Measurement Structure of the California School Climate, Health, and Learning Surveys

Student, Staff, and Parent Surveys

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July 2020

Prepared for the California Department of Education's School Health and Safety Office

Suggested citation: Mahecha, J., & Hanson, T. (2020). *Measurement Structure of the California School Climate, Health, and Learning Surveys: Student, Staff, and Parent Surveys.* San Francisco, CA: WestEd.

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Key Findings

This report examines the psychometric properties of five survey modules that are part of the California School Climate, Health, and Learning Survey system (CalSCHLS): (1) the elementary California Healthy Kids Survey (CHKS), (2) the secondary CHKS Core Module, (3) the secondary CHKS School Climate Module, (4) the California School Staff Survey (CSSS), and (5) the California School Parent Survey (CSPS). The purpose is to confirm the measurement structure of the CalSCHLS system instruments established in prior research and to ascertain the extent to which survey questions may be biased for different groups of survey respondents (e.g., different racial/ethnic groups or grade levels). The issue of item bias is important for interpretation of survey results. For example, if a survey question intended to measure school connectedness is biased for different gender groups, then the questionnaire response does not mean the same thing for males and females. Such biases make subgroup comparisons difficult to interpret. This report also examines the reliability of derived scales from the CalSCHLS instruments, both overall and for various subgroups. Such reliability information is important in that it provides information on the precision of average scale scores for groups. And finally, the report examines subgroup differences on the factors measured by the surveys to ascertain construct validity.

Constructs Measured Across all Surveys

Table A below provides a snapshot of the constructs measured in the report. The analyses conducted indicate that the surveys assess numerous important aspects of school climate-related supports, violence and risk behavior, student well-being, staff workplace climate, and parent supports. Moreover, parallel measures are assessed reliably (although differently) across the different stakeholder surveys. The results are consistent with prior analyses of the CalSCHLS data. Overall, with a few exceptions, each of the summary measures exhibit acceptable internal consistency reliability and most measures appear to represent distinct dimensions. Moreover, there is little evidence of consequential item bias across demographic subgroups. The results for each survey instrument are summarized below.

TABLE A

Number of items per construct measured by CalSCHLS instruments

Construct	Elementary Survey	Secondary Core	Secondary School Climate	Staff Survey	Parent Survey
School Supports					
School Connectedness	4	5			
Caring Staff-Student Relationships	6	6		6	
Student Meaningful Participation	7	5		4	
Support for Social Emotional Learning	4		7	6	
Student Learning Environment			8	9	21[a]
Learning Engagement Climate			5		
Student Peer Relationships			4	4	
Respect for Diversity			3	3	
Instructional Equity				7	
Clarity of Rules			3	8[b]	
Fairness	4		4	8[b]	
Antibullying Climate	3		4	5	
Disciplinary Harshness			3	4	
Violence and Disorder					
Violence Victimization	3	8			
Violence Perpetration	3[c]				
Substance Use at School		6		4[d]	3[e]
Delinquency		8			
Harassment/Bullying Victimization		7			
Student Antisocial Behavior				4	
School Disorder				4	7[f]
Racial/Ethnic Conflict			2		
Student Well-being					
Academic Motivation	4	4			
Prosocial Behavior	4				
Student Readiness to Learn				4	
Staff Working Climate					
Staff Working Environment				5	
Staff Collegiality				3	
Parent Supports					
Parent High Expectations	2				
Parental Involvement in Schooling	5				
Promote Parent Involvement at School		3		5	8

Construct	Elementary Survey	Secondary Core	Secondary School Climate	Staff Survey	Parent Survey
Parental Involvement at School					7[g]
Communication w Parents about School					7
Facilities					
Quality of Facilities			3		
College/Career					
College & Career Support			3		

Source: 2017/18 CalSCHLS student, staff, and parent surveys. *Notes:*

[a] Construct is more global on the parent survey.
[b] Construct includes both fairness and rule clarity on staff survey.
[c] Scale reliability unacceptably low. Recommend that individual items are used to compare group difference rather than Violence Perpetration scale.
[d] Staff survey asks about substance use, mental health, and absentee problems at school. This measure should not be used for elementary schools because it exhibits poor reliability.
[e] Parent survey asks about substance use problems at school.
[f] Recommend that the composite measure of School Disorder not be used because of the extensive measurement invariance found on the items that comprise the scale. Item-level comparisons are still appropriate.
[g] The CSPS Parental Involvement at School composite measure should be used with caution given its low reliability and item bias across racial/ethnic and socioeconomic groups.

Elementary California Healthy Kids Survey

Constructs Measured. Analysis of the 2017/18 elementary CHKS data suggests that 49 survey questions reliably measure 11 dimensions of school climate and student well-being (see Table A).[1] A 12th dimension, **Violence Perpetration**, was also revealed in the measurement model, but the scale did not exhibit adequate reliability to be recommended for future use. The results suggest that the elementary instrument measures dimensions of school climate and student well-being that it is intended to measure.

Discriminant Validity. Correlations between the 11 measured factors were examined to assess whether they are sufficiently distinct from one another to justify representing them as different constructs. In general, the correlations were sufficiently small to justify keeping the measures separate, although the correlation between **Antibullying Climate** and **Support for Social Emotional Learning** is relatively high (0.85). Because the items assessing these two domains differ substantially with regards to their content and are clearly aligned with the intended constructs, separate measures of Antibullying Climate and Support for Social Emotional Learning are retained.

Item Bias. Item bias was investigated across grade levels and gender. Although 15 items exhibited differential item functioning for students in grade 3 and grade 5, signifying that the items may have different meaning for grade 3 students than they do for grade 5 students, these differences were not substantial enough to effect grade comparisons on the 11 constructs. Similar findings were evident for males and females. Item bias across school grade and gender groups was not substantial enough to meaningfully affect inferences about group differences on the 11 factors.

Reliability. Reliability for all but one of the constructs exceeded the 0.60 threshold across most of the subgroups. As noted above, reliability of the Violence Perpetration scale was unacceptably low. The Violence Perpetration items should not be used to comprise a scale.

Demographic Differences. For most measures, scores on the school climate and well-being indicators were highest (most positive) for grade 3 students and decline for each succeeding elementary grade. The one exception is **Parent High Expectations**, which is lowest among grade 3 students and highest among students in grades 4, 5, and 6. Females consistently scored higher than males on all of the indicators of well-being and positive school climate.

Secondary California Healthy Kids Core Module

Constructs Measured. The secondary CHKS core module survey questions reliably measure nine dimensions of school climate and student well-being (see Table A).[2] The results are consistent with other psychometric analyses of the core items (Hanson, 2011; Hanson & Voight, 2014) and with how the

[1] Other items not included in the analysis are used as single-item indicators.

[2] Other items not included in the analysis are used as single-item indicators.

instrument is used. The Core Module measures the dimensions of school climate and student well-being that it is intended to measure.

Discriminant Validity. The correlations among the nine factors were sufficiently small to justify keeping the measures separate, although the correlation between **Violence Victimization** and **Harassment/Bullying** (0.86) is high. Because the harassment/bullying items capture harassment related to six bias-related categories (gender, race/ethnicity, religion, sexual orientation, mental disability, and immigrant status), it is important to keep this measure distinct from violence victimization so that practitioners can monitor bias-related victimization.

Item Bias. Differential item functioning was investigated across secondary school grades, gender, race/ethnicity, and English language proficiency.

- Item bias is not substantial across secondary grade levels. The one exception is that the item asking students how welcome parents feel participating at the school appears to have different meanings for NT students and grade 11 students. Caution should be used when comparing the Promotion of Parental Involvement scores of NT students with those of students from other secondary grades.
- Substantively meaningful gender bias on the Secondary Core CHKS items is also not evident. That said, differential item functioning across males and females was detected on the item that asks about harassment/bullying because of gender. Harassment because of gender certainly has a different meaning for females and males. Gender comparisons on this individual item should be examined routinely in addition to comparing the overall level of harassment across males and females.
- Substantively meaningful bias across English Language Proficiency groups on the Secondary Core CHKS items was not evident.

Reliability. Reliability for all nine of the constructs exceeded 0.70 for all subgroups with the exception of **Delinquency** for female students (0.68). Overall, all nine measures demonstrate good internal consistency reliability.

Demographic Differences. Grade 7 students reported the highest scores on most indicators of positive school climate. They also exhibited the highest scores on Violence Victimization and Harassment/Bullying. Females reported higher **Violence Victimization** and **Harassment/Bullying** than males. They also scored higher than males on **Academic Motivation** and scored lower on **Delinquency**. Race/Ethnic disparities in school support and well-being are pronounced across most of the measured constructs.

Secondary California Healthy Kids School Climate Module

Constructs Measured. The secondary CHKS School Climate Module survey questions measure 12 dimensions of school climate (see Table A).[3] The results are consistent with other psychometric analyses (Hanson, 2011; Hanson & Voight, 2014) and with how the instrument is used. The CHKS School Climate Module assesses the dimensions of school climate that it is intended to measure.

Discriminant Validity. The correlations among the 12 factors were small enough to justify keeping the measures separate. However, as was the case for the elementary survey, the correlation between **Antibullying Climate** and **Support for Social Emotional Learning** is relatively high (0.89). Separate measures of these two factors are retained because the items assessing these two domains are clearly aligned with the intended constructs.

Item Bias. Differential item functioning was investigated across secondary school grades, gender, race/ethnicity, and English language proficiency.

- Item bias is not substantial across secondary grade levels except that the item asking students how clean and tidy the school is appears to have different meanings for NT students and grade 11 students.
- No gender bias was evident on the items that comprise the Secondary School Climate Module.
- Item bias across racial/ethnic groups is not substantial on the CHKS School Climate Module. However, there is some evidence of differential item functioning for white and African American students on the items assessing **Quality of School Facilities**. Care should be taken when making comparisons between these two groups on this construct.
- No substantively meaningful bias across English Language Proficiency groups on the CHKS Secondary School Climate items was.

Reliability. All 12 School Climate Module scales exhibit good reliability.

Demographic Differences. The school climate measures vary in expected ways with school grade, with higher levels (more positive) for grade 7 students compared to other grades. Females and males report similar levels on all of the school climate measures except **Quality of Facilities**, where female perceptions are more positive. Asian students report the most positive perceptions of school climate of all the racial/ethnic group on 10 of the 12 school climate domains assessed. African American report the highest levels of **Racial/Ethnic Conflict** and **Disciplinary Harshness** and the lowest levels of **Fairness, Respect for Diversity,** and **Student Peer Relationships**. The results for **Racial/Ethnic Conflict** are particularly noteworthy. African American students are far more likely than other groups to perceive that racial/ethnic conflict is high, followed by American Indian, Latinx, and Pacific Islander students. White students perceive lower levels of racial/ethnic conflict than all the other groups.

[3] Other items not included in the analysis are used as single-item indicators.

California School Staff Survey

Constructs Measured. The staff survey questions measure 17 dimensions of school climate (see Table A).[4] The results are consistent with other psychometric analyses (Hanson & Voight, 2014) and with how the instrument is used.

Discriminant Validity. Discriminant validity is questionable. The **Student Learning Environment** measure is strongly correlated with **Staff Working Environment**, **Staff Collegiality**, **Caring Staff-Student Relationships**, and **Promotion of Parental Involvement**. Strong correlations are also evident between **Staff Working Environment** and **Staff Collegiality**, **Staff Relationships** and **Caring Staff-Student Relationships**, and **Student Meaningful Participation** and **Instructional Equity**. Although these domains overlap both conceptually and empirically, separate measures of these six domains are retained because of their usefulness in school improvement efforts.

Item Bias. Differential item functioning was investigated across school type, staff role, and staff race/ethnicity.

- For school type, differences in measurement intercepts were significant enough to have consequences for school type comparisons on the underlying constructs for six domains: **Instructional Equity**; **Meaningful Student Participation**; **Student Readiness to Learn**; **Disciplinary Harshness**; **Substance Use, Mental Health, and Absenteeism Problems**; and **Student Antisocial Behavior**. Several items should be dropped from the composite scales when comparisons are being made across elementary, middle, and high schools.
- For staff role, differences in measurement intercepts were significant enough to have consequences for comparisons on two factors: **Student Meaningful Participation** and **Disciplinary Harshness**. The meaning of the item asking about equal opportunities to participate in classroom activities appears to differ for teachers and other staff. This item should either not be used or at least used with caution in the **Student Meaningful Participation** scale when comparisons are made across staff roles. The **Disciplinary Harshness** item that asks about teacher strictness has a different meaning for teachers than it does for paraprofessionals and classified staff. The item should be used with caution in the **Disciplinary Harshness** scale.
- No evidence of substantively meaningful bias across racial/ethnic group on the California School Staff Survey items was evident.

Reliability. The reliability of 16 of the 17 constructs assessed exceeded 0.70 for all subgroups. A low reliability was estimated for the **Substance Use, Mental Health, and Absenteeism Problems** scale in elementary schools. Because of its low reliability and differential item functioning across school type, the **Substance Use, Mental Health, and Absenteeism Problems** scale should not be used for elementary schools. The remaining 16 measures demonstrate good internal consistency reliability.

[4] Other items not included in the analysis are used as single-item indicators.

