%	5.1%	3.4%	5.5%	0.5%	21.1%	9.0%
Native Hawaiian or Pacific Islander	0.2%	0.2%	0.2%	0.5%	0%	0%	0%	0%	0.2%
White	78.5%	74.8%	86.7%	86.5%	93.7%	91.3%	97.7%	72.8%	83.9%
Two or more races	4.7%	5.5%	4.0%	5.5%	2.4%	2.6%	1.3%	3.7%	4.5%

APPENDIX H

Validity Screening for 2016 High School Survey

Our previous research found that the use of validity screening items can identity students who tend to give exaggerated reports of risk behavior and more negative views of school conditions than other students (Cornell, Klein, Konold, & Huang, 2012; Cornell, Lovegrove, & Baly, 2014). The preliminary sample was screened on two criteria: (1) the time it took students to complete the survey and (2) responses to two validity screening questions. As described below, 1,626 students (2.4% of the sample) who completed the survey in less than 6 minutes were excluded because it was judged that they would not have been able to read and carefully answer each question so quickly. An additional 4,646 students (6.7% of the sample) responded to the validity questions that they were not telling the truth on the survey and also were excluded.

The survey included two validity-screening items to identify students who admitted that they were not answering truthfully. The first item, "I am telling the truth on this survey," had four response options: *Strongly Disagree, Disagree, Agree*, and *Strongly Agree*. Students answering *Strongly Disagree* or *Disagree* were omitted from the sample. At the end of the survey, the second item was "How many of the questions on this survey did you answer truthfully?" This item had five response options: *All of them, All but 1 or 2 of them, Most of them, Some of them,* and *Only a few or none of them.* Students answering *Some of them* or *Only a few or none of them* were omitted from the sample. The following table displays a comparison of valid and invalid responders, students who both took the survey too fast and did not pass the screening items, and reveals statistically significant differences on most survey items for the 2016 survey. Additional information and comparisons of valid and invalid responders for each survey year are located in the respective technical reports.

Question	Valid	Invalid		*d*
How do you feel about going to this school?				
I like this school.	2.97	2.70	***	-0.35
I am proud to be a student at this school.	2.97	2.71	***	-0.33
I feel like I belong at this school.	2.86	2.67	***	-0.23
I usually finish my homework.	3.06	2.79	***	-0.33
I want to learn as much as I can at school.	3.30	2.98	***	-0.47
Getting good grades is very important to me.	3.54	3.19	***	-0.55
Thinking about your school, would you agree or disagree with the statements below?				
The school rules are fair.	2.62	2.44	***	-0.23
The punishment for breaking school rules is the same for all students.	2.56	2.45	***	-0.12
Students at this school are only punished when they deserve it.	2.61	2.49	***	-0.14
Students are suspended without a good reason.	2.22	2.44	***	0.27

When students are accused of doing something wrong, they get a chance to explain.	2.60	2.47	***	-0.16
Students are treated fairly regardless of their race or ethnicity.	2.91	2.64	***	-0.31
The adults at this school are too strict.	2.43	2.57	***	0.17
Most teachers and other adults at this school....				
...care about all students.	2.83	2.60	***	-0.31
...want all students to do well.	3.03	2.74	***	-0.42
...listen to what students have to say.	2.64	2.53	***	-0.13
...treat students with respect.	2.80	2.61	***	-0.25
How much do you agree or disagree with these statements?				
There are adults at this school I could talk with if I had a personal problem.	2.88	2.64	***	-0.27
If I tell a teacher that someone is bullying me, the teacher will do something to help.	2.93	2.68	***	-0.34
I am comfortable asking my teachers for help with my schoolwork.	3.04	2.78	***	-0.36
There is at least one teacher or other adult at this school who really wants me to do well.	3.41	2.92	***	-0.72
If another student talked about killing someone, I would tell one of the teachers or staff at school.	3.15	2.73	***	-0.49
If another student brought a gun to school, I would tell one of the teachers or staff at school.	3.37	2.80	***	-0.69
I feel safe in this school.	2.94	2.68	***	-0.34
How much do you agree or disagree with these statements?				
My teachers expect me to work hard.	3.32	2.93	***	-0.64
My teachers really want me to learn a lot.	3.20	2.88	***	-0.49
My teachers expect a lot from students.	3.24	2.88	***	-0.52
My teachers do not really care how much I learn.	2.11	2.45	***	0.43
My teachers expect me to attend college.	3.12	2.84	***	-0.39
Prevalence of teasing and bullying				
Students in this school are teased about their clothing or physical appearance.	2.81	2.46	***	-0.41
Students in this school are teased or put down because of their race or ethnicity.	2.33	2.30	*	-0.03
There is a lot of teasing about sexual topics at this school.	2.64	2.42	***	-0.24

Bullying is a problem at this school.	2.37	2.29	***	-0.09
Students in this school are teased or put down about their sexual orientation.	2.40	2.33	***	-0.08
A teacher or other adult at school bullies a student by repeatedly punishing or criticizing a student unfairly.				
There are teachers or other adults at this school who bully students.	2.04	2.20	***	0.20
There are teachers or other adults at this school who make fun of students.	2.16	2.27	***	0.13
Some teachers or other adults at this school say things that make students feel badly.	2.35	2.31	***	-0.04
Some teachers or other adults at this school pick on certain students.	2.36	2.33	**	-0.03
Now, we'd like to know about gangs at your school this year (since school began last fall).				
Are there gangs at your school this year?	2.42	2.20	***	-0.30
Have gangs been involved in fights or other violence at your school this year?	2.39	2.22	***	-0.24
Have gangs been involved in the sale of drugs at your school this year?	2.42	2.22	***	-0.27
Have you considered joining a gang?	2.06	2.08	*	0.06
Do you agree or disagree with these statements?				
If someone threatens you, it is okay to hit that person.	2.46	2.63	***	0.19
Bullying is sometimes fun to do.	1.44	1.99	***	0.80
It feels good when I hit someone.	2.00	2.36	***	0.43
If you fight a lot, everyone will look up to you.	1.71	2.17	***	0.61
If you are afraid to fight, you won't have many friends.	1.78	2.16	***	0.49
Students who are bullied or teased mostly deserve it	1.51	2.06	***	0.78
Have any of the following happened to you personally at school this year?				
A student stole my personal property.	1.43	1.51	***	0.13
A student physically attacked, pushed, or hit me.	1.25	1.41	***	0.27
A student threatened to hurt me.	1.35	1.45	***	0.15
A student threatened me with a weapon.	1.09	1.32	***	0.55
A student said mean or insulting things to me.	1.84	1.65	***	-0.21
Please answer these questions:				
I have been bullied at school this year (since school started last fall).	1.55	1.52	***	-0.10
I have bullied others at school this year.	1.21	1.48	***	0.45

I have been physically bullied or threatened with physical bullying at school this year.	1.21	1.42	***	0.51
I have been verbally bullied at school this year.	1.61	1.54	***	-0.04
I have been socially bullied at school this year.	1.41	1.47	***	0.18
I have been cyberbullied at school this year.	1.25	1.43	***	0.32
I have been bullied by teachers or other adults at school this year.	1.20	1.46	***	0.31

During the past 12 months how many times did someone you dated or went out with:				
Physically hurt you on purpose?	1.13	1.41	***	0.42
Threatened to hurt you?	1.15	1.43	***	0.41
Called you names or put you down?	1.37	1.53	***	0.16
Tried to kiss you or touch you against your will?	1.19	1.48	***	0.38
Tried to make you drink alcohol or use drugs?	1.13	1.45	***	0.47
Continued to bother you or harass you after you stopped going out?	1.27	1.48	***	0.24
I have dated or gone out with someone in the past 12 months.	1.96	1.85	***	-0.09
During the past 12 months, how often did another student ...				
Make unwelcome sexual comments, jokes, or gestures that made you feel uncomfortable	1.65	1.61	*	-0.04
Spread sexual rumors about you?	1.37	1.53	***	0.16
Touch, brush up against you, grab or pull your clothing in a sexual or unwelcome way?	1.29	1.52	***	0.25
Bother you by repeatedly asking you to go out or do something with him/her that you did not want to do?	1.38	1.54	***	0.16

APPENDIX I

Sample School Report for 2016 High School Survey

The report on the following pages is an example of the individual school survey reports that were distributed to each high school. These reports allow schools to identify their strengths and weaknesses in comparison to other schools in their region or the state as a whole.

Student and Teacher/Staff Perceptions of School Climate

Anonymous High School

Grades 9-12, Spring 2016

The Virginia Secondary School Climate Survey provides schools with a biennial assessment of school climate and safety conditions from the perspective of students and teachers/staff. The purpose of this report is to help schools identify strengths and weaknesses that can guide efforts to improve school safety and student learning.

This report is based on responses from XXX students and XX teachers/staff in your school. State results are based on 62,679 students and 14,619 teachers/staff in 320 schools, with additional comparisons to schools in your region. A breakdown of student answers by grade and gender is found in a supplementary file available with this report. For more information, see http://www.dcjs.virginia.gov/vcss/audit/student/

Contents

Ways to use this report

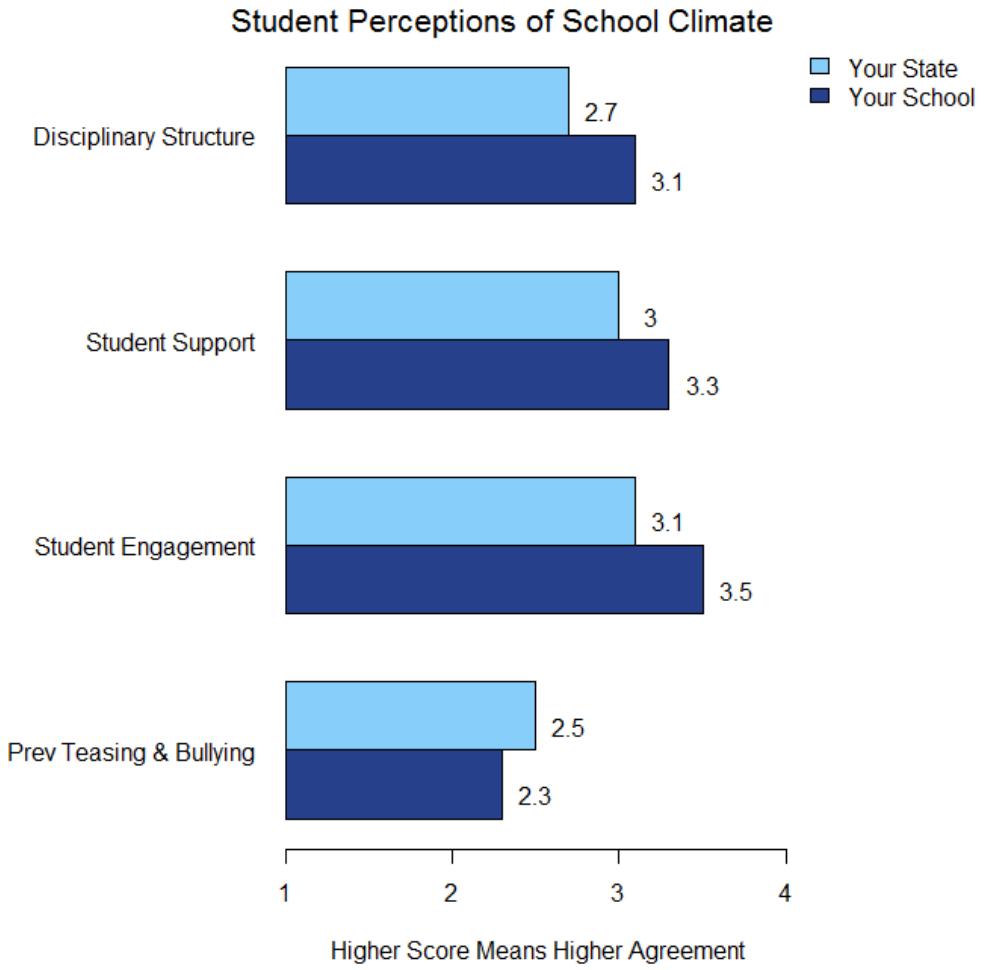
- Compare 2016 survey results with your 2014 report.
- Share this report with faculty, students, and parents.
- Identify school improvement goals.
  - How can you improve student safety at school?
  - How can teachers and other staff members improve their relationships with students?
  - How can the disciplinary system be improved?
  - How can you engage students and raise their educational aspirations?
- Document funding needs for safety and support programs.
- Evaluate character education and bullying prevention efforts.

Key Student Perceptions

Four scales are used to summarize key aspects of school climate:

- Disciplinary Structure – average of 7 items to assess whether school rules and discipline seem fair.
- Student Support – average of 8 items to assess whether students feel respected and are willing to seek help from adults at school.
- Student Engagement – average of 6 items to assess whether students like this school and want to learn.
- Prevalence of Teasing and Bullying (PTB) – average of 5 items to assess how much various forms of bullying and teasing are observed.

Each item was answered on a 4-point scale: 1-Strongly Disagree, 2-Disagree, 3-Agree, 4-Strongly Agree. The chart below presents averages for students in your school compared to the averages for all students in the state who took the survey. For example, an average score of 3.1 for Student Engagement means that students generally agreed with the 6 items for that scale. The items for each scale are found later in the report. Individual school results are not presented if fewer than 10 students completed the survey.



According to the authoritative school climate model, schools should be both demanding and supportive in their relationships with students. Research in Virginia schools has found that a high level of both Disciplinary Structure and Student Support indicates a school climate that facilitates Student Engagement and diminishes the Prevalence of Teasing and Bullying. Authoritative school climate is also associated with fewer student discipline problems, more respectful behavior toward teachers, higher performance on SOL exams, and a higher graduation rate.

Student Perceptions of Disciplinary Structure and Student Support

These questions assess the degree to which students perceive the school climate as both structured and supportive. The items were answered on a 4-point scale: 1-Strongly Disagree, 2-Disagree, 3-Agree, 4-Strongly Agree. Percentages for Agree + Strongly Agree are presented here. Averages are based on the sum of all items in the same scale.

Disciplinary Structure scale Thinking about your school, would you agree or disagree with the statements below? Pick the answer that is closest to how you feel.	**Percent Agree or Strongly Agree**		
	Your School	**Your Region**	**State**
The school rules are fair.	87%	63%	65%
The punishment for breaking school rules is the same for all students.	69%	51%	60%
Students at this school are only punished when they deserve it.	85%	62%	61%
Students are suspended without a good reason. (reverse scored)	26%	29%	32%
When students are accused of doing something wrong, they get a chance to explain.	90%	71%	63%
Students are treated fairly regardless of their race or ethnicity.	94%	81%	76%
The adults at this school are too strict. (reverse scored)	15%	33%	39%
Average for 7 items above	3.1	2.7	2.7
Student Support scale Most teachers and other adults at this school …			
…care about all students.	89%	77%	75%
…want all students to do well.	95%	87%	86%
…listen to what students have to say.	84%	67%	62%
…treat students with respect.	89%	74%	74%
How much do you agree or disagree with these statements?			
There are adults at this school I could talk with if I had a personal problem.	90%	79%	72%
If I tell a teacher that someone is bullying me, the teacher will do something to help.	92%	79%	81%
I am comfortable asking my teachers for help with my schoolwork.	92%	84%	84%
There is at least one teacher or other adult at this school who really wants me to do well.	98%	96%	95%
Average for 8 items above	3.3	3	3
Additional items not included in overall scale, but relevant to safety.			
If another student talked about killing someone, I would tell one of the teachers or staff at school.	96%	85%	81%
If another student brought a gun to school, I would tell one of the teachers or staff at school.	95%	92%	88%
I feel safe in this school.	95%	82%	82%

Student Engagement and Educational Expectations

These questions assess different aspects of student engagement, which is defined as a student's sense of connectedness with his/her school and is intrinsic to student motivation and commitment to completing school. Research in Virginia schools has shown that higher student engagement is related to higher academic achievement and lower levels of bullying and peer aggression. The attachment and academic commitment items were answered on a 4-point scale: 1-Strongly Disagree, 2-Disagree, 3-Agree, 4-Strongly Agree. Percentages for Agree + Strongly Agree are presented here. Involvement in school activities is the mean number of activities per student.