Demographic Differences. Across almost all the measures, elementary staff report higher levels of school climate and student well-being than middle and high school staff. The advantages for elementary schools and disadvantages for high schools are particularly apparent for **Student Learning Environment**, **Caring Adult-Student Relationship**, **Promotion of Parental Involvement**, **Support for Social Emotional Learning**, and **School Disorder**. Elementary and NT schools exhibit similar scores on **Student Learning Environment**, **Working Environment**, **Staff Collegiality**, **Respect for Diversity**, **Caring Adult-Student Relationships**, and **Support for Social Emotional Learning**. Middle schools exhibit the lowest scores of all school types on **Student Peer Relationships** and the highest scores on **Antisocial Behaviors**.

School administrators have different perceptions of the school climate characteristics of their schools than other school staff. **Administrators report substantially more positive (or less negative) scores than other staff on almost all of the measures.** African American staff and staff categorized as other report lower levels of positive school climate and higher levels of school problems than other staff. African American/white disparities in school support and well-being are pronounced across most of the measured constructs.

California School Parent Survey

Constructs Measured. The parent survey questions measure six dimensions (see Table A).[5] An important difference between the parent model and the student/staff models is that the parent Student Learning Environment factor is more global and is based on far more items.

Discriminant Validity. Most of the correlations between factors are sufficiently small to justify keeping the domains separate. However, **Student Learning Environment** is strongly correlated with **Promotion of Parental Involvement** and **Substance Use Problems** is strongly correlated with **School Disorder**. These domains overlap considerably. Although debatable, separate measures of these four domains are retained to maintain comparability with the student and staff survey measures.

Item Bias. Differential item functioning was investigated across school type, grade level of students, staff role, parent race/ethnicity, and free/reduced-price meals.

- For school type, race/ethnicity, and free/reduced-price meals, the meaning of the survey items asking about PTA meeting attendance and attendance at regularly scheduled parent-teacher conferences differ across subgroups. Comparisons across groups on these items should be examined in addition to comparing the overall level of **Parental Involvement in School**.
- No substantively meaningful bias across grade level groups on the California Parent Survey items was evident.
- As was the case for school type, the meaning of the survey items asking about PTA meeting attendance and attendance at regularly scheduled parent-teacher conferences differ for white

[5] Other items not included in the analysis are used as single-item indicators.

and non-white parents. Comparisons across racial and ethnic groups on these items should be routinely examined.

- The meaning of most of the items that measure **School Disorder** differ across racial and ethnic groups. Comparisons across racial and ethnic groups on the individual items should be examined. The overall **School Disorder** scale should not be used because of the extensive measurement invariance found on the items that comprise the scale.

Reliability. Reliability for five of the six constructs exceeded 0.70 for all subgroups. The reliability of the **Parental Involvement at School** scale falls slightly below the threshold. The **Parental Involvement at School** scale should be used with caution given its low reliability and the estimated bias described above. The remaining five measures demonstrate good internal consistency reliability.

Demographic Differences.

Differences across school type are consistent across measures – parents of elementary students report higher scores with regards to the **Student Learning Environment**, **Promotion of Parental Involvement**, **Communications with Parents about School**, and **Parental Involvement at School** than parents of middle and high schoolers. In general, the parents of high school students exhibit the lowest scores while parents of middle school students exhibit scores that lie between those of parents of elementary and high school students. Differences across student grade level are consistent with those for school type.

Racial/ethnic disparities vary by domain. Filipino and Latinx parents report the highest scores on **Student Learning Environment**, **Promotion of Parental Involvement**, and **Communication with Parents about School**, while whites and those classified as other report the lowest levels. However, white parents report the highest levels of **Parental Involvement at School**, followed distantly by parents of Asian/Pacific Islander and Filipino decent. African American and Latinx parents report the lowest levels of **Parental Involvement at School.** Similarly, parents of students eligible for free/reduced-price meals exhibit higher scores on **Student Learning Environment**, **Promotion of Parental Involvement**, and **Communication with Parents about School**, but substantially lower levels of **Parental Involvement at School**.

Introduction

The California School Climate, Health, and Learning Survey (CalSCHLS) system was created by the California Department of Education (CDE) in 1997 to efficiently and cost-effectively provide school districts and their partner communities with quality local data which can be used to improve the student academic performance and social-emotional, behavioral, and physical health of youth. It assesses key indicators linked to success in school, career, and life. The majority of districts in California now use CalSCHLS data as Local Control and Accountability Plan (LCAP) indicators.

The survey system is comprised of three interrelated surveys:

- an elementary and secondary student survey (the California Healthy Kids Survey or CHKS),
- a staff survey (California School Staff Survey or CSSS), and
- a parent survey (California School Parent Survey or CSPS).

Although each of these surveys have been extensively validated (Hanson, 2011; Hanson, 2012; Hanson & Kim, 2007; Hanson & Voight, 2014), the content of the surveys has been refined over time and there is a further need to conduct psychometric research to provide evidence supporting their validity. Moreover, potential item bias across subgroups of respondents has not been extensively investigated.

The purpose of this report is to confirm the measurement structure of the CalSCHLS system surveys established in prior research and to ascertain the extent to which survey questions may be biased for different groups of survey respondents (e.g., different racial/ethnic groups or grade levels). The issue of item bias (differential item functioning) is important for interpretation of survey results. For example, if a survey question intended to measure school connectedness is biased for different gender groups, then the questionnaire response does not mean the same thing for males and females. Such biases make subgroup comparisons difficult to interpret. This report also examines the reliability of derived scales from the CalSCHLS instruments, both overall and for various subgroups. Such reliability information is important in that it provides information on the precision of average scale scores for groups.

The first section of the report briefly describes the surveys that comprise CalSCHLS—the CHKS elementary and secondary student surveys, the CSSS, and the CSPS. This is followed by a description of the methodology used to ascertain the measurement structure of the surveys as well as how potential item bias is detected. Subsequent sections provide psychometric results for each survey.

The California School Climate, Health, and Learning Survey

Developed collaboratively by the California Department of Education and WestEd, the CalSCHLS system consists of surveys for students, school staff, and parents for elementary, middle, and high schools. The content of the three surveys is aligned so that responses on common questions and summary measures can be examined across stakeholders. The surveys are administered extensively across California (Table 1). Historically, districts participating in CalSCHLS administered the surveys every other year, but increasingly districts administer the survey annually. Between 2017/18 and 2018/19, almost 30% of districts in the state administered the CHKS annually. Designed as a flexible system for meeting multiple needs, all three surveys can be customized by combining different modules and adding questions. Each of the surveys consist of a standardized Core Module and a series of supplementary topic-focused modules that districts can elect to administer. In addition, districts may add their own questions in a custom module.

This report provides results from data collected from the Core Module of each survey and the Secondary Student School Climate Module. All data analyzed were collected during the 2017/18 academic year.

TABLE 1

Summary of CalSCHLS Administration (2017/18–2018/19)

Survey	Districts	Schools	Respondents
Students (CHKS)	743	5,545	1,418,637
Staff (CSSS)	434	3,132	122,443
Parents (CSPS)	301	2,392	330,295

Source: 2017/18 and 2018/19 CalSCHLS student, staff, and parent surveys.

Elementary California Healthy Kids Survey

The Core Module of the Elementary CHKS is comprised of 77 questions about student perceptions and experiences related to school climate and safety, pupil engagement, developmental supports, supports for social emotional learning and positive behavior, parental involvement in school, and health-related and behavioral learning barriers. The elementary survey assesses many of the same or similar items as the secondary school version so that cross-survey comparisons can be made—although the wording is simpler and developmentally appropriate for earlier grades. The elementary survey was designed to be administered to students in grade 5, but several districts also routinely administer the survey to students in grades 3, 4, and 6. It is therefore important to examine the extent to which the survey items mean the same thing for students across elementary grades. The elementary CHKS was administered to

238,964 students, in 3,034 schools served by 527 districts in 2017/18 and 2018/19—representing approximately 50% of elementary schools in the state. The majority of participating schools—81%—administer the Core Module only. The most popular supplemental survey modules are the Social and Emotional Health Module (20% of schools) and the Custom Module (8% of schools).

Secondary School California Healthy Kids Survey

The Secondary CHKS is administered in schools serving students in grades 7 through 12. The Core Module is comprised of 77 questions about student perceptions and experiences related to school climate and safety, pupil engagement, developmental supports, positive behavior, parental involvement in school, and health-related and behavioral learning barriers. The Secondary School Climate Module consists of 55 questions asking about aspects of school climate not assessed by the Core Module, including learning supports; perceptions of students' school engagement; fairness, harshness, and clarity of disciplinary practices; student peer relationships; and support of social emotional learning. The secondary Core CHKS was administered to 1,179,951 in 2,953 schools and 717 districts in 2017/18 and 2018/19, representing 70% of districts and 52% of schools in the state. The School Climate Module was administered in about 30% of schools that administered the Core Module.

California School Staff Survey

The California School Staff Survey (CSSS) assesses the perceptions and experiences of K-12 teachers, administrators, and other school personnel. School districts are advised to administer the CSSS to all staff at each school, although administration practices vary across districts and schools. The CSSS consists of two sections, the first for all staff and the second for staff with responsibility for services or instruction related to health, prevention, discipline, counseling, and/or safety. This study only uses the first section of the CSSS intended for all staff. That section includes 102 questions designed to assess perceptions of the learning environment (e.g., school is a supportive and inviting place for students to learn), the work environment, staff relationships, caring staff-student relationships, parental involvement in school, and other aspects of school climate also assessed on the student surveys. In the 2017/18 to 2018/19 period, 122,443 staff in 3,132 schools and 434 districts took the CSSS.

California School Parent Survey

Participation in the California School Parent Survey (CSPS) has increased substantially, from 84 districts (499 schools) in 2013/14 to 224 districts (1,860 schools) in 2017/18. Comprised of 64 questions, the CSPS was designed to assess parent perceptions about several dimensions of school climate, including parental involvement at shool, school supports, the discipline and safety environment, and perceptions of learning-related student behaviors. Between 2017/18 to 2018/19, the CSPS was administered to 330,295 parents in 2,392 schools and 301 school districts.

Analytic Strategy

As described in the introduction, this study has three purposes:

1. To confirm that the CalSCHLS survey items assess the dimensions that they are intended to assess based on prior research.
2. To ascertain the extent to which CalSCHLS survey questions may be biased for different groups of survey respondents.
3. To assess the reliability of derived CalSCHLS scales.

Measurement Structure

To address the first purpose, Confirmatory Factor Analysis (CFA) models were estimated to test empirically whether the factor structure of each survey instrument was consistent with current usage and the underlying conceptual model. The study employed Muthén and Muthén's (2012) Mplus 7 statistical modeling program to obtain parameter estimates for the CFA models.

In the general factor analysis model, the relationship between the questionnaire items (*y**) and the underlying constructs (η) can be represented by:

$$y^* = \nu + \Lambda\eta + \varepsilon \,, \qquad [1]$$

where ν is a vector of measurement intercepts, Λ is a matrix of measurement slopes (factor loadings), and ε is a matrix of residuals, assumed to be independent of η and with zero expectation. The model implies the following covariance matrix of *y**:

$$\Sigma = \Lambda\Psi\Lambda' + \Theta \,, \qquad [2]$$

where Ψ is the covariance matrix of η and Θ is the covariance matrix of ε (see Long, 1983).

In general, the indicators *y** are assumed to be normally distributed, latent continuous variables. A person's observed score on item *y* depends on her/his position on *y**. Because the observed items are dichotomous or ordinal (measured using Likert-type response options), each item (*y*) is linked to the latent continuous variable (*y**) in a nonlinear way through a model of thresholds (see Muthén, 1984). The relationships between an observed ordinal or dichotomous item *y* with *c* categories to y* can be expressed as:

$$y = c, if\ \tau_c < y^* \leq \tau_{c+1} \,, \qquad [3]$$

for c = 0, 1, 2,…, c-1. The τs represent threshold parameters. Muthén's (1987) approach models the relationships among these more fundamental latent *y** variables. With ordinal items, polychoric correlations represent the correlations of the underlying continuous *y** variables.

The measurement model is estimated by minimizing the weighted least squares (WLS) fitting function

$$WLS = {}^{1}/_{2}\,(s-\sigma)'W^{-1}(s-\sigma), \qquad [4]$$

where *s* is a matrix of sample statistics (probit thresholds, probit regression coefficients, and polychoric correlations), σ is a matrix of the population counterparts to *s* implied by equation **[A2]**, and *W* is the covariance matrix for the vector or sample statistics.[6]

The decision-making criterion for determining whether the CFA model was adequate was based on assessing how well the model fit the empirical data. Three fit indices were used to make this determination: the room mean square error of approximation (RMSEA), the comparative fit index (CFI), and the Tucker-Lewis index (TLI). A smaller value of RMSEA and larger value of CFI and TLI indicate better model fit. A rule of thumb for a "good fit" for a model is a RMSEA value of 0.06 or lower and CFI/TLI values above 0.90, preferably greater than 0.95 (Hu & Bentler, 1999). All baseline CFA models met the criterion of adequate fit (see Table A1 in Appendix A).

Item Bias

The second purpose of this report is to assess item bias, or differential item functioning (DIF). DIF is a phenomenon that negatively affects the quality of instruments by distorting actual differences in similarly themed items or groups or items (i.e., scale scores). This distortion happens when individuals respond differently to an item because of factors other than the level of the construct that is being measured by the item. For example, one of the constructs measured in the CHKS is violence victimization, a construct that accounts for the degree to which individuals are subject to different kinds of violent behaviors, including being pushed and/or being subject to mean rumors. For a constant level of violence victimization, males and females should score the same on the items that are part of this factor if the items were perfectly unbiased. However, if, for the same level of violence victimization, males reported being subject to a higher frequency of being pushed, this would suggest that the item does not mean the same thing for males and females, at least not with reference to the violence victimization construct. In this case the item would be found to exhibit DIF.