Student Engagement in School Affective engagement subscale	**Percent Agree or Strongly Agree**		
	Your School	**Your Region**	**State**
I like this school	97%	84%	83%
I am proud to be a student at this school.	95%	83%	81%
I feel like I belong at this school.	94%	78%	76%
Academic engagement subscale			
I usually finish my homework.	90%	86%	80%
I want to learn as much as I can at school.	95%	93%	93%
Getting good grades is very important to me.	96%	95%	95%
Average for 6 items above	3.5	3.2	3.1
Educational Expectations How far do you expect to go in school?			
I do not expect to graduate from high school.	0%	1%	<1%
I might or might not graduate from high school.	0%	2%	1%
I expect to graduate from high school.	6%	12%	11%
I expect to graduate from a two-year college or technical school.	15%	14%	9%
I expect to graduate from a four-year college.	35%	34%	38%
I expect to complete post-graduate studies (such as a master’s degree or doctoral degree) after graduating from a four-year college.	43%	37%	40%

Academic Expectations

Students do best in a climate of high academic expectations.

Academic Expectations Scale How much do you agree or disagree with these statements?	Percent Agree or Strongly Agree		
	Your School	Your Region	State
My teachers expect me to work hard.	99%	96%	96%
My teachers really want me to learn a lot.	97%	91%	91%
My teachers expect a lot from students.	90%	90%	91%
My teachers do not really care how much I learn. (reverse scored)	11%	22%	24%
My teachers expect me to attend college.	95%	86%	87%
Average for 5 items above	3.1	3	3

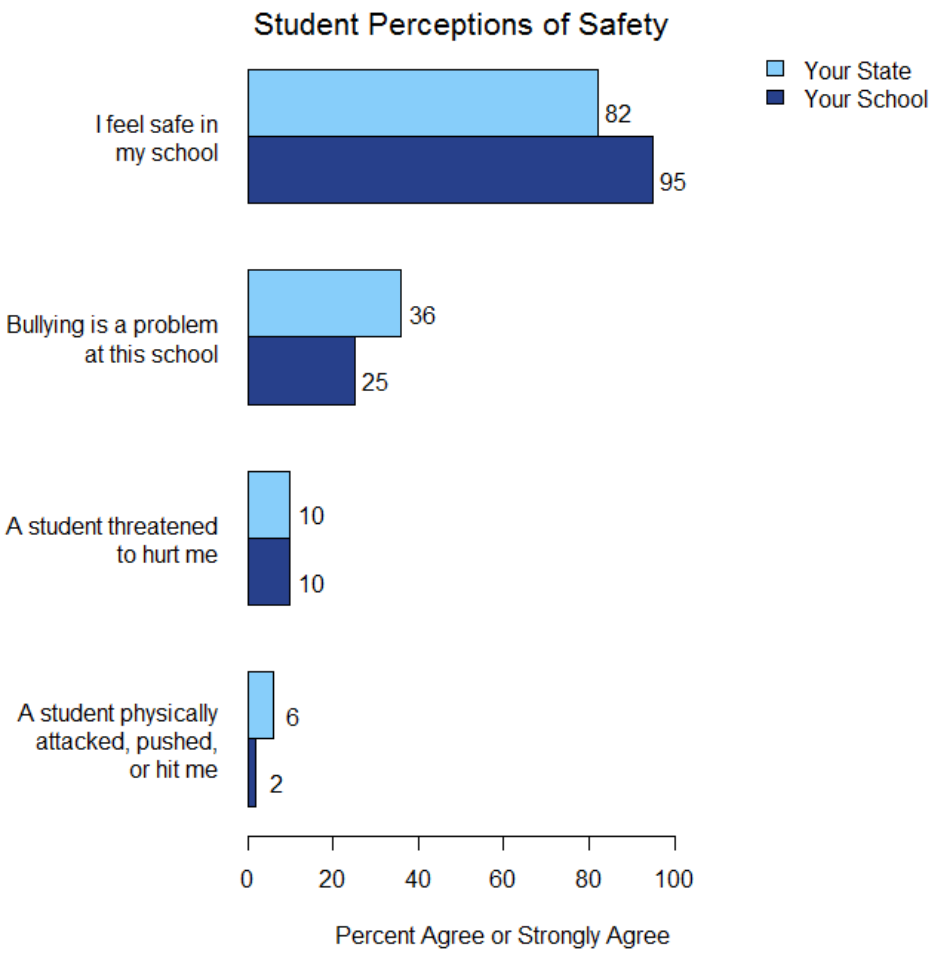
Aggressive Attitudes

A small percentage of students with aggressive attitudes can negatively affect the school climate, generating more peer conflict and bullying.

Attitudes about Aggressive Behavior			
If someone threatens you, it is okay to hit that person.	37%	44%	38%
It feels good when I hit someone.	25%	21%	19%
If you fight a lot, everyone will look up to you.	4%	9%	10%
If you are afraid to fight, you won't have many friends.	8%	12%	12%
Students who are bullied or teased mostly deserve it.	1%	6%	5%
Bullying is sometimes fun to do.	2%	5%	5%
Average for 6 items above	1.7	1.8	1.8

Student Safety

Student safety is a fundamental condition for effective learning and achievement. Selected items in the chart below provide an overview of student perceptions of safety. More detailed questions and complete scales are on the following pages.



Bullying and Peer Aggression

Previous research has found that a high prevalence of teasing and bullying is a consistent predictor of negative school outcomes, including lower student engagement, lower performance on SOL testing, and higher dropout rates.

Prevalence of Teasing and Bullying Scale These questions are about teasing and bullying you see at your school. Do not include friendly teasing that does not hurt anyone's feelings.	**Percent Agree or Strongly Agree**		
	Your School	**Your Region**	**State**
Students in this school are teased about their clothing or physical appearance.	51%	65%	64%
Students in this school are teased or put down because of their race or ethnicity.	19%	34%	36%
There is a lot of teasing about sexual topics at this school.	40%	60%	52%
Bullying is a problem at this school.	25%	45%	36%
Students in this school are teased or put down about their sexual orientation.	40%	50%	38%
Average for 5 items above	2.3	2.6	2.5
Perceptions of Bullying by Teachers/Staff A teacher or other adult at school bullies a student by repeatedly punishing or criticizing a student unfairly. This goes beyond what is normal discipline in the school. Students were asked to keep this definition in mind when answering the next four questions:			
There are teachers or other adults at this school who bully students.	11%	23%	23%
There are teachers or other adults at this school who make fun of students.	19%	29%	31%
Some teachers or other adults at this school say things that make students feel badly.	20%	40%	43%
Some teachers or other adults at this school pick on certain students.	23%	42%	44%

Many bullying prevention programs stress the need to change the peer culture at school so that bystanders do not reinforce bullying behavior. A good source of information is www.stopbullying.gov.

Our research shows that a Peer Nomination Survey is a safe and effective way to identify victims of bullying. A peer nomination survey sends a strong message to students that educators are concerned about bullying and, most importantly, allows school counselors to identify students who are in need of assistance. It is useful to explain the purpose of the peer nomination survey so that students understand its importance. One option for explaining peer nominations to students is to show a short video before answering the peer nomination question: http://www.youtube.com/watch?v=s6lBeN8OmS4. After the survey is administered, school counselors can tabulate the names of nominated students and conduct follow-up interviews, as described in this video: http://www.youtube.com/watch?v=UCeV3qJL7IU&feature=youtube.