To assess potential item bias, MIMIC (multiple indicator multiple cause) structural equation modeling is used to test for DIF across subgroups (e.g., grade, gender, ethnicity). Assessing DIF using MIMIC modeling involves two steps. First, a CFA model with covariates is estimated in which subgroup means of the underlying construct are estimated but all direct effects of the covariates on the individual items (i.e., measurement intercepts) are constrained to be zero. Items with potential DIF are detected by

[6] Muthén's WLSMV estimator was used to obtain model estimates. This estimator uses the diagonal of the weight matrix to obtain parameter estimates and the full weight matrix to obtain standard errors and measures of model fit (Muthén, duToit, & Spisic, 1997).

examining modification indices and expected parameter change values of the constrained measurement intercepts from this model. The second step is to estimate an additional CFA model similar to the first, but with measurement intercepts unconstrained for the candidate items exhibiting DIF from the first model. Estimates from the second model provide information on the magnitude of DIF for each item. Comparisons of the means of the underlying constructs across the two models provide information on the consequences of DIF group differences on the constructs (i.e., comparing scale means).

An applied strategy is used in the analysis to ascertain whether group differences in measurement intercepts have substantive implications for comparisons of construct scores across groups. Recommendations for item changes are made only when the measurement intercepts differ by more than 0.20 standard deviations and such differences affect group differences on the underlying construct by more than 0.10 standard deviations. Measurement intercept differences and the resulting group differences in factor means that are smaller than that are unlikely to have substantive significance.

Construct Reliability

To assess reliability of the scales (Purpose 3), internal consistency estimates of the reliability of the derived scales were calculated using Cronbach's alpha for each subgroup. Nunnaly's (1978) criterion of 0.70 was used as the cutoff for determining acceptable internal consistency reliability. Because of the typically low internal consistency evident in surveys of elementary school students, this criterion was relaxed slightly to 0.60. Generally, internal consistency reliability indicates how well a measure can be used to assess individual differences between respondents on that measure. The higher the reliability, the more likely the measure can be used to correctly distinguish respondents across different levels. Typically, a measure that includes more items has greater reliability.

Group Differences in the Underlying Constructs

To assess construct validity, differences in the underlying scales across demographic subgroups are also examined, based on the results of the MIMIC models that constrain all measurement intercepts to be invariant across groups. Standardized group means are presented, with the mean of the reference group (e.g., grade 5, males) set to 1.

Results

Elementary California Healthy Kids Survey

Data

The psychometric analysis of the elementary survey is based on data collected in 2017/18. Two different samples are used. To estimate the base CFA model and examine potential item bias related to student gender, the analytic sample includes 111,402 students from 2,345 schools. To examine potential item bias across grade level, a subsample of schools that surveyed students in multiple elementary grades is used. This subsample is used so that potential differences across schools that do and do not choose to administer the CHKS in multiple elementary grades is taken into account. This sample includes 17,432 students from 161 schools. Table 2 describes the analytic sample and the distribution of observations across gender and school grade. Respondent gender and grade are based on self-report survey items on the elementary survey.[7]

Measurement Structure

A 12-factor CFA model was estimated for the elementary school sample (see Table A1 in Appendix A for model fit statistics). The 12-factor CFA revealed distinct factors for the following constructs:

- School Connectedness
- Caring Staff-Student Relationships
- Student Meaningful Participation
- Fairness
- Support for Social Emotional Learning
- Antibullying Climate
- Academic Motivation
- Prosocial Behavior
- Violence Perpetration
- Violence Victimization
- Parent High Expectations
- Parental Involvement in Schooling

Table 3 shows the items associated with each construct and standardized factor loadings from the CFA model. The standardized loadings represent the relationship between the underlying factors and each item in standard deviation units. The higher the loading, the better the questionnaire item differentiates students with respect to their scores on the underlying factor. The average loading across all the constructs is 0.71, indicating that the items are moderately to strongly correlated with the underlying factors. **Overall, the results suggest that the instrument measures the dimensions of school climate**

[7] Survey respondents are excluded from the analytic sample if their self-reported grade is not served by the school. For example, if a student reports that she/he is in grade 4 and the school does not serve grade 4 students, grade is recoded to missing and the observation is excluded from the analytic sample.

and student well-being that it is intended to measure. The vast majority of items are strongly correlated with the underlying factors, which indicates that the questionnaire items adequately differentiate students on the measures. However, two issues regarding the patterns of factor loadings should be noted:

- Compared to other dimensions, the items assessing opportunities for **Student Meaningful Participation** are less strongly correlated with the underlying factor. This suggests that these items do less well in differentiating student scores than the items associated with other constructs. However, four of the seven items have loadings greater than 0.6 and only one item (*20. Do your teachers ask you what you want to learn about?*) has a loading less than 0.5, suggesting that underlying factor explains sufficient variance of the included items.
- One item used to assess **School Connectedness** (*7. Do you feel close to people at this school?*) has a low factor loading (0.368), indicating that the item does not differentiate students well with regards to this construct.[8] Still, the underlying factor accounts for about 25% of the variance on this item.

Table 4 shows the correlations between the 12 factors to assess whether they are sufficiently distinct from one another to justify representing them as different constructs. In general, the correlations are sufficiently small to justify keeping them separate—although the correlation between **Antibullying Climate** and **Support for Social Emotional Learning** is relatively high (0.85). Because the items assessing these two domains differ substantially with regards to their content and are clearly aligned with the intended constructs, separate measures of Antibullying Climate and Support for Social Emotional Learning are retained.

Item Bias

As described in the Analytic Strategy section, MIMIC modeling is used to test for differential item functioning. For the elementary survey, this involved estimating differences in measurement intercepts and factor means across grade and gender.

Grade Levels. Table 5 shows measurement intercept differences across elementary grades, relative to grade 5.[9] Only differences greater than +/-0.20 standard deviations are estimated. In total, differences in measurement intercepts across grade 3 and 5 were detected for 15 items that measure seven constructs. In addition, one measurement intercept difference between grade 4 and 5 was detected (*72. Does a parent/grown-up at home check your homework?*). However, in no case did accounting for these measurement intercept differences affect grade comparisons on the underlying constructs (i.e., School Connectedness, Academic Motivation, etc.) by more than 0.10 standard deviations. Therefore, **item bias across elementary grades is not substantial enough to meaningfully affect inferences about grade level differences on the underlying constructs.**

[8] The school connectedness items were originally developed by Resnick et al (1997) for the Add Health study. The original scale included five items. Modified versions of the Add Health school connectedness items are also included on the secondary CHKS.

[9] See notes in Table 5 for an explanation of the meaning of the measurement intercepts and consequence of DIF for factor means.

Gender. Differences between males and females in measurement intercepts are present for five items (Table 6), but such differences do not meaningfully alter gender differences in the underlying constructs. **Substantively meaningful gender bias on the Elementary CHKS items was not evident.**

Construct Reliability

Table 7 presents internal consistency reliability estimates based on Cronbach's alpha for the total sample, by grade, and by gender. Reliability for all but one of the constructs exceeded the 0.60 threshold across most of the subgroups and nine exceeded Nunnaly's (1978) threshold of 0.70. However, **the reliability of the Violence Perpetration scale ranged from 0.50 to 0.56 across subgroups, which is unacceptably low. The Violence Perpetration items should not be used to comprise a scale.**

Demographic Differences on the Measured Constructs

Standardized construct means for each grade and for males and females are presented in Figures 1 and 2, respectively.

Grade Levels. Several pattens are evident with regard to differences across elementary school grades:

- Scores are highest (more positive) for grade 3 students and decline for each succeeding grade for six of the 12 measures: **School Connectedness, Caring Staff-Student Relationships, Student Meaningful Participation, Fairness, Support for Social Emotional Learning,** and **Antibullying Climate**. This is consistent with a developmental pattern of declines of perceptions of school supports and connectedness to school as students progress through elementary school.
- Conversely, grade 3 students report the highest level of **Violence Victimization** (1.31), followed by students in grade 4 (1.10), grade 5 (1.00), and grade 6 (0.96). **Parent High Expectations** are also substantially lower among grade 3 students than other students (0.66 vs. ~1.00), perhaps due to increases in academic requirements as students progress through elementary school.
- **Violence Perpetration**, which prior analyses suggests does not exhibit adequate reliability, appears to decline between grade 3 (1.05) and grade 4 (0.94), and then increase in subsequent grades (1.00 and 1.11).
- **Academic Motivation** and **Prosocial Behavior** increase between grades 3 and 4 and then decline in grade 5 and again in grade 6. Similarly, **Parental Involvement in School** increases between grades 3 and 4, remains stable in grades 4 and 5, and then declines in grade 6.

Gender. Females consistently score higher than males on all the indicators of well-being and positive school climate (including less exposure to Violence Victimization and less participation in Violence Perpetration). The consistency of female advantage across these 12 indicators is striking.

TABLE 2

Elementary CHKS Analytic Sample (2017/18)

Survey/Subgroup	Respondents	Percentage
Elementary CHKS	111,402	100.0
Grade 3*	1,609	9.2
Grade 4*	3,503	20.1
Grade 5*	6,684	38.3
Grade 6*	5,636	32.3
Female	57,324	51.5
Male	54,078	48.5

Source: 2017/18 Elementary CHKS. *Notes*: *Sample used to examine item bias across elementary grades is a subsample comprised of schools that administered the Elementary CHKS across multiple grades.

TABLE 3

Base Elementary CHKS Confirmatory Factor Analysis Model

#	Item	Loading
	School Connectedness	
7.	Do you feel close to people at school?	0.368
8.	Are you happy to be at this school?	0.746
9.	Do you feel like you are part of this school?	0.709
56.	Do you feel safe at school?	0.751
	Caring Staff-Student Relationships	
14.	Do the teachers/grown-ups at school care about you?	0.765
15.	Do the teachers/grown-ups at school tell you when you do a good job?	0.639
22.	Do the teachers/grown-ups at school listen when you have something to say?	0.736
23.	Do the teachers/grown-ups at school believe that you can do a good job?	0.757
25.	Do the teachers/grown-ups at school make an effort to get to know you?	0.657
26.	Do the teachers/grown-ups at school want you to do your best?	0.705
	Student Meaningful Participation	
13.	Are you given a chance to help decide school activities or rules?	0.561
16.	Do the teachers/grown-ups school ask you about your ideas?	0.681
17.	Do the teachers/grown-ups give you a chance to solve school problems?	0.561
18.	Do you get to do interesting activities at school?	0.699
19.	Are you given a chance to help decide class activities or rules?	0.626
20.	Do your teachers ask you what you want to learn about?	0.496
24.	Do you do things to be helpful at school?	0.633

#	Item	Loading
	Fairness	
27.	Are the school rules fair?	0.725
12.	Do teachers treat students fairly at school?	0.746
28.	Do teachers/grown-ups at school treat students with respect?	0.816
29.	Are students treated fairly when they break school rules?	0.534
	Support for Social Emotional Learning	
32.	Does your school help students resolve conflicts with one another?	0.727
33.	Does your school teach students to understand how other students think and feel?	0.689
34.	Does your school teach students to feel responsible for how they act?	0.709
35.	Does your school teach students to care abt each other/treat each other with respect?	0.760
	Antibullying Climate	
36.	Do the teachers/grown-ups make it clear that bullying is not allowed?	0.704
37.	If you tell a teacher that you've been bullied, will the teacher do something to help?	0.778
38.	Do students at your school try to stop bullying when they see it happening?	0.597
	Academic Motivation	
39.	Do you finish all your class assignments?	0.573
40.	When you get a bad grade, do you try even harder the next time?	0.815
41.	Do you keep working and working on your schoolwork until you get it right	0.801
42.	Do you keep doing your classwork even when it's really hard for you?	0.779
	Prosocial Behavior	
43.	Do you follow the classroom rules?	0.801
44.	Do you follow the playground rules at recess and lunch times?	0.777
45.	Do you listen when your teacher is talking?	0.735
46.	Are you nice to other students?	0.780

#	Item	Loading
	Violence Perpetration	
47.	Past year, how many times have you hit or pushed other kids at school when you were not playing around?	0.777
48.	Past year, how many times have you spread mean rumors or lies about other kids at school?	0.703
49.	Past year, how many times at school have you said mean things about other students or called them bad names?	0.826
	Violence Victimization	
50.	Do other kids hit or push you at school when they are not just playing around?	0.759
51.	Do other kids at school spread mean rumors or lies about you?	0.815
53.	Do other kids at school call you bad names or make mean jokes about you?	0.904
	Parent High Expectations	
69.	Does a parent/grown-up at home believe that you can do a good job?	0.870
70.	Does a parent/grown-up at home want you to do your best?	0.902
	Parental Involvement in Schooling	
68.	Does a parent/grown-up at home care about your schoolwork?	0.803
71.	Does a parent/grown-up at home ask if you did your homework?	0.706
72.	Does a parent/grown-up at home check your homework?	0.600
73.	Does a parent/grown-up at home ask you about school?	0.664
74.	Does a parent/grown-up at home ask you about your grades?	0.639

Source: 2017/18 Elementary CHKS.

TABLE 4

Elementary CHKS Factor Correlations

Domain	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) School Connectedness	1.00										
(2) Caring Staff-Student Relat.	0.75	1.00									
(3) Meaningful Participation	0.65	0.79	1.00								
(4) Fairness	0.75	0.83	0.62	1.00							
(5) Support for SEL	0.66	0.79	0.67	0.77	1.00						
(6) Antibullying Climate	0.71	0.79	0.60	0.80	0.85	1.00					
(7) Academic Motivation	0.53	0.52	0.48	0.46	0.46	0.47	1.00				
(8) Prosocial Behavior	0.57	0.53	0.47	0.60	0.49	0.54	0.72	1.00			
(9) Violence Victimization	-0.40	-0.31	-0.23	-0.43	-0.28	-0.39	-0.45	-0.73	1.00		
(10) Violence Perpetration	-0.46	-0.32	-0.16	-0.40	-0.27	-0.45	-0.20	-0.34	0.58	1.00	
(11) Parent High Expectations	0.49	0.59	0.37	0.44	0.46	0.49	0.56	0.48	-0.31	-0.26	1.00
(12) Parental Involvement in Schooling	0.41	0.45	0.45	0.35	0.42	0.41	0.52	0.43	-0.24	-0.12	0.77

Source: 2017/18 Elementary CHKS. Estimates come from base CFA Model.

TABLE 5

Elementary CHKS - DIF by Grade

		Measurement Intercept[a]		Difference in Factor Mean after DIF[b]	
#	Item	Grade 3	Grade 4	Grade 3	Grade 4
	School Connectedness			-0.03	
7.	Do you feel close to people at school?	-0.22			
8.	Are you happy to be at this school?	0.24			
	Fairness			-0.05	
27.	Are the school rules fair?	0.42			
29.	Are students treated fairly when they break school rules?	-0.35			
	Antibullying Climate			-0.06	
36.	Do the teachers/grown-ups make it clear that bullying is not allowed?	-0.35			
38.	Do students at your school try to stop bullying when they see it happening?	0.34			
	Academic Motivation			-0.01	
39.	Do you finish all your class assignments?	-0.30			
41.	Do you keep working and working on your schoolwork until you get it right?	-0.29			
	Violence Perpetration			0.03	
48.	Past year, how many times have you spread mean rumors or lies about other kids at school?	0.23			
49.	Past year, how many times at school have you said mean things about other students or called them bad names?	-0.25			

		Measurement Intercept[a]		Difference in Factor Mean after DIF[b]	
#	Item	Grade 3	Grade 4	Grade 3	Grade 4
	Violence Victimization			-0.03	
50.	Do other kids hit or push you at school when they are not just playing around?	0.23			
53.	Do other kids at school call you bad names or make mean jokes about you?	-0.20			
	Parental Involvement in Schooling			-0.02	-0.08
68.	Does a parent/grown-up at home care about your schoolwork?	-0.27			
72.	Does a parent/grown-up at home check your home-work?	0.54	0.24		
74.	Does a parent/grown-up at home ask you about your grades?	-0.25			

Source: 2017/18 Elementary CHKS. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of grade on the questionnaire item, relative to grade 5, after controlling for scores on the underlying factor. For example, the measurement intercept for item 7 on grade 3 indicates that even when third and fifth graders exhibit equal levels of school connectedness, third graders scores on feeling close to people at school are 0.22 standard deviations lower than those of fifth graders. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. For example, the -0.03 estimate for school connectedness means that mean difference between third and fifth graders are reduced by 0.03 standard deviations after accounting for DIF. In this case, the consequence of DIF for estimating grade-level difference in school connectedness are not substantively significant, partially because the DIF for items 7 and 8 cancel each other out. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 6

Elementary CHKS - DIF by Gender

		Measurement Intercept[a]	Difference in Factor Mean after DIF[b]
#	Item	Female	Effect on Factor Mean
	Student Meaningful Participation		-0.05
24.	Do you do things to be helpful at school?	0.22	
	Violence Perpetration		-0.08
47.	Past year, how many times have you hit or pushed other kids at school when you were not playing around?	-0.35	
48.	Past year, how many times have you spread mean rumors or lies about other kids at school?	0.26	
	Violence Victimization		0.01
50.	Do other kids hit or push you at school when they are not just playing around?	-0.26	
51.	Do other kids at school spread mean rumors or lies about you?	0.23	

Source: 2017/18 Elementary CHKS. Notes: [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of gender on the questionnaire item after controlling for scores on the underlying factor. For example, the measurement intercept for item 24 on females indicates that even when females and males exhibit equal levels of Student Meaningful Participation, females scores on doing things to be helpful at school are 0.22 standard deviations higher than those of males. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. For example, the -0.05 estimate for Student Meaningful Participation means that mean difference between females and males are reduced by 0.05 standard deviations after accounting for DIF. In this case, the consequence of DIF for estimating gender differences in opportunities for Student Meaningful Participation are not substantively significant. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 7

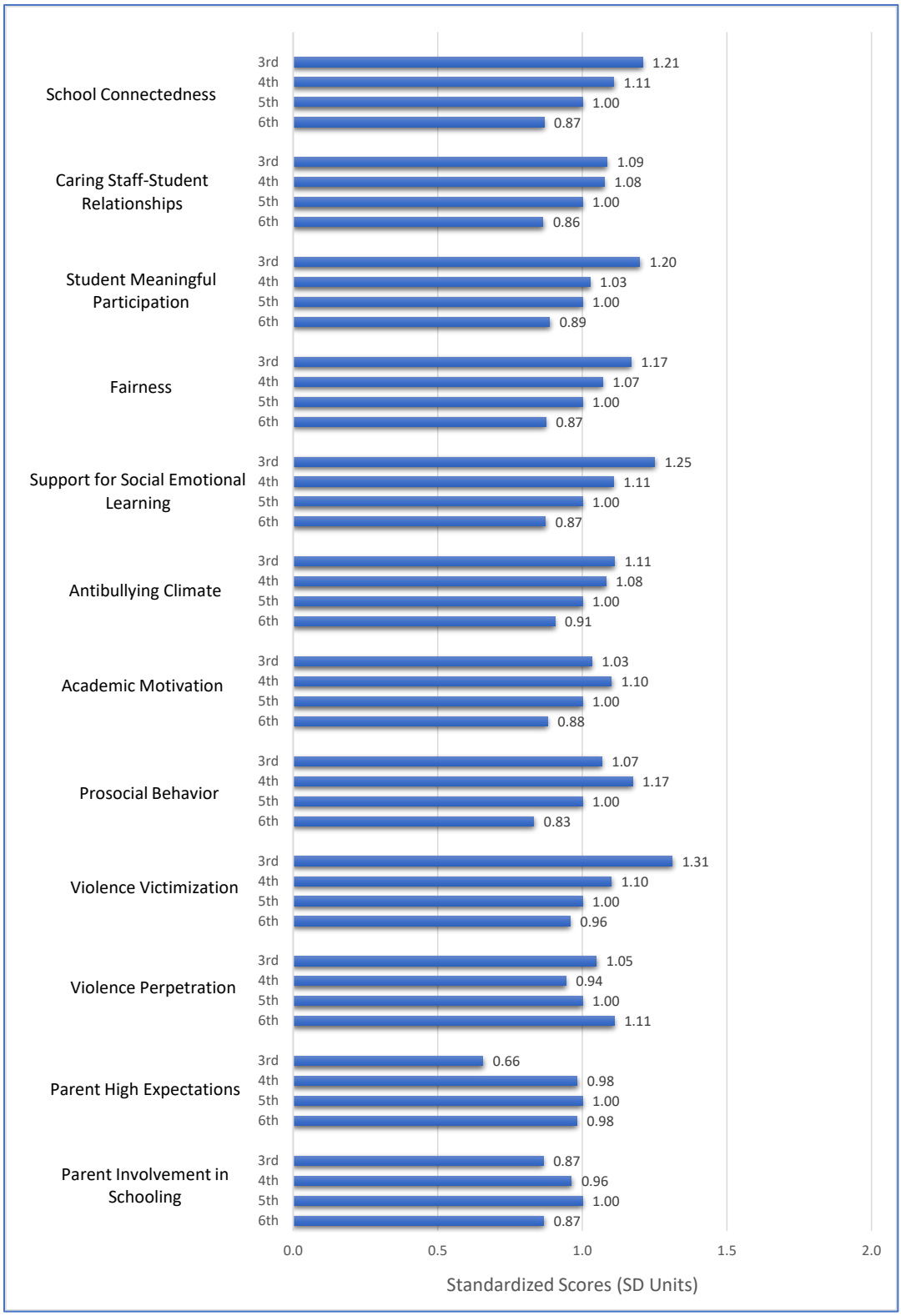
Elementary CHKS Construct Reliability Coefficients

Construct	Items	Total	Grade 3	Grade 4	Grade 5	Grade 6	Female	Male
(1) School Connectedness	4	0.68	0.66	0.64	0.68	0.72	0.69	0.66
(2) Caring Staff-Student Relationship	6	0.79	0.79	0.77	0.78	0.82	0.79	0.78
(3) Student Meaningful Participation	7	0.75	0.75	0.74	0.75	0.78	0.76	0.74
(4) Fairness	4	0.72	0.69	0.69	0.72	0.77	0.71	0.72
(5) Support for Social/Emot Learning	4	0.75	0.75	0.75	0.75	0.78	0.75	0.74
(5) Antibullying Climate	3	0.61	0.62	0.60	0.61	0.64	0.62	0.60
(6) Academic Motivation	4	0.76	0.76	0.75	0.75	0.78	0.75	0.75
(7) Prosocial Behavior	4	0.78	0.81	0.79	0.78	0.79	0.77	0.77
(8) Violence Victimization	3	0.70	0.76	0.71	0.69	0.69	0.68	0.70
(9) Violence Perpetration	3	0.52	0.56	0.53	0.51	0.51	0.50	0.53
(10) Parent High Expectations	2	0.70	0.73	0.68	0.70	0.75	0.69	0.70
(11) Parental Involvement in Schooling	5	0.71	0.69	0.67	0.71	0.74	0.72	0.69

Source: 2017/18 Elementary CHKS.

FIGURE 1

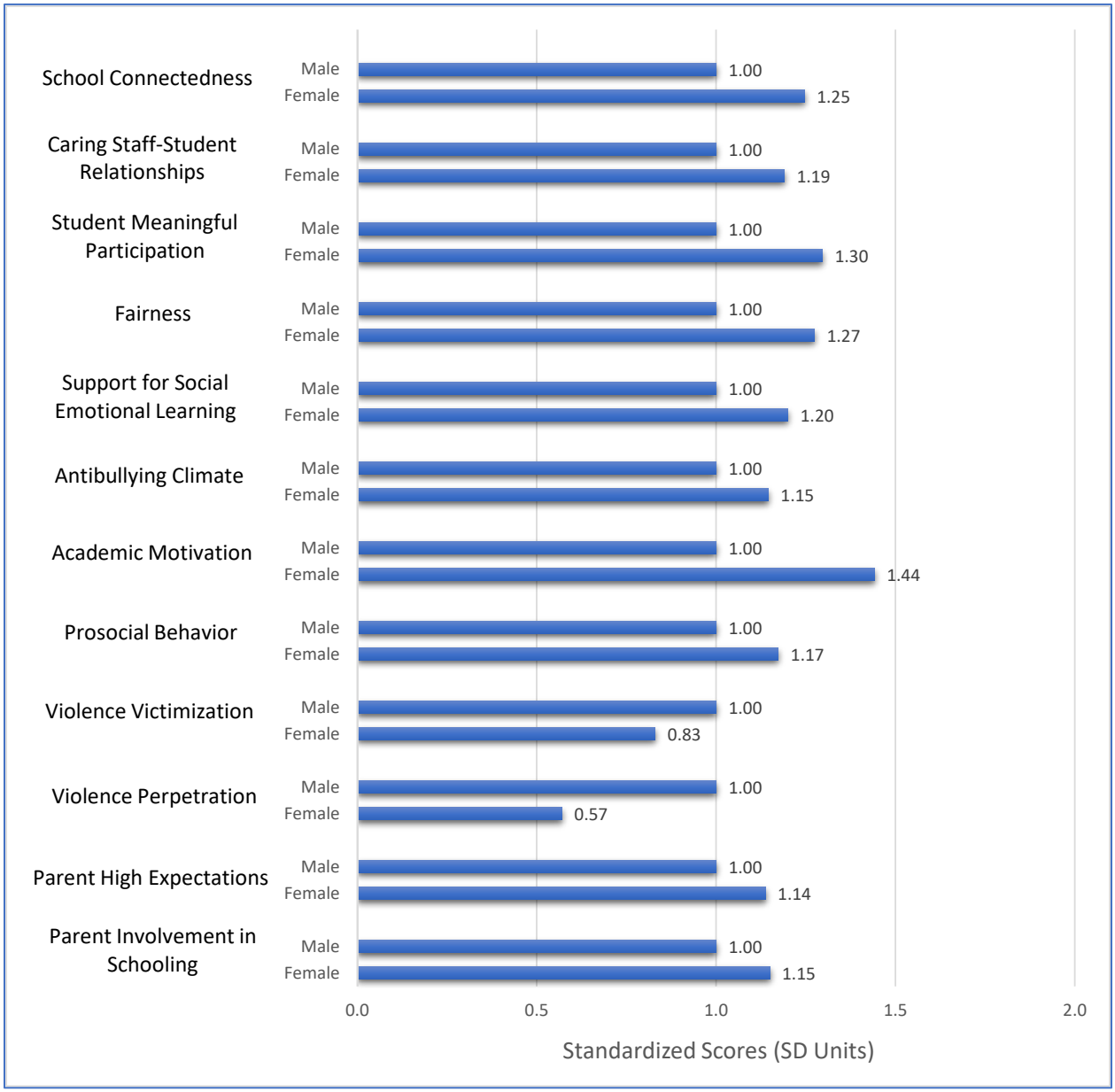
Elementary CHKS – Factor Means by Grade



Source: 2017/18 Elementary CHKS.