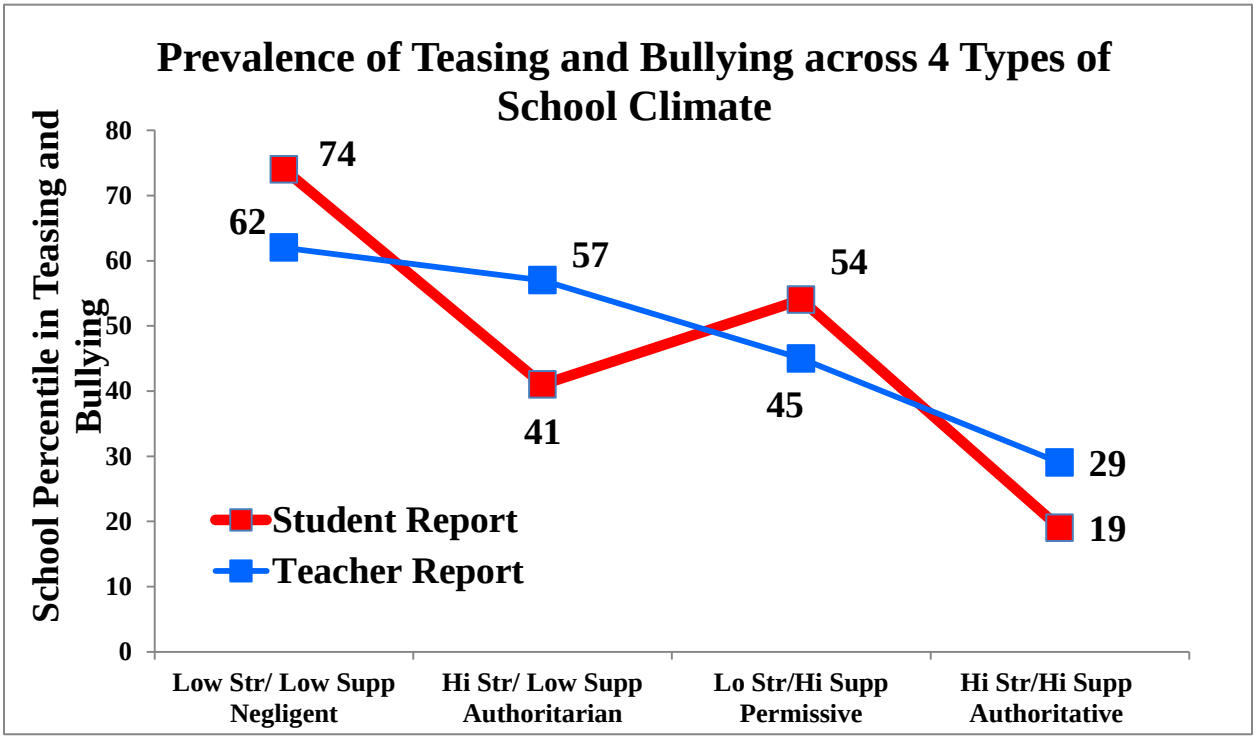
Personal Experiences of Bullying Use this definition of bullying to answer the questions below: ❍ Bullying is the repeated use of one's strength or popularity to injure, threaten, or embarrass another person on purpose. ❍ Bullying can be physical, verbal, or social. ❍ Cyber bullying involves repeatedly using technology (cell phone, email, Internet, etc.) to tease or put down someone. ❍ It is not bullying when two students who are about the same in strength or popularity have a fight or argument.	**Percent Once or More per Week**		
	Your School	**Your Region**	**State**
I have been bullied at school **this year** (since school started last fall).	6%	8%	6%
I have bullied others at school this year.	1%	2%	2%
I have been physically bullied or threatened with physical bullying at school this year.	1%	2%	2%
I have been verbally bullied at school this year.	7%	11%	8%
I have been socially bullied at school this year.	7%	8%	6%
I have been cyberbullied at school this year.	3%	5%	3%
I have been bullied by teachers or other adults at school this year.	1%	5%	4%
Peer Aggression	**Percent Reporting One Time or More than Once**		
	Your School	**Your Region**	**State**
A student stole my personal property.	18%	31%	33%
A student physically attacked, pushed, or hit me.	13%	19%	18%
A student threatened to hurt me.	21%	28%	23%
A student threatened me with a weapon.	3%	7%	6%
A student said mean or insulting things to me.	38%	54%	51%
Gangs at School	**Percent Reporting Yes**		
	Your School	**Your Region**	**State**
Are there gangs at your school this year?	4%	8%	15%
Have gangs been involved in fights or other violence at your school this year?	3%	5%	11%
Have gangs been involved in the sale of drugs at your school this year?	4%	8%	12%
Have you considered joining a gang?	4%	5%	3%

Sexual Violence and Harassment During the past 12 months how many times did someone you dated or went out with …	**Percent Reporting One Time or More than Once**		
	Your School	**Your Region**	**State**
…physically hurt you on purpose?	2%	7%	6%
…threatened to hurt you?	4%	8%	6%
…called you names or put you down?	13%	20%	15%
…tried to kiss you or touch you against your will?	8%	10%	8%
…tried to make you drink alcohol or use drugs?	4%	6%	5%
…continued to bother you or harass you after you stopped going out?	14%	14%	11%
I have dated or gone out with someone in the past 12 months.	63 %	62%	51%
During the past 12 months, how often did another student …	**Percent Reporting One Time or More than Once**		
	Your School	**Your Region**	**State**
… make unwelcome sexual comments, jokes, or gestures *that made you feel uncomfortable*?	20%	28%	27%
… spread sexual rumors about you?	19%	23%	17%
… touch, brush up against you, grab or pull your clothing, or corner you in a sexual and unwelcome way?	8%	13%	13%

Reactions to Victimization You have just answered some questions about being teased or bullied in some way. Did you tell a teacher or another adult at school what happened?	**Percent true**		
	Your School	**Your Region**	**State**
Yes	40%	33%	28%
Did it help to tell the teacher or another adult at school what happened?			
It seemed to help the situation get better.	77%	63%	62%
It seemed to make the situation worse.	0%	6%	5%
It made no difference.	23%	31%	33%

Title IX of the Education Amendments of 1972, 20 U.S.C. Sec. 1681, *et seq.*, prohibits discrimination on the basis of sex in any federally-funded education program or activity. The U.S. Department of Education's Office for Civil Rights has issued a series of Dear Colleague Letters to remind schools of their responsibilities to take immediate and effective steps to respond to sexual harassment and violence.

http://www2.ed.gov/about/offices/list/ocr/docs/dcl-factsheet-201104.html
http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf
http://www2.ed.gov/about/offices/list/ocr/letters/colleague-201504-title-ix-coordinators.pdf



Research Update. Research with the 2014 survey of high school students and teachers found that authoritative schools have lower levels of teasing and bullying than authoritarian, permissive, or disengaged schools. Schools scoring above the state median for structure and support were classified as *authoritative*, and these were compared to schools with high structure but low support (*authoritarian*), high support but low structure (*negligent*), or low structure and low support (*permissive*). Student and teacher reports of the prevalence of teasing and bullying within each school were used to generate school level means and percentiles. As show in the figure, students (plotted in red) in authoritative schools reported a prevalence of teasing and bullying that ranked at the 19th percentile of all schools, in comparison to permissive schools at the 54th percentile, authoritarian schools at the 41st percentile, and disengaged schools at the 74th percentile. Teacher perceptions (plotted in blue) showed a similar pattern. These analyses controlled for differences in size, poverty level, and minority composition of the student enrollment.

Disciplinary Experiences Reported by Students

How many days have you been suspended from school this year?	Percent Agree		
	Your School	**Your Region**	**State**
I have not been suspended from school this year.	91%	95%	94%
One day	4%	1%	1%
Two days	1%	<1%	1%
Three days	3%	1%	1%
Four days	0%	<1%	<1%
Five or more days	1%	1%	2%

Youth Risk Behaviors[3]	**Percent true**		
During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club on school property?	**Your School**	**Your Region**	**State**
0 days	96%	93%	97%
1 day	1%	1%	1%
2 or 3 days	1%	1%	<1%
4 or 5 days	1%	<1%	<1%
6 or more days	1%	4%	1%
During the past 12 months, how many times were you in a physical fight on school property?	**Your School**	**Your Region**	**State**
0 times	93%	92%	94%
1 times	3%	5%	3%
2 or 3 times	2%	2%	2%
4 or 5 times	2%	<1%	<1%
6 or 7 times	0%	<1%	<1%
8 or 9 times	0%	<1%	<1%
10 or 11 times	0%	<1%	<1%
12 or more times	0%	<1%	<1%
During the past 12 months, did you ever seriously consider attempting suicide?	**Your School**	**Your Region**	**State**
Yes	13%	16%	15%
No	87%	84%	85%
During the past 12 months, how many times did you actually attempt suicide?	**Your School**	**Your Region**	**State**
0 times	93%	93%	94%
1 times	4%	4%	3%
2 or 3 times	1%	2%	2%
4 or 5 times	1%	<1%	<1%
6 or more times	1%	<1%	<1%

[3] The Youth Risk Behavior items are used nationwide by the Centers for Disease Control and Prevention in their Youth Risk Behavior Survey (Centers for Disease Control and Prevention, 2013).