FIGURE 2

Elementary CHKS – Factor Means by Gender



Source: 2017/18 Elementary CHKS.

Secondary California Healthy Kids Survey Core Module

Data

The psychometric analysis of the secondary Core survey module is based on data collected from 556,961 students from 2,187 schools. Analyses are conducted across the following demographic characteristics: school grade (7, 9, 11, and non-traditional), gender (female, male), race/ethnicity (African American, American Indian, Asian, Latinx, Pacific Islander, White, and Multiethnic), and English language proficiency (English only, not English only–proficient, and not English only–not proficient).

School grade (7, 9, 11, and non-traditional) is based on both self-reported grade (*3. What grade are you in?*) and school type, as recorded by CDE in the California School Directory. Respondents who report that they are in grades 7, 9, or 11 who attend schools classified as elementary, intermediate/middle, junior high, K-12, or high schools are included in the analytic sample and grouped into the appropriate grade.[10] Students are classified as non-traditional if they attend schools identified as continuation, county community day, district community day, juvenile court, opportunity, or special education schools. Approximately 76% of non-traditional students attend continuation schools and 13% attend county community schools.

Gender is based on a single questionnaire item (*3. What is your sex?*) with two response options (male, female).

Race/ethnicity is based on two survey questions, one asking about ethnicity (*5. Are you of Hispanic or Latino origin?*) and a second asking about race (*6. What is your race?*). Respondents who indicate that they are of Hispanic or Latino origin are classified as Latinx regardless of their response choice on the race questionnaire item. Those who indicate they are not of Hispanic or Latino origin are classified based on their response to the questionnaire item asking about race. Item bias, scale reliability, and difference in means on the measured constructs are examined across seven racial/ethnic subgroups: African American, American Indian, Asian, Latinx, Pacific Islander, White, and Multiethnic.

English language proficiency is intended to be a rough proxy of English Learner status. It is based on one item that assesses respondents' home language (*12. What language is spoken most of the time in your home?*) and a set of four questions asking about English language proficiency (*13.–16. How well do you understand, speak, read, and write English?*). Respondents who report that they speak English most of the time in their home are categorized as "English only students." Those that report that they speak a non-English language most of the time at home are coded as "not English only students." The English

10 Respondents in schools classified as elementary, intermediate/middle, junior high, K-12, or high schools report that they are in even-number grades (6, 8, 10, 12) are excluded from the analytic sample because districts are not required (but are encouraged) to administer the survey in even-numbered grades. In addition, respondents are excluded from the analytic sample if their self-reported grade is not served by the school. For example, if a respondent reported that she/he was in grade 7 but attended a school that did not serve grade 7 students (based on the California School Director and CDE's school-level enrollment data), that respondent is excluded from the analytic sample.

proficiency status of "not English only students" is then determined by creating a scale score using the four survey questions about understanding, speaking, reading, and writing English. Response options are reverse coded so higher values indicate higher English proficiency (1 "Not at all," 2 "Not well," 3 "Well," and 4 "Very well"). The scale score is computed by averaging the survey responses across these four items. Respondents classified as "not English only students" are categorized as proficient or not proficient based on their scores on the English language proficiency scale, with those with scores greater than 3.5 categorized as proficient and those with scores less than or equal to 3.5 categorized as not proficient. This results in three subgroups: English only, not English only–English proficient, and not English only–not English proficient.

Table 8 describes the analytic sample and the distribution of observations across demographic subgroups.

Measurement Structure

A 9-factor CFA model was estimated for the secondary school sample (see Table A1 in Appendix A for model fit statistics). The model revealed distinct factors for the following constructs:

- School Connectedness
- Caring Staff-Student Relationships
- Student Meaningful Participation
- Academic Motivation
- Substance Use at School
- Violence Victimization
- Harassment/Bullying Victimization
- Delinquency
- Promotion of Parental Involvement

Table 9 shows the items associated with each construct and standardized factor loadings from the CFA model. As described above, the higher the loading, the better the questionnaire item differentiates students with respect to their scores on the underlying factor. The average loading across all the constructs is 0.81, indicating that the items are strongly correlated with the underlying factors. The results are consistent with other psychometric analyses of the core items (Hanson, 2011; Hanson & Voight, 2014) and with how the instrument is used. **The model indicates that the CHKS Core Module measures the dimensions of school climate and student well-being that it is intended to measure.**[11]

Table 10 shows that the correlations between the nine factors are sufficiently small to justify keeping them separate. The one exception is the correlation between **Violence Victimization** and **Harassment/Bullying** (0.86). It is debatable whether these two factors are empirically distinct, but because the harassment/bullying items capture harassment related to six bias-related categories (gender, race/ethnicity, religion, sexual orientation, mental disability, and immigrant status), it is

[11] Interestingly, the item with the smallest loading (0.65) is the first School Connectedness item (*22. I feel close to people at this school.*) – the same item that had a low factor loading on the elementary survey. However, 0.65 is still a reasonably large loading that differentiates students well on School Connectedness.

important to keep this measure distinct from violence victimization so that practitioners can monitor bias-related victimization.

Item Bias

MIMIC models are estimated to test for differential item functioning across secondary school grades, gender, race/ethnicity, and English language proficiency.

Grade Levels. Table 11 shows measurement intercept differences across secondary grades, relative to grade 11.[12] Differences in measurement intercepts across NT and grade 11 are evident for 10 items that measure five constructs, and across grades 7 and 11 for eight items that measure four constructs. However, in only one instance does accounting for measurement intercept differences affect grade-level comparisons on the underlying constructs by more than 0.10 standard deviations. NT students are less likely than grade 11 students to report that parents feel welcome to participate at the school (-0.27) even when both groups reported the same levels of school Promotion of Parental Involvement. This suggests that the item (*29. Parents feel welcome to participate at this school.*) has a different meaning for NT students. Before accounting for this measurement intercept difference, NT students' report levels of Promotion of Parental Involvement in School that are 0.11 standard deviations higher than that reported by grade 11 students. After accounting for this difference, Promotion of Parental Involvement scores are 0.23 standard deviations higher for NT students. To summarize, with one exception, **item bias across secondary grade levels is not substantial**. **The one exception is that the item asking students how welcome parents feel participating at the school appears to have different meanings for NT students and grade 11 students**. Caution should be used when comparing the Promotion of Parental Involvement scores of NT students with those of students from other secondary grades.

Gender. Differences between males and females in measurement intercepts is present for five items (Table 12), but such differences do not meaningfully alter gender differences in the underlying constructs by more than 0.10 standard deviations. **Substantively meaningful gender bias on the Secondary Core CHKS items is not evident.** Although substantively meaningful gender bias is not evident regarding the overall Harassment/Bullying Victimization construct, the measurement intercept for the item asking about harassment/bullying because of gender (*117. Harassed or bullied because of your gender*) is much larger for females than males (0.39). **Harassment because of gender certainly has a different meaning for females and males. Gender comparisons on this individual item should be examined as a matter of routine in addition to comparing the overall level of harassment across males and females.**

Race/Ethnicity. Table 13 displays measurement intercept differences between white students and students in other racial/ethnic groups. Significant (≥ 0.20 SD) measurement intercepts are present for 10 items assessing four constructs, but only for Harassment/Bullying are these different substantively meaningful. **Nearly all non-white racial/ethnic groups report higher levels of harassment because of race/ethnicity/national origin** (*114. Harassed or bullied because of your race, ethnicity, or national origin*) **and immigrant status** (*120. Harassed or bullied because you are an immigrant, or someone*

[12] See notes in Table 5 for an explanation of the meaning of the measurement intercepts and consequence of DIF for factor means.

thought you were) **even after controlling for overall levels of Harassment/Bullying Victimization**. Obviously, these items asking about **harassment/bullying due to race/ethnicity and immigrant status have different meanings for white students and students of color**. Moreover, white students are more likely than most other racial/ethnic groups to be harassed/bullied for other reasons that fall outside of the six bias-related categories (*121. Harassed or bullied because of any other reason*). Accounting for these measurement intercept differences diminishes the Harassment/Bullying Victimization scores for African American (-0.18), Asian (-0.12), and Pacific Islander (-0.11) students (Table 14). Because of these differences, **racial/ethnic group comparisons of overall scores of Harassment/Bullying Victimization should not be made because three of the seven items appear to have different meanings for racial/ethnic groups**.

English Language Proficiency. Differences in measurement intercepts between English only and not English Proficient students were evident for six items (Table 15), but the differences did not meaningfully alter group comparisons in the underlying constructs. **Substantively meaningful bias across English Language Proficiency groups on the Secondary Core CHKS items was not evident**. However, the measurement intercepts for harassment because of immigrant status (*120. Harassed or bullied because you are an immigrant, or someone thought you were*) for students who primarily spoke a non-English language at home were substantially larger (0.59 and 0.72) than those for English only students. Being harassed because of immigrant status likely has a different meaning for English only students and student who speak a non-English language. **Comparisons across English language proficiency groups on the harassment because of immigrant status item should be examined in addition to comparing the overall level of harassment across groups.**

Construct Reliability

Tables 16-18 show internal consistency reliability estimates for the total sample and by grade, gender, race/ethnicity, and English language proficiency. Reliability for all nine of the constructs exceeded Nunnaly's (1978) threshold of 0.70 for all subgroups with the exception of **Delinquency** for female students (0.68). Overall, all nine measures demonstrate good internal consistency reliability.

Demographic Differences on the Measured Constructs

Standardized construct means for demographic subgroups are presented in Figures 3 through 6.

Grade Levels. Several pattens of results are apparent.

- **School Connectedness**, **Academic Motivation**, and school **Promotion of Parental Involvement**, scores are highest (more positive) for grade 7 students and decline for each succeeding grade. While these positive indicators of wellness and school climate appear to decline with grade, two negative indicators of school climate, **Violence Victimization** and **Harassment/Bullying** also are highest in grade 7 and decline in a stepwise fashion with grade.
- Grade 7 students also report higher **Caring Staff-Student Relationships** and **Student Meaningful Participation** than students in high schools. Difference in these outcomes across high school grades are minimal.

- **Substance use at School** is substantially lower among grade 7 students than among grades 9 and 11 students, and it is substantially higher among NT students than among grades 9 and 11 students.

Gender. Although females consistently exhibited higher scores than males on the indicators of positive school climate and well-being on the elementary survey, these advantages are not as apparent on the secondary Core module measures.

- No gender differences were evident for **School Connectedness**, **Caring Staff-Student Relationships, Student Meaningful Participation**, and school **Promotion of Parental Involvement.**
- Females report higher **Violence Victimization** and **Harassment/Bullying** than males.
- Females scored higher than males on **Academic Motivation** and scored lower on **Delinquency**.

Race/Ethnicity. Racial/Ethnic disparities in school support and well-being are pronounced across most of the measured constructs.[13]

- White students report the highest level of **School Connectedness** across all racial/ethnic groups while African American students the lowest level. The School Connectedness scores of American Indian, Latinx, Pacific Islander, and Multiracial students' lie between those of Whites and African Americans.
- White students exhibit the highest level of **Caring Staff-Student Relationships**. Latinx students exhibit the lowest level. African American, American Indian, Asian, Pacific Islander, and Multiracial students exhibit scores between that of white and Latinx students.
- Across all the domains measured, **Student Meaningful Participation** varies the least across racial/ethnic groups. However, Latinx students report lower levels than the other groups.
- Asian students report the highest levels of **Academic Motivation** while African American report the lowest levels. Differences across the other racial/ethnic groups are small.
- **Substance Use at School** is highest among American Indian students, followed by Latinx and African American students. Asian students report the lowest Substance Use at School of all racial/ethnic groups.
- **Violence Victimization** is lowest among Asians, followed by Latinx students. Differences across the other racial/ethnic groups are minimal.
- African American and American Indian students report the highest **Delinquency**. Asians report the lowest levels.

[13] Results for Harassment/Bullying are not presented for each racial/ethnic group because the items were found to function differently across race/ethnicity.

- The school's **Promotion of Parental Involvement** is highest among Asian students and lowest among African American students. Differences across the other racial/ethnic groups are insubstantial.

English Language Proficiency. With some exceptions, disparities across English language proficiency groups tend to either be non-existent, favor English only students, or disadvantage students who are not English proficient.