During the past 30 days, on how many days did you have at least one drink of alcohol?	Your School	Your Region	State
0 days	74%	79%	79%
1 or 2 days	14%	10%	11%
3 to 5 days	4%	4%	5%
6 to 9 days	3%	3%	3%
10 to 19 days	3%	2%	1%
20 to 29 days	0%	<1%	<1%
All 30 days	1%	2%	<1%
During the past 30 days, how many times did you use marijuana?	Your School	Your Region	State
0 times	92%	90%	87%
1 to 2 times	5%	4%	5%
3 or 9 times	0%	2%	3%
10 to 19 times	1%	1%	2%
20 to 39 times	1%	<1%	<1%
40 or more times	1%	3%	3%

Demographic Information for Student Participants

School Demographics	Your School	Your Region	State
Number of schools	1	39	320
9th grade	27	1,278	17,083
10th grade	25	1,074	16,416
11th grade	23	1,043	15,468
12th grade	22	1,010	13,712
Total number of student participants	97	4,405	62,679
Percentage male	42%	47%	49%
Percentage Hispanic or Latino	1%	6%	14%
Race Percentages			
American Indian/Alaska Native	2%	2%	1%
Asian	0%	<1%	7%
Black or African-American	3%	2%	20%
Native Hawaiian or Pacific Islander	1%	<1%	1%
White	90%	87%	53%
2 or more races	4%	7%	18%
Total	100%	100%	100%
Percentage who speak another language at home	7%	10%	27%
Grades on Last Report Card			
Mostly A's	30%	27%	21%
Mostly A's and B's	46%	43%	41%
Mostly B's	7%	5%	7%
Mostly B's and C's	12%	15%	19%
Mostly C's	0%	2%	4%
Mostly C's and D's	4%	5%	5%
Mostly D's and F's	0%	2%	2%

Parent Education (highest level parent)			
Not graduated from high school	3%	8%	8%
Graduated from high school	36%	36%	26%
Graduated from two-year college or technical school	26%	19%	14%
Graduated from four-year college	15%	22%	26%
Completed post-graduate studies (such as a master's degree or doctoral degree) after graduating from a four-year college	20%	15%	26%
Number of Biological or Adoptive Parents in Home			
Two parents	72%	68%	69%
One parent	24%	27%	29%
No parents	4%	4%	2%
Free/Reduced Price Meal			
Do you receive a free or reduced-price meal at school? (% Yes)	28%	41%	31%

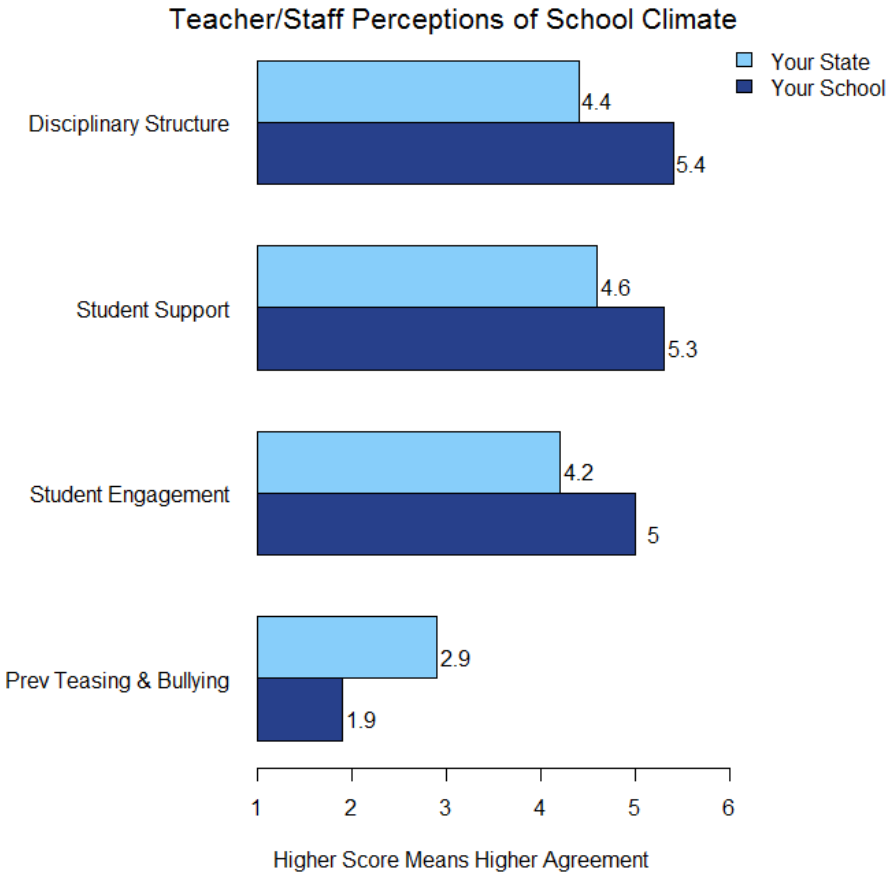
Key Teacher/Staff Perceptions

Four scales are used to summarize key aspects of school climate:

- Disciplinary Structure – average of 9 items to assess whether school rules and discipline seem fair.
- Student Support – average of 10 items to assess whether students feel respected and are willing to seek help from adults at school.
- Student Engagement – average of 6 items to assess whether students like this school and want to learn.
- Prevalence of Teasing and Bullying (PTB) – average of 5 items to assess how often various forms of bullying and teasing are observed.

Each item was answered on a 6-point scale: 1-Strongly Disagree, 2-Disagree, 3-Somewhat Disagree, 4-Somewhat Agree, 5-Agree, 6-Strongly Agree. The chart below presents averages for all teachers and other staff members who took the survey in your school along with the averages for all teachers/staff in the state who took the survey. For example, an average score of 4 for Student Engagement means that teachers/staff generally agreed with the six items for that scale. The items for each scale are found later in the report.

This report presents results for teachers and staff members in positions such as administrators, counselors, nurses, psychologists, school resource officers and security officers, and social workers. Individual school results are not presented if fewer than 20 teachers/staff completed the survey. Teacher and staff results are combined in this report in order to protect participant confidentiality. A separate report will compare teacher and staff perceptions on a statewide basis.



According to the authoritative school climate model, schools should be both demanding (high structure) and supportive in their relationships with students. Research in Virginia schools has found that high levels of both Disciplinary Structure and Student Support indicate a school climate that facilitates Student Engagement and diminishes the Prevalence of Teasing and Bullying. Authoritative school climate is also associated with fewer student discipline problems, more respectful behavior toward teachers, higher performance on SOL exams, and higher graduation rates.

Teacher/Staff Perceptions of School Discipline

These questions assess the degree to which teachers/staff perceive the school climate as structured. The items were answered on 6-point scales: 1-Strongly disagree, 2-Disagree, 3-Somewhat Disagree, 4-Somewhat Agree, 5-Agree, 6-Strongly Agree.