- No significant differences are found across English language proficiency groups on **Student Meaningful Participation, Harassment/Bullying, Delinquency,** or **Promotion of Parental Involvement**.
- **School Connectedness** and **Caring Staff-Student Relationships** is highest among English only students, followed closely by English proficient students and students who are not English Proficient.
- **Academic Motivation** is highest for English proficient students, lowest for students who are not English proficient, and at the midpoint for English only students.
- Students who are not English proficient report substantially higher levels of **Substance Use at School** than English proficient students and English only students, who report similar levels to each other.
- Contrary to the pattern of the results for the other measures, **Violence Victimization** appears to be substantially higher for English only students than it is for the other two groups of students who primarily speak a non-English language at home.

TABLE 8

Secondary CHKS Analytic Sample (2017/18)

	Core Module		School Climate	
Survey/Subgroups	**Respondents**	**Percentage**	**Respondents**	**Percentage**
Secondary CHKS	556,961	100.0	157,368	100.0
Grace 7	197,818	35.5	45,112	28.7
Grade 9	185,904	33.4	57,847	36.8
Grade 11	156,254	28.1	49,759	31.6
Non-traditional	16,985	3.1	4,650	2.9
Female	263,858	50.0	68,555	50.6
Male	264,320	50.0	66,965	49.4
African American	19,597	3.5	4,655	3.0
American Indian	5,376	1.0	1,400	0.9
Asian	65,546	11.8	17,273	11.0
Latinx	273,166	49.0	80,335	51.1
Pacific Islander	7,278	1.3	1,912	1.2
White	120,418	21.6	35,025	22.3
Mixed	57,430	10.3	14,936	9.5
Missing	8,172	1.5	1,832	1.2
English only	350,438	63.7	98,326	63.2
English proficient	132,291	24.1	38,663	24.8
Not English proficient	67,025	12.2	18,601	12.0

Source: 2017/18 Secondary CHKS.

TABLE 9

Base Secondary CHKS Core Module Confirmatory Factor Analysis Model

#	Item	Loading
	Caring Staff-Student Relationships	
35.	teacher or adult who really cares about me	0.806
36.	teacher or adult who tells me when I do a good job	0.836
37.	teacher or adult who notices when I'm not there	0.737
38.	teacher or adult who always wants me to do my best	0.864
39.	teacher or adult who listens to me when I have something to say	0.851
40.	teacher or adult who believes that I will be a successful student	0.873
	Student Meaningful Participation	
41.	At school, I do interesting activities.	0.762
42.	At school, I help decide things like class activities or rules.	0.845
43.	At school, I do things that make a difference.	0.845
44.	At school, I have a say in how things work.	0.844
45.	At school, I help decide school activities or rules.	0.833
	School Connectedness	
22.	I feel close to people at this school.	0.649
23.	I am happy to be at this school.	0.835
24.	I feel like I am part of this school.	0.855
25.	The teachers at this school treat students fairly.	0.710
26.	I feel safe in my school.	0.735
	Academic Motivation	
31.	I try hard to make sure that I am good at my schoolwork.	0.857
32.	I try hard at school because I am interested in my work.	0.835

#	Item	Loading
33.	I work hard to try to understand new things at school.	0.894
34.	I am always trying to do better in my schoolwork.	0.872
	Promotion of Parental Involvement	
28.	Teachers communicate with parents about what students are expected to learn in class.	0.739
29.	Parents feel welcome to participate at this school.	0.797
30.	School staff takes parent concerns seriously.	0.759
	Substance Use at School	
77.	cigarettes on school property (30 days)	0.939
78.	smokeless tobacco on school property (30 days)	0.930
79.	electronic cigarettes, e-cigarette on school property (30 days)	0.864
80.	at least one drink of alcohol on school property (30 days)	0.874
81.	marijuana on school property (30 days)	0.910
82.	any other drug, pill, or medicine to get “high”… on school property (30 days)	0.936
	Violence Victimization	
100.	been pushed, shoved, slapped, hit, or kicked at school (12 months)	0.729
101.	been afraid of being beaten up at school (12 months)	0.697
103.	had mean rumors or lies spread about you at school (12 months)	0.836
104.	had sexual jokes, comments, or gestures made to you at school (12 months)	0.777
105.	been made fun of because of your looks or the way you talk at school (12 months)	0.846
106.	had your property stolen or deliberately damaged... at school (12 months)	0.701
114.	been made fun of, insulted, or called names at school (12 months)	0.871
122.	other students spread mean rumors/lies/hurtful pictures about you online…	0.785
	Delinquency	
102.	been in a physical fight at school (12 months)	0.681

#	Item	Loading
107.	been offered, sold, or given an illegal drug at school (12 months)	0.707
108.	damaged school property on purpose at school (12 months)	0.745
109.	carried a gun at school (12 months)	0.846
110.	carried any other weapon at school (12 months)	0.778
111.	been threatened or injured with a weapon at school (12 months)	0.870
112.	seen someone carrying a gun, knife, or other weapon at school (12 months)	0.720
113.	been threatened with harm or injury at school (12 months)	0.885
	Harassment/Bullying Victimization	
115.	Harassed or bullied because of your race, ethnicity, or national origin	0.747
116.	Harassed or bullied because of your religion	0.679
117.	Harassed or bullied because of your gender	0.762
118.	Harassed or bullied because you are gay or lesbian or someone thought you were	0.768
119.	Harassed or bullied because of physical or mental disability	0.780
120.	Harassed or bullied because you are an immigrant, or someone thought you were	0.705
121.	Harassed or bullied because of any other reason	0.876

Source: 2017/18 Secondary CHKS.

TABLE 10

Secondary CHKS Core Module Factor Correlations

Domain	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) School Caring Relationships	1.00								
(2) Meaningful Participation	0.58	1.00							
(3) School Connectedness	0.60	0.51	1.00						
(4) Academic Motivation	0.46	0.42	0.58	1.00					
(5) Promotion Parent Involve.	0.54	0.43	0.76	0.53	1.00				
(6) Substance Use at School	-0.22	-0.09	-0.29	-0.34	-0.27	1.00			
(7) Violence Victimization	-0.15	-0.11	-0.31	-0.11	-0.21	0.31	1.00		
(8) Delinquency	-0.22	-0.14	-0.35	-0.29	-0.29	0.68	0.74	1.00	
(9) Harassment/Bullying Vict.	-0.17	-0.09	-0.32	-0.11	-0.23	0.38	0.86	0.66	1.00

Source: 2017/18 Secondary CHKS. Estimates come from base CFA Model.

TABLE 11

Secondary CHKS Core - DIF by Grade

		Measurement Intercept[a]			Difference in Factor Mean after DIF[b]		
#	Item	Grade 7	Grade 9	NT	Grade 7	Grade 9	NT
	School Caring Relationships w Adults				-0.04		
38.	Teacher/adult always wants me to do my best.	-0.21					
	Student Meaningful Participation						0.09
41.	At school, I do interesting activities.			-0.34			
45.	At school, I help decide school activities or rules.			0.24			
	Promotion of Parental Involvement						0.12
29.	Parents feel welcome to participate at this school.			-0.27			
	Substance Use at School				0.00		0.03
77.	cigarettes on school property (30 days)	0.25		0.21			
79.	electronic cigarettes, e-cigarette on school property (30 days)			-0.27			
81.	marijuana on school property (30 days)	-0.24					
82.	any other drug, pill, or medicine to get “high”… on school property (30 days)	0.24					
	Violence Victimization				0.02		
100.	been pushed, shoved, slapped, hit, or kicked at school (12 months)	0.44					
101.	been afraid of being beaten up at school (12 months)	0.33					
104.	had sexual jokes, comments, or gestures made to you at school	-0.30					

		Measurement Intercept[a]			Difference in Factor Mean after DIF[b]		
#	Item	Grade 7	Grade 9	NT	Grade 7	Grade 9	NT
	Delinquency				0.08	0.06	-0.03
102.	been in a physical fight at school (12 months)			0.46			
107.	been offered, sold, or given an illegal drug at school (12 months)	-0.86	-0.20	-0.30			
109.	carried a gun at school (12 months)			0.28			
110.	carried any other weapon at school			0.21			
	Harassment/Bullying Victimization						-0.04
119.	Harassed or bullied because of physical or mental disability			0.24			

Source: 2017/18 Secondary CHKS. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of grade on the questionnaire item, relative to grade 11, after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 12

Secondary CHKS Core - DIF by Gender

		Measurement Intercept[a]	Difference in Factor Mean after DIF[b]
#	Item	Female	Effect on Factor Mean
	Violence Victimization		0.09
100.	been pushed, shoved, slapped, hit, or kicked at school (12 months)	-0.42	
106.	had your property stolen or deliberately damaged... at school (12 months)	-0.28	
	Delinquency		0.01
102.	been in a physical fight at school (12 months)	-0.24	
107.	been offered, sold, or given an illegal drug at school (12 months)	0.21	
109.	carried a gun at school (12 months)	-0.24	
	Harassment/Bullying Victimization		-0.06
117.	Harassed or bullied because of your gender	0.39	

Source: 2017/18 Elementary CHKS. Notes: [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of gender on the questionnaire item after controlling for scores on the underlying factor. For example, the measurement intercept for item 117 on females indicates that even when females and males exhibit equal levels of Harassment/Bullying Victimization, females scores on being harassed or bullied because of gender are 0.39 standard deviations higher than those of males. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. For example, the -0.06 estimate for Harassment/Bullying Victimization means that mean difference between females and males is reduced by 0.06 standard deviations after accounting for DIF. In this case, the consequence of DIF for estimating gender differences in Harassment/Bullying are not substantively significant. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 13

Secondary CHKS Core - DIF by Ethnicity (Measurement Intercepts)

		Measurement Intercept[a]					
#	Item	African Amer	Amer Indian	Asian	Latinx	Pac Islander	Multi-ethnic
	Student Meaningful Participation						
43.	At school, I do things that make a difference.			0.20			
	Substance Use at School						
79.	electronic cigarettes, e-cigarette on school property (30 days)	-0.36	-0.27		-0.23		
	Delinquency						
102.	been in a physical fight at school	0.42	0.27				0.20
107.	been offered, sold, or given an illegal drug at school (12 months)	-0.23	-0.28	-0.26			
113.	been threatened with harm or injury at school (12 months)	-0.23			-0.22		
	Harassment/Bullying Victimization						
115.	Harassed or bullied because of your race, ethnicity, or national origin	0.55		0.47		0.30	0.25
117.	Harassed or bullied because of your gender			-0.21			
119.	Harassed or bullied because of physical or mental disability			-0.26			
120.	Harassed or bullied because you are an immigrant, or someone thought you were	0.35	0.40	0.59	0.81	0.44	0.26
121.	Harassed or bullied because of any other reason	-0.34	-0.20	-0.27		-0.23	

Source: 2017/18 Elementary CHKS. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of race/ethnicity on the questionnaire item, relative to white students, after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated

TABLE 14

Secondary CHKS Core - DIF by Ethnicity (Factor Means)

	Difference in Factor Mean after DIF[a]					
Item	**African Amer**	**Amer Indian**	**Asian**	**Latinx**	**Pac Islander**	**Multi-ethnic**
Student Meaningful Participation			-0.05			
Substance Use at School	0.08	0.06		0.07		
Delinquency	-0.03	-0.02	0.06	0.05		-0.04
Harassment/Bullying Victimization	-0.18	0.01	-0.12	-0.06	-0.11	-0.09

Source: 2017/18 Elementary CHKS. *Notes:* [a]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 15

Secondary CHKS Core - DIF by English Language Proficiency

		Measurement Intercept[a]		Difference in Factor Mean after DIF[a]	
#	Item	English Proficient	Not English Proficient	English Proficient	Not English Proficient
	Student Meaningful Participation				0.06
41.	At school, I do interesting activities.		-0.23		
	Academic Motivation				0.06
31.	I try hard to make sure that I am good at my schoolwork.		-0.20		
	Violence Victimization				0.03
104.	had sexual jokes, comments, or gestures made to you at school		-0.22		
	Delinquency				-0.02
109.	carried a gun at school (12 months)		0.23		
	Harassment/Bullying Victimization			-0.08	-0.08
120.	Harassed or bullied because you are an immigrant, or someone thought you were	0.59	0.72		
121.	Harassed or bullied because of any other reason		-0.25		

Source: 2017/18 Elementary CHKS. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of English language proficiency on the questionnaire item, relative to English-only students, after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 16

Secondary CHKS Core Module Reliability Coefficients by Grade and Gender

Construct	Items	Total	Grade 7	Grade 9	Grade 11	NT	Female	Male
(1) School Caring Relationships	6	0.90	0.87	0.90	0.92	0.93	0.90	0.89
(2) Student Meaningful Participation	5	0.86	0.84	0.85	0.87	0.90	0.86	0.85
(3) School Connectedness	5	0.83	0.82	0.83	0.83	0.84	0.83	0.83
(4) Academic Motivation	4	0.88	0.87	0.88	0.88	0.91	0.88	0.88
(5) Promotion of Parental Involve.	3	0.77	0.73	0.77	0.78	0.83	0.77	0.76
(6) Substance Use at School	6	0.79	0.83	0.79	0.74	0.84	0.75	0.80
(7) Violence Victimization	8	0.85	0.86	0.85	0.84	0.87	0.85	0.85
(8) Delinquency	8	0.75	0.75	0.75	0.72	0.85	0.68	0.77
(9) Harassment/Bullying Victimizat.	7	0.75	0.73	0.75	0.76	0.84	0.73	0.76

Source: 2017/18 Secondary CHKS.