School Disciplinary Structure	Reference Group	Strongly Disagree, Disagree, or Somewhat Disagree	Somewhat Agree	Agree or Strongly Agree
The punishment for breaking school rules is the same for all students.	School	4%	4%	91%
	Region	27%	21%	51%
	State	45%	21%	35%
Students at this school are only punished when they deserve it.	School	0%	0%	100%
	Region	11%	17%	72%
	State	22%	22%	56%
Students know the school rules for student conduct.	School	0%	4%	96%
	Region	6%	12%	82%
	State	12%	18%	70%
If a student does something wrong, he or she will definitely be punished.	School	4%	22%	74%
	Region	28%	29%	44%
	State	50%	27%	23%
Students can get away with breaking the rules at this school pretty easily. (reverse scored)	School	100%	0%	0%
	Region	68%	21%	11%
	State	52%	26%	22%
Students are suspended without a good reason. (reverse scored)	School	91%	0%	9%
	Region	94%	2%	4%
	State	95%	2%	3%
The adults at this school are too strict. (reverse scored)	School	100%	0%	0%
	Region	96%	3%	2%
	State	96%	3%	<1%
When students are accused of doing something wrong, they get a chance to explain.	School	9%	0%	91%
	Region	4%	14%	83%
	State	4%	17%	79%
Students are suspended for minor things. (reverse scored)	School	96%	4%	0%
	Region	94%	2%	3%
	State	94%	5%	2%
		Average score across 9 items, Each item scored 1-6		
Average score across 9 items above	School	5.4		
	Region	4.7		
	State	4.4		

Teacher/Staff Perceptions of Student Support

These questions assess the degree to which teachers perceive the school climate as supportive using two subscales, Student Willingness to Seek Help from Teachers/Staff and Teacher/Staff Respect for Students. Items were answered on 6-point scales: 1-Strongly Disagree, 2-Disagree, 3-Somewhat Disagree, 4-Somewhat Agree, 5-Agree, 6-Strongly Agree.

Student Willingness to Seek Help from Teachers/Staff	**Reference Group**	**Strongly Disagree, Disagree, or Somewhat Disagree**	**Somewhat Agree**	**Agree or Strongly Agree**
Students know whom to go to for help if they have been treated badly by another student.	School	4%	0%	96%
	Region	3%	17%	80%
	State	5%	23%	72%
Students feel comfortable asking for help from teachers if there is a problem with a student.	School	4%	4%	91%
	Region	6%	30%	64%
	State	10%	34%	56%
Students report it when one student hits another.	School	17%	17%	65%
	Region	20%	35%	46%
	State	30%	32%	38%
Students are encouraged to report bullying and aggression.	School	0%	4%	96%
	Region	3%	12%	85%
	State	6%	18%	76%
Teachers/staff take action to solve the problem when students report bullying.	School	0%	4%	96%
	Region	2%	13%	84%
	State	6%	20%	75%
Teachers/staff know when students are being picked on or being bullied.	School	22%	13%	65%
	Region	16%	44%	40%
	State	25%	41%	34%
		Average score across 6 items, Each item scored 1-6		
Average score across 6 items above	School	5.3		
	Region	4.8		
	State	4.6		

Teacher/Staff and Adult Respect for Students	Reference Group	Strongly Disagree, Disagree, or Somewhat Disagree	Somewhat Agree	Agree or Strongly Agree
Most teachers and other adults at this school care about all students.	School	0%	0%	100%
	Region	2%	7%	91%
	State	3%	10%	87%
Most teachers and other adults at this school want all students to do well.	School	0%	0%	100%
	Region	<1%	7%	92%
	State	2%	8%	90%
Most teachers and other adults at this school listen to what students have to say.	School	0%	0%	100%
	Region	2%	16%	82%
	State	5%	20%	75%
Most teachers and other adults at this school treat students with respect.	School	0%	0%	100%
	Region	2%	12%	86%
	State	4%	16%	80%
		Average score across 4 items, Each item scored 1-6		
Average score across 4 items above	School	5.8		
	Region	5.2		
	State	5.1		

Student Support		Average score across 10 items, Each item scored 1-6
Average score across 6 items for Willingness to Seek Help and 4 items for Respect for Students	School	5.5
	Region	5
	State	4.8

Students who are behaviorally engaged in the classroom—who participate in classroom discussions, complete tasks, and attend and respond to teacher instruction—demonstrate higher levels of academic achievement (Gregory et al., 2014). Programs such as My Teaching Partner-Secondary (MTP-S) help to enhance student behavioral engagement and thereby promote higher levels of academic achievement. MTP-S provides teachers with individual coaching and standardized feedback based on observations of their classroom interactions. Research in Virginia schools found that MTP-S was associated with higher levels of student engagement across classrooms with diverse student and teacher characteristics. Specifically, teacher emphasis on analysis and problem solving, as well as use of diverse instructional learning formats, accounted for higher levels of student engagement.

Gregory, A., Allen, J. P., Mikami, A. Y., Hafen, C. A., & Pianta, R. C. (2014). Effects of a professional development program on behavioral engagement of students in middle and high school. *Psychology in the Schools, 51*, 143-163. doi: 10.1002/pits.21741

Teacher/Staff Perceptions of Collegiality	Reference Group	Strongly Disagree, Disagree, or Somewhat Disagree	Somewhat Agree	Agree or Strongly Agree
The teachers at this school work well with one another.	School	0%	0%	100%
	Region	6%	20%	73%
	State	8%	23%	69%
There is a strong sense of mutual support among the teachers and other staff at this school.	School	0%	0%	100%
	Region	10%	23%	67%
	State	15%	25%	60%
Teachers and other school staff members trust one another at this school.	School	0%	0%	100%
	Region	11%	26%	63%
	State	17%	27%	56%
This school is a collegial environment for teachers and other school staff members.	School	0%	0%	100%
	Region	10%	24%	66%
	State	15%	25%	60%
		Average score across 4 items, Each item scored 1-6		
Average score across 4 items above	School	5.8		
	Region	4.8		
	State	4.6		

Teacher/Staff Perceptions of Student Engagement How do students feel about going to this school?	**Reference Group**	**Strongly Disagree, Disagree, or Somewhat Disagree**	**Somewhat Agree**	**Agree or Strongly Agree**
Students generally like this school.	School	0%	0%	100%
	Region	6%	18%	76%
	State	8%	22%	71%
Students are proud to be at this school.	School	0%	0%	100%
	Region	8%	26%	66%
	State	12%	28%	60%
Students hate going to school. (reverse scored)	School	83%	4%	13%
	Region	75%	18%	7%
	State	79%	16%	6%
Students finish their homework at this school.	School	13%	30%	57%
	Region	32%	44%	24%
	State	42%	38%	20%
Getting good grades is very important to most students here.	School	0%	39%	61%
	Region	18%	38%	44%
	State	21%	35%	44%
Most students want to learn as much as they can at this school.	School	4%	43%	52%
	Region	24%	40%	36%
	State	29%	38%	33%
		Average score across 6 items, Each item scored 1-6		
Average score across 6 items above	School	5		
	Region	4.3		
	State	4.2		

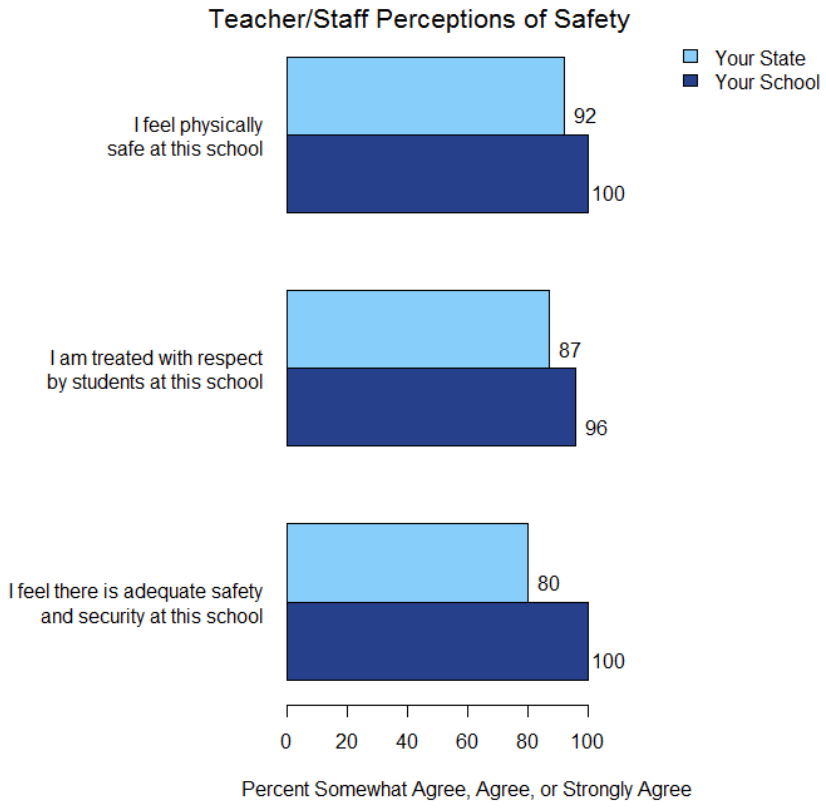
Resources for school climate improvement:
The Collaborative for Academic, Social, and Emotional Learning (CASEL) is an organization dedicated to making social and emotional learning (SEL) an integral part of education. CASEL identifies evidence-based programs and practices for SEL. http://www.casel.org/

The National School Climate Center is an organization that develops programs for schools to develop a positive school climate that nurtures social and emotional, ethical, and academic skills.
http://www.schoolclimate.org/

Positive Behavior Intervention and Supports (PBIS) is a school-wide disciplinary approach that emphases proactive strategies for defining, teaching, and supporting appropriate student behaviors to create positive school environments.
https://www.pbis.org

Summary Chart for Teacher/Staff Perceptions of Safety

The total scores for each school on Teacher/Staff Perceptions of Safety, which are detailed in the table at the bottom of this page, are compared to state averages in the chart below.



Concerns about Discipline and Safety	Reference Group	Strongly Disagree, Disagree, or Somewhat Disagree	Somewhat Agree	Agree or Strongly Agree
I am treated with respect by students at this school.	School	4%	13%	83%
	Region	7%	21%	72%
	State	13%	21%	66%
I feel physically safe at this school.	School	0%	0%	100%
	Region	3%	12%	84%
	State	8%	14%	78%
I feel there is adequate safety and security in this school.	School	0%	4%	96%
	Region	12%	20%	68%
	State	20%	19%	61%
The disciplinary practices at this school are effective.	School	0%	9%	91%
	Region	20%	27%	53%
	State	37%	26%	37%
Disciplinary policies are clear to school staff members.	School	4%	0%	96%
	Region	13%	21%	67%
	State	29%	23%	49%

Teacher/Staff Perceptions of Gang Activity	Reference Group	I don't know	No	Yes
Are there gangs at your school this year?	School	4%	96%	0%
	Region	28%	69%	3%
	State	49%	28%	23%
Have gangs been involved in fights or other violence at your school this year?	School	4%	96%	0%
	Region	22%	76%	1%
	State	49%	39%	11%
Have gangs been involved in the sale of drugs at your school this year?	School	4%	96%	0%
	Region	31%	67%	2%
	State	61%	29%	10%

Resources on gang prevention:

Boys & Girls Clubs Gang Prevention through Targeted Outreach
http://www.bgca.org/whatwedo/SpecializedPrograms/Pages/DelinquencyandGangPreventionInitiative.aspx

Gang Resistance Education and Training
http://www.great-online.org/

Office of Juvenile Justice and Delinquency Prevention
https://www.nationalgangcenter.gov/SPT/

Prevalence of Teasing and Bullying	**Reference Group**	**Strongly Disagree, Disagree, or Somewhat Disagree**	**Somewhat Agree**	**Agree or Strongly Agree**
Students in this school are teased about their clothing or physical appearance.	School	78%	17%	4%
	Region	62%	28%	10%
	State	62%	27%	11%
Students in this school are teased or put down because of their race or ethnicity.	School	87%	13%	0%
	Region	82%	12%	6%
	State	77%	16%	7%
There is a lot of teasing about sexual topics at this school.	School	87%	4%	9%
	Region	68%	22%	10%
	State	68%	21%	11%
Bullying is a problem at this school.	School	100%	0%	0%
	Region	76%	19%	5%
	State	72%	21%	7%
Students in this school are teased or put down about their perceived sexual orientation.	School	83%	13%	4%
	Region	70%	22%	8%
	State	74%	19%	7%
Perceptions of Bullying by Teachers/Staff A teacher or other adult at school bullies a student by repeatedly punishing or criticizing a student unfairly, going beyond what is normal discipline in the school.	**Reference Group**	**Strongly Disagree, Disagree, or Somewhat Disagree**	**Somewhat Agree**	**Agree or Strongly Agree**
There are teachers or other adults at this school who bully students.	School	100%	0%	0%
	Region	89%	8%	3%
	State	86%	10%	4%
There are teachers or other adults at this school who make fun of students.	School	100%	0%	0%
	Region	88%	8%	5%
	State	83%	12%	5%
Some teachers or other adults at this school say things that make students feel badly.	School	96%	0%	4%
	Region	82%	13%	5%
	State	74%	20%	6%
Some teachers or other adults at this school pick on certain students.	School	100%	0%	0%
	Region	85%	11%	4%
	State	80%	14%	5%

Teacher/Staff Awareness of Threat Assessment Threat assessment is a process of identifying and resolving conflicts and problems before they escalate into violence. It is a form of prevention now mandated by the Virginia Code (§ 22.1-79.4)	**Reference Group**	**I don't know**	**No**	**Yes**
Does your school use a formal threat assessment process to respond to student threats of violence?	School	9%	0%	91%
	Region	34%	4%	63%
	State	47%	3%	51%
For your formal threat assessment process, does your school follow the guidelines developed by the University of Virginia, *Guidelines for Responding to Student Threats of Violence*?	School	43%	0%	57%
	Region	65%	1%	33%
	State	69%	1%	30%

In 2013, new Virginia legislation required that each division superintendent establish a threat assessment team for each school. The legislation also directed the Virginia Department of Criminal Justice Services to provide schools with a model policy and procedures that they can use as a guide. In brief, threats are defined as any communication or behavior that suggests a person may intend to harm someone. When someone makes a threat, it should be reported to the school threat assessment team. Threat assessment is a violence prevention strategy that attempts to resolve conflicts and problems before they escalate into violence. Threat assessments typically begin by interviewing the student reported to have made a threat as well as other relevant witnesses, so that the circumstances and seriousness of the threat can be determined. Threat assessment is not a zero tolerance approach that applies the same consequences for all incidents. Based on the seriousness of the threat, the team takes appropriate action that may involve a combination of counseling, discipline, parent notification, and safety precautions.

The Department of Criminal Justice Services has posted some model procedures for threat assessment on its website. There is no required model, but various models that are acceptable. One model that is used extensively in Virginia schools is "Guidelines for Responding to Student Threats of Violence" (also called the Virginia Student Threat Assessment Guidelines) developed at the University of Virginia. This model has been tested in controlled studies and is recognized in the National Registry of Evidence-based Programs and Practices (NREPP). Studies have found that almost all threats can be resolved without removing the student from school.

For more information, see http://curry.virginia.edu/research/projects/threat-assessment.

Aggression toward Teachers/Staff

Student Aggression Have any of the following happened to you personally at school this year? This includes school events like field trips, school dances, and sports events.	**Reference Group**	**No**	**One Time**	**More than Once**	**Many Times**
A student stole my personal property.	School	91%	4%	4%	0%
	Region	88%	8%	4%	<1%
	State	86%	9%	4%	<1%
A student said mean or insulting things to me.	School	78%	9%	9%	4%
	Region	63%	13%	19%	5%
	State	52%	16%	23%	9%
A student threatened to hurt me.	School	100%	0%	0%	0%
	Region	94%	4%	2%	<1%
	State	90%	6%	3%	<1%
A student threatened me with a weapon.	School	100%	0%	0%	0%
	Region	99%	<1%	0%	<1%
	State	99%	<1%	<1%	<1%
A student physically attacked, pushed, or hit me.	School	100%	0%	0%	0%
	Region	98%	2%	0%	<1%
	State	96%	3%	<1%	<1%
		Total score for school*			
Total Student Aggression toward Teachers	School	0.1			
	Region	0.2			
	State	0.3			

*Each item was scored as 0 No event, 1 One time, 2 More than once, or 3 Many times. A total Student Aggression score was calculated by adding the items for each teacher/staff member and averaging across all teachers/staff members in a school.