TABLE 17

Secondary CHKS Core Module Reliability Coefficients by Race/Ethnicity

Construct	Items	African Amer	Amer Indian	Asian	Latinx	Pac Island	White	Mixed
(1) School Caring Relationships	6	0.89	0.90	0.89	0.90	0.89	0.90	0.89
(2) Student Meaningful Participation	5	0.84	0.85	0.86	0.85	0.85	0.86	0.84
(3) School Connectedness	5	0.82	0.85	0.83	0.83	0.82	0.84	0.83
(4) Academic Motivation	4	0.88	0.90	0.87	0.89	0.87	0.88	0.87
(5) Promotion of Parental Involve.	3	0.77	0.79	0.77	0.77	0.76	0.78	0.76
(6) Substance Use at School	6	0.83	0.84	0.80	0.80	0.81	0.74	0.77
(7) Violence Victimization	8	0.84	0.87	0.84	0.85	0.85	0.85	0.85
(8) Delinquency	8	0.77	0.80	0.70	0.75	0.76	0.72	0.75
(9) Harassment/Bullying Victimizat.	7	0.75	0.78	0.76	0.76	0.74	0.71	0.75

Source: 2017/18 Secondary CHKS.

TABLE 18

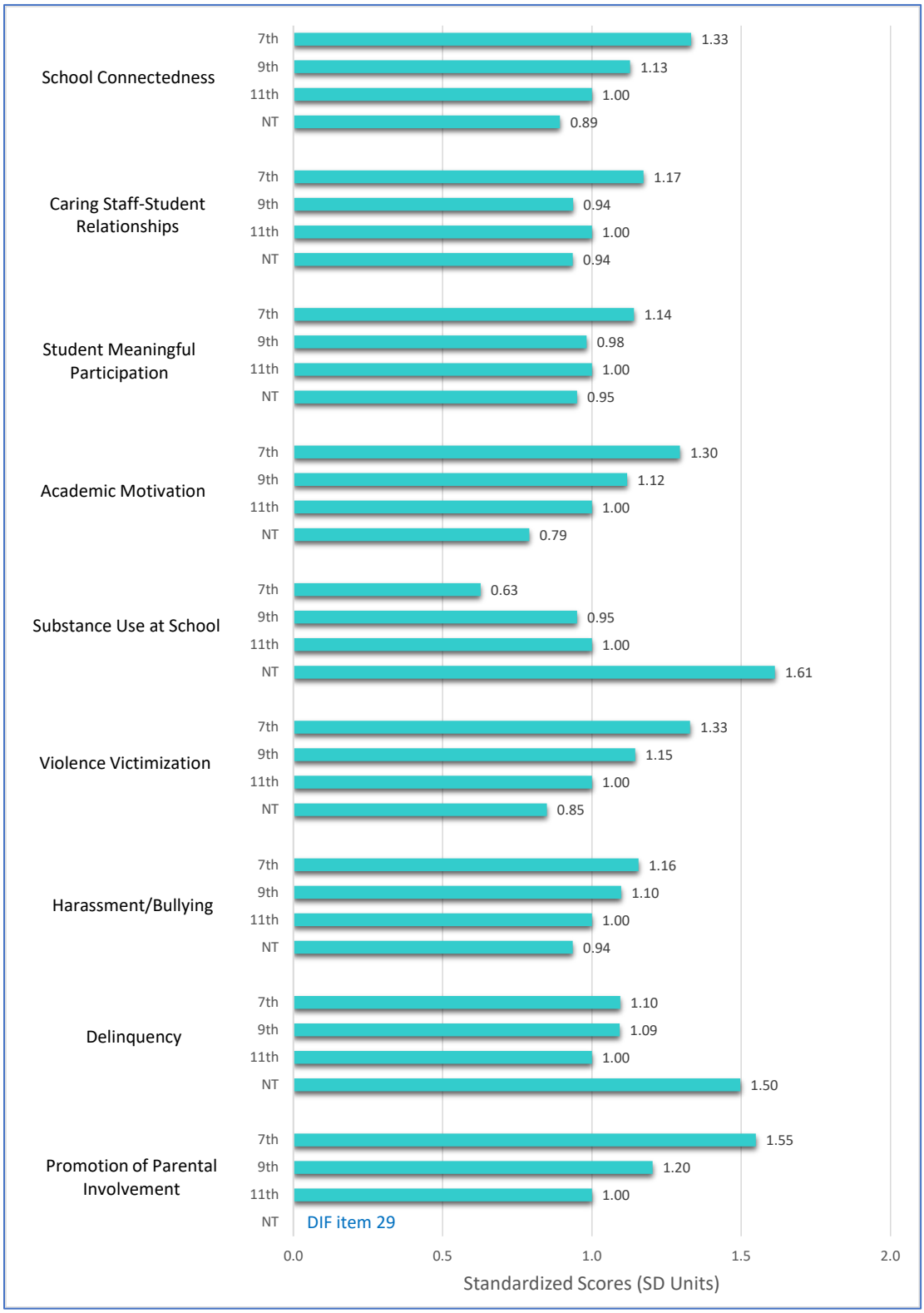
Secondary CHKS Core Module Reliability Coefficients by English Language Proficiency

Construct	Items	English Only	English Proficient	Not English Proficient
(1) School Caring Relationships	6	0.90	0.90	0.89
(2) Student Meaningful Participation	5	0.86	0.86	0.85
(3) School Connectedness	5	0.83	0.83	0.82
(4) Academic Motivation	4	0.88	0.89	0.89
(5) Promotion of Parental Involve.	3	0.77	0.77	0.76
(6) Substance Use at School	6	0.76	0.80	0.86
(7) Violence Victimization	8	0.85	0.85	0.86
(8) Delinquency	8	0.73	0.74	0.80
(9) Harassment/Bullying Victimizat.	7	0.73	0.77	0.80

Source: 2017/18 Secondary CHKS.

FIGURE 3

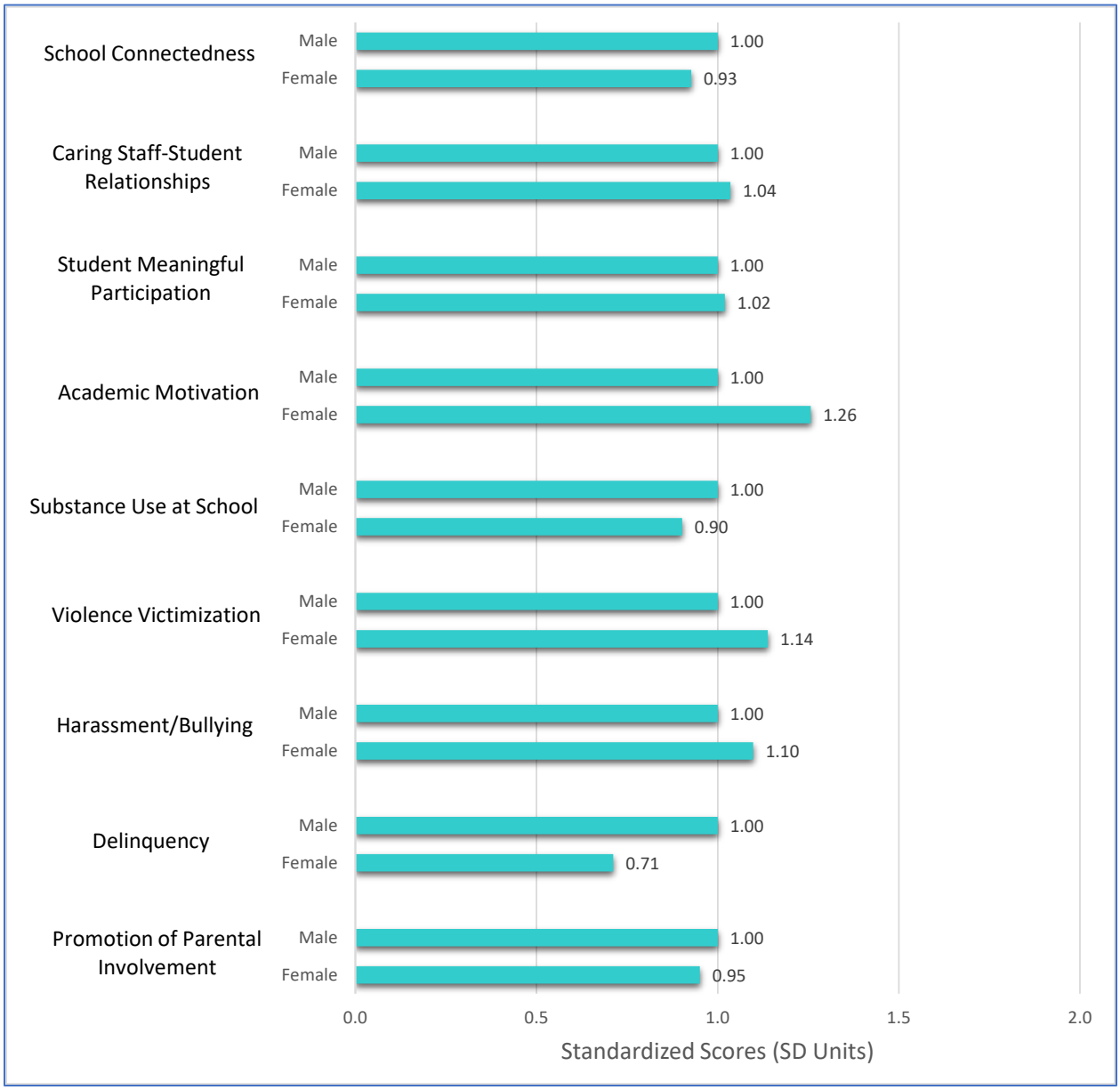
Secondary CHKS Core – Factor Means by Grade



Source: 2017/18 Secondary CHKS Core.

FIGURE 4

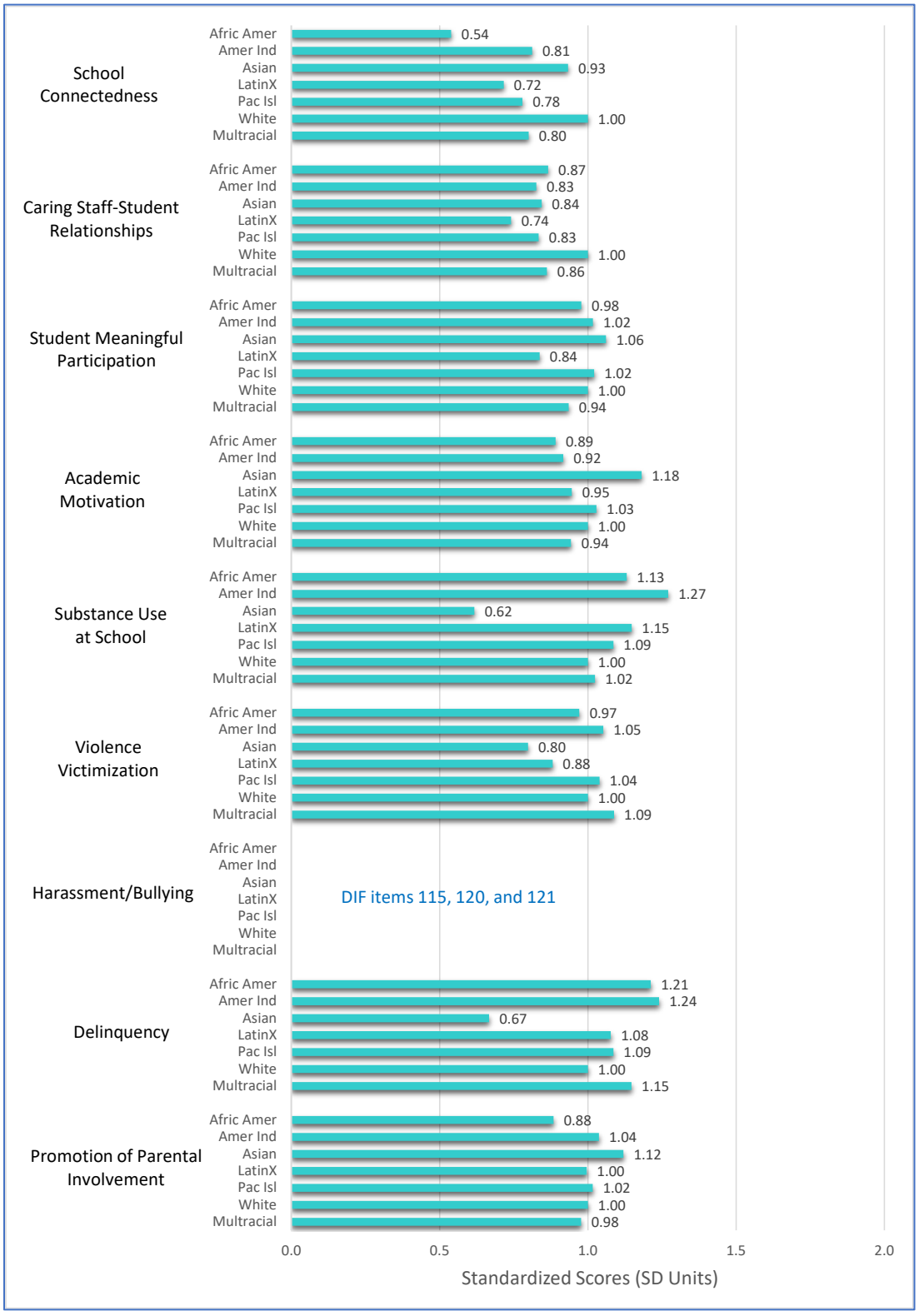
Secondary CHKS Core – Factor Means by Gender