Aggression toward teachers is linked to burnout and disengagement from teaching. A national survey found that 80% of K through 12 teachers reported at least one victimization experience in the current or past year, with 29% reporting being physically attacked and 43% reporting being verbally threatened by a student (McMahon et al., 2014). Research shows that a positive school climate may reduce aggression and associated teacher distress. Our research in Virginia schools found that more structured and supportive schools are safer and less distressing for teachers (Berg & Cornell, 2015).

Berg, J., & Cornell, D. (2015). Authoritative school climate, aggression toward teachers, and teacher distress in middle school. *School Psychology Quarterly*.

McMahon, S. D., Martinez, A., Espelage, D., Rose, C., Reddy, L. A., Lane, K., … Brown, V. (2014). Violence directed against teachers: Results from a national survey. *Psychology in the Schools*, *51*, 753–766. doi:10.1002/pits.21777

Parent or Staff Conflict Have any of the following happened to you personally at school this year? This includes school events like field trips, school dances, and sports events.	**Reference Group**	**No**	**One time**	**More than Once**	**Many Times**
A parent said rude or insulting things to me.	School	87%	4%	9%	0%
	Region	70%	15%	13%	2%
	State	63%	17%	16%	4%
A parent threatened to complain about me to the administration.	School	87%	13%	0%	0%
	Region	75%	14%	9%	1%
	State	72%	16%	10%	3%
A parent threatened to harm me.	School	100%	0%	0%	0%
	Region	97%	2%	<1%	<1%
	State	98%	1%	<1%	<1%
A colleague said rude or insulting things to me.	School	100%	0%	0%	0%
	Region	83%	8%	8%	2%
	State	78%	11%	9%	2%
A colleague threatened to harm me.	School	96%	4%	0%	0%
	Region	99%	<1%	<1%	<1%
	State	99%	<1%	<1%	<1%
		Total score for school*			
Total Parent or Staff Conflict	School	0.1			
	Region	0.2			
	State	0.3			

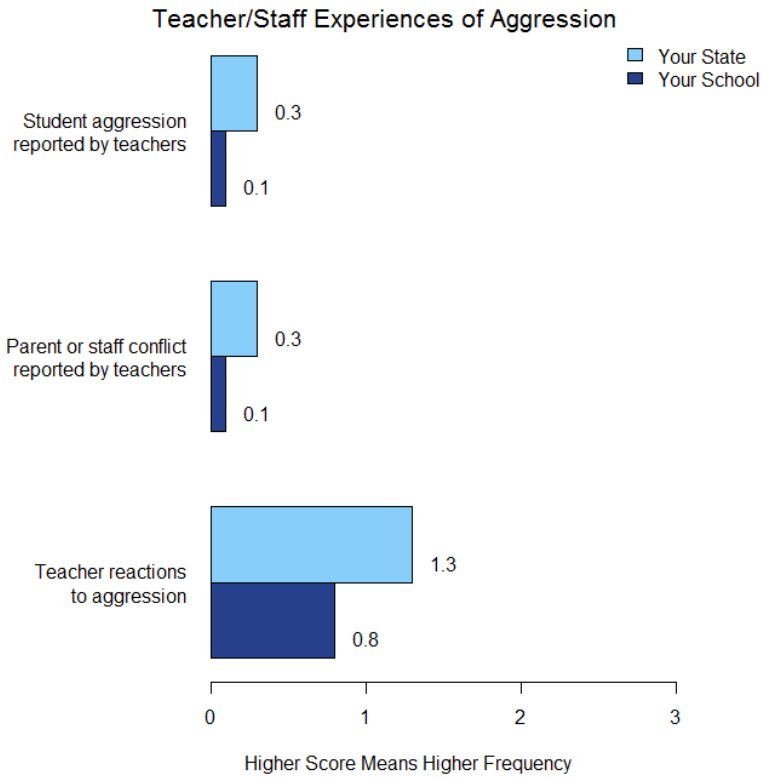
*Each item was scored as 0 No event, 1 One time, 2 More than once, or 3 Many times. A total Parent or Staff Conflict score was calculated by adding the items for each teacher/staff member and averaging across all teachers/staff members in a school.

Teacher/Staff Reactions to Aggression You have just answered some questions about being insulted, threatened, or harmed in some way at school. Think about the overall impact of these experiences. How did they affect you?	**Reference Group**	**Not true**	**A little True**	**Somewhat True**	**Definitely True**
They bothered me a lot.	School	62%	12%	12%	12%
	Region	39%	30%	18%	12%
	State	34%	26%	20%	20%
I felt frustrated.	School	38%	12%	38%	12%
	Region	27%	27%	22%	23%
	State	23%	24%	22%	31%
I felt sad.	School	50%	12%	25%	12%
	Region	49%	24%	15%	12%
	State	44%	22%	16%	17%
I felt angry.	School	75%	12%	12%	0%
	Region	34%	30%	19%	17%
	State	35%	25%	19%	21%
I felt burned out about my job.	School	62%	0%	25%	12%
	Region	46%	23%	17%	15%
	State	37%	21%	18%	24%
It made me think about whether to continue teaching/my work in school.	School	75%	0%	12%	12%
	Region	57%	18%	12%	13%
	State	47%	17%	14%	21%
		Total Score for School*			
Total Teacher/Staff Reactions to Aggression	School	0.8			
	Region	1.1			
	State	1.3			

*Each item was scored as 0 Not true, 1 A little true, 2 Somewhat true, or 3 Definitely true. A total Reactions to Aggression score was calculated by adding the items for each teacher and averaging across all teachers in a school.

Summary Chart for Teacher/Staff Experiences of Aggression

The total scores for each school on Student Aggression toward Teachers/Staff, Parent or Staff Conflict, and Teacher/Staff Reactions to Aggression, which are presented on the previous pages, are compared to state averages in the chart below. These three scores are placed on the same chart for convenience, but should not be compared to one another. Only comparisons between school and state for each score are meaningful.



Demographic Information for Teacher/Staff Participants

Demographic information was limited in order to protect participant anonymity.

Demographics	Your School	Your Region	State
Number of schools	1	39	320
Number of teacher participants	22	772	12,250
Number of staff participants	1	104	2,369
Percentage female	70%	67%	69%
How many years have you been working as a teacher or in another professional capacity in schools?			
1-2 years	0%	7%	9%
3-5 years	4%	10%	12%
6-10 years	13%	18%	18%
More than 10 years	83%	65%	61%

Technical Notes

Most questions for students were answered on a 4-point scale (strongly disagree, disagree, agree, strongly agree), whereas most questions for teachers were answered on a 6-point scale (strongly disagree, disagree, somewhat disagree, somewhat agree, agree, strongly agree). The 4-point scales permit students of different ages and reading levels to answer questions more quickly and easily. The 6-point scales are intended to give teachers the opportunity to make more differentiated judgments. There are some measures (such as disciplinary structure and student support) that are found on both student and teacher surveys, but students and teachers have different conceptions of school climate, so exact comparisons are not possible.

The tables report the percentage of participants who agreed or strongly agreed rather than average scores because the percentages are easier to interpret. More precise scores are available in digital file for schools that surveyed all students in each grade. These scores report overall gender and grade breakdowns for each school, but do not report responses by individual students or teachers.

State norms are weighted by number of participants and size of school enrollment.

Student surveys were screened for validity with two questions: (1) “I am telling the truth on this survey” (response options: strongly disagree, disagree, agree, strongly agree) and (2) “How many of the questions on this survey did you answer truthfully” (response options: all of them, all but 1 or 2 of them, most of them, some of them, only a few or none of them). There were 4,646 students (6.74%) omitted from the sample because they answered “strongly disagree” or “disagree” to question (1) or “some of them” or “only a few or none of them” to question (2). Another 1,626 students (2.36%) were omitted due to completing the survey too quickly to have read the questions.

Differences between schools and state or regional norms must be interpreted with caution since they may be due to factors such as sampling error or measurement error. Additional reports and analyses of survey results at the state level will be released in the coming year. For more information, see http://youthviolence.edschool.virginia.edu

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