Source: 2017/18 Secondary CHKS Core

FIGURE 5

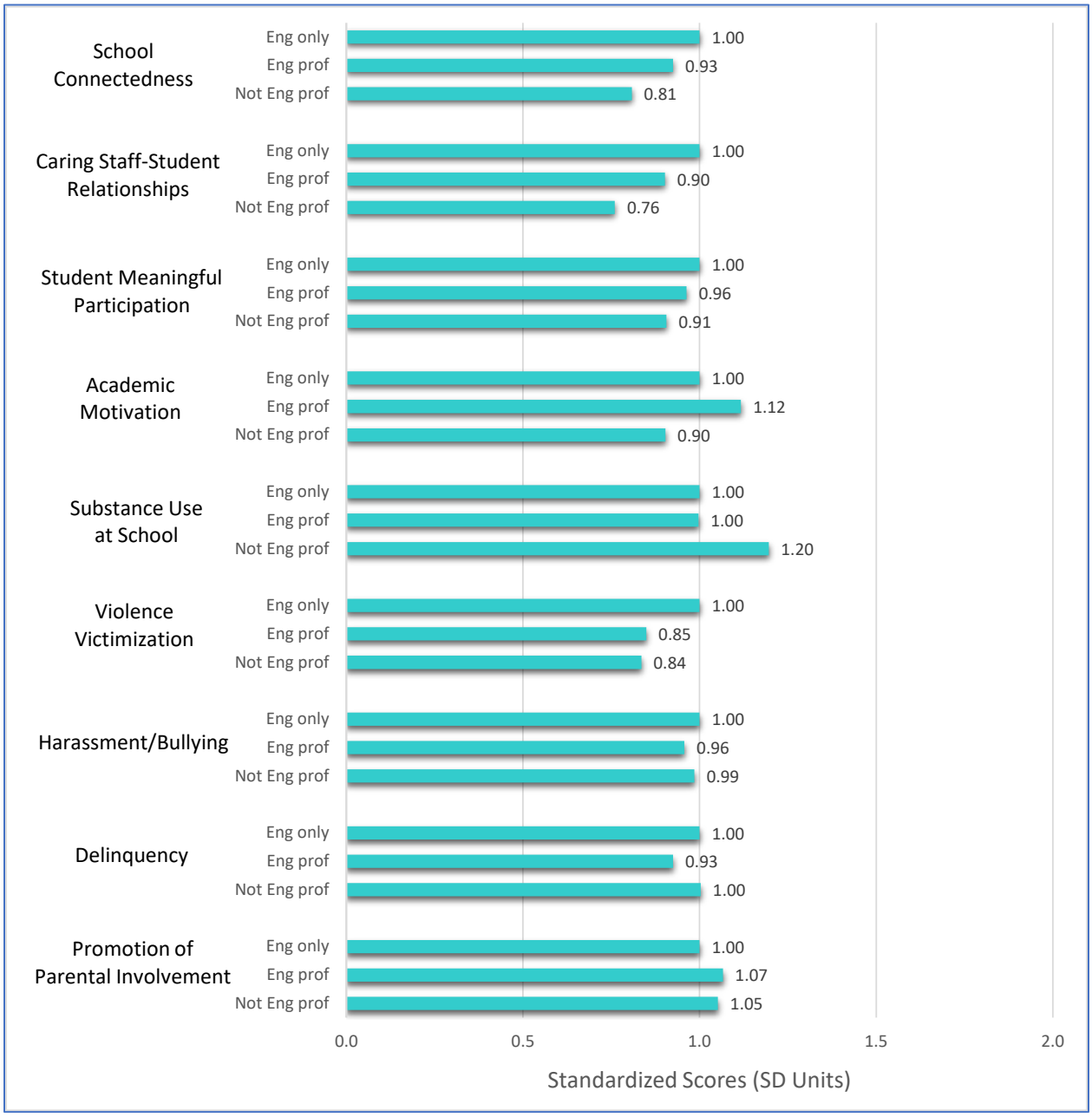
Secondary CHKS Core – Factor Means by Race/Ethnicity



Source: 2017/18 Secondary CHKS Core

FIGURE 6

Secondary CHKS Core – Factor Means by English Language Proficiency



Source: 2017/18 Secondary CHKS Core

Secondary California Healthy Kids Survey School Climate Module

Data

The analysis of data from the secondary School Climate Module is based on a subset of 157,368 students from 590 schools that were administered the School Climate Module. As with the secondary Core module, analyses are conducted across the following demographic characteristics: school grade (7, 9, 11, and non-traditional), gender (female, male), race/ethnicity (African American, American Indian, Asian, Latinx, Pacific Islander, White, and Multiethnic), and English language proficiency (English only, not English only–proficient, and not English only–not proficient.

Measurement Structure

A 12-factor CFA model was estimated for the secondary School Climate Module sample (see Table A1 in Appendix A for model fit statistics). The 12-factor CFA revealed distinct factors for the following constructs:

- Student Learning Environments
- Learning Engagement Climate
- Fairness
- Racial/Ethnic Conflict
- Respect for Diversity
- Clarity or Rules
- Disciplinary Harshness
- Student Peer Relationships
- Support of Social Emotional Learning
- Antibullying Climate
- College and Career Support
- Quality of Facilities

Table 19 shows standardized factor loadings from the CFA model. The average loading across all the constructs is 0.83, which demonstrates that the items are strongly correlated with the underlying factors. The results are consistent with prior research (Hanson, 2011) and indicate that **the CHKS School Climate Module assesses the dimensions of school climate that it is intended to measure.**

The correlations between the 12 factors in Table 20 indicate that the factors are sufficiently distinct from one another to justify representing them as different constructs. However, as was the case for the elementary survey, the correlation between **Antibullying Climate** and **Support for Social Emotional Learning** is relatively high (0.89). Separate measures of these two factors are retained because the items assessing these two domains are clearly aligned with the intended constructs.

Item Bias

As with the secondary Core Module data, estimating differences in measurement intercepts across secondary school grades, gender, race/ethnicity, and English language proficiency are estimated.

Grade Levels. Table 21 shows measurement intercept differences across secondary grade levels, relative to grade 11.[14] Only five differences in measurement intercepts between grade 11 and NT students were greater than +/-0.20 standard deviations. Accounting for measurement intercept differences on two of these items affects grade-level comparisons on the **Quality of School Facilities** construct. Specifically, regardless of their rating of the overall Quality of School Facilities, NT students are more likely than grade 11 students to report that their school is usually clean and tidy (*27. My school is usually clean and tidy*)[15] and are less likely than grade 11 students to report that their schoolyard and buildings are in good condition (*41. The schoolyard and buildings are clean and in good condition*). These differences suggest that items 27 and 41 mean something different for NT students compared to grade 11 students—although it is unclear why the intercepts differ in the way that they do. NT students report higher Quality of School Facilities than grade 11 students, but the difference drops from 0.33 standard deviations to 0.19 standard deviations after accounting for these measurement intercept differences. To summarize, with one exception, **item bias across secondary grade levels is not substantial on the CHKS School Climate Module**. **The one exception is that the item asking students how clean and tidy the school is appears to have different meanings for NT students and grade 11 students**.

Gender. No difference in measurement intercepts between male and female students were greater than +/-0.20 standard deviations. **Gender bias is not evident on the items that comprise the Secondary School Climate Module**.

Race/Ethnicity. Table 22 displays measurement intercept differences between white students and African American and Latinx students in other racial/ethnic groups. Differences in intercepts between white students and students in other racial/ethnic groups are all less than +/- 0.20 standard deviations. In one instance, differences in measurement intercepts between African American and white students affect group comparisons on the underlying construct. African American students are less likely than white students to report that their school is usually clean and tidy (*27. My school is usually clean and tidy*), are more likely than white students to report that their schoolyard and buildings are in good condition (*41. The schoolyard and buildings are clean and in good condition*), and are more likely than white students to report that their school grounds are kept clean (*45. The school grounds are kept clean*). Again, these differences are present after controlling for the overall level of Quality of School Facilities. Although it is unclear why these differences exist, these differences attenuate the African American/white differences on the Quality of School Facilities.[16] In summary, **item bias across racial/ethnic groups is not substantial on the CHKS School Climate Module**. However, there is some **evidence of DIF for white and African American students on the items assessing Quality of School Facilities. Care should be taken when making comparisons between these two groups on this construct.**

[14] See notes in Table 5 for an explanation of the meaning of the measurement intercepts and consequence of DIF for factor means.

[15] Item 27 asking whether the school is usually clean and tidy comes from the Core Module. It is used as a single item measure of School Facilities on the Core and as part of a 3-item scale assessing the Quality of School Facilities when the School Climate Module is administered.

[16] African American students rate the Quality of School Facilities 0.50 standard deviations lower than white students when item bias is not taken into account and 0.31 standard deviations lower when item bias is taken into account.

These differences suggest that items 27 and 41 mean something different for NT students compared to grade 11 students—although it is unclear why the intercepts differ in the way that they do. NT students report higher Quality of School Facilities than grade 11 students, but the difference drops from 0.33 standard deviations to 0.19 standard deviations after accounting for these measurement intercept differences.

English Language Proficiency. Differences in measurement intercepts between English only and not English Proficient students are evident for two items (Table 23), but these differences do not meaningfully alter group comparisons on the underlying constructs. **Substantively meaningful bias across English Language Proficiency groups on the CHKS Secondary School Climate items is not evident**.

Construct Reliability

Tables 24 through 27 show internal consistency reliability estimates based on Cronbach's alpha for the total sample, by grade, gender, race/ethnicity, and English Language Proficiency. Reliability averaged 0.85 and exceeded the 0.70 threshold for all of the constructs and all of the subgroups. **Scales from the CHKS School Climate Module exhibit good reliability.**

Demographic Differences on the Measured Constructs

Standardized construct means for demographic subgroups are presented in Figures 7 through 10.

Grade Levels. Grade 7 students' perceptions of school climate are more positive than students in other secondary grades, while differences across students in high school grades tend to be small (Figure 7).

- **Student Learning Environment, Fairness, Respect for Diversity, Clarity of Rules, Student Peer Relationships, Supports for SEL, and Antibullying Climate** scores are highest (more positive) for grade 7 students compared to other grades. In addition, grade 7 students report the lowest levels of **Racial/Ethnic Conflict**. The one exception to the pattern is that grade 7 students also report the highest levels of Disciplinary Harshness of all the grade-level groups.
- Unlike the case for the Secondary Core Module constructs, NT students report similar levels to other high school students across most of the school climate measures, except for **Respect for Diversity** and **Student Peer Relationships**, where NT students exhibit the lowest scores.

Gender. Females and males report similar levels on all of the school climate constructs except for **Quality of Facilities**, where females perceive their school facilities to be of higher quality than males (Figure 8).

Race/Ethnicity. Perceptions of school climate tend to be most favorable for whites and Asians and the least favorable for African Americans (Figure 9A and 9B).

- Asian students report the most positive perceptions of school climate of all the racial/ethnic groups on 10 of the 12 school climate domains assessed. The only domains for which this is not the case is for **Racial/Ethnic Conflict** and **Quality of Facilities**.

- African American report the highest levels of **Racial/Ethnic Conflict** and **Disciplinary Harshness** and the lowest levels of **Fairness, Respect for Diversity,** and **Student Peer Relationships**.
- The results for **Racial/Ethnic Conflict** are noteworthy. African American students are far more likely than other groups to perceive that racial/ethnic conflict is high, followed by American Indian, Latinx, and Pacific Islander students. White students perceive lower levels of racial/ethnic conflict than all the other groups.
- Ratings of **Disciplinary Harshness** were highest for African American and Latinx students and lowest for Asian and white students.
- Perceptions of **Student Learning Environment** and **Support for Social Emotional Learning** did not vary substantially across racial/ethnic groups.

English language proficiency. School climate differences across English language proficiency groups tend to disadvantage students who are not English proficient.

- Students whose primary language is not English and are not English proficient report the highest levels of **Racial/Ethnic Conflict** and **Disciplinary Harshness** and the lowest levels of **Respect for Diversity, Student Peer Relationships,** and the **Quality of Facilities**.
- English proficient students report higher levels of **College and Career Support** than English only students.
- No meaningful differences in **Student Learning Environment**, **Learning Engagement Climate**, **Clarity of Rules**, and **Support for Social Emotional Learning** are found across English language proficiency groups.

TABLE 19

Base Secondary CHKS School Climate Module Confirmatory Factor Analysis Model

#	Item	Loading
	Student Learning Environment	
2.	Adults at this school encourage me to work hard to be successful in college/job.	0.848
3.	My teachers work hard to help me with my schoolwork when I need it.	0.864
4.	Teachers show how classroom lessons are helpful to students in real life.	0.811
5.	Teachers give students a chance to take part in classroom discussions or activities.	0.825
6.	This school is a supportive and inviting place for students to learn.	0.908
7.	Teachers go out of their way to help students.	0.857
8.	Teachers help students catch up when they return from an absence.	0.793
9.	My teachers give me useful feedback on my work.	0.838
	Learning Engagement Climate	
1.	Students at this school are motivated to learn.	0.845
46.	Students pay attention in class.	0.842
47.	Students try their best in school.	0.863
48.	Students usually follow the rules at school.	0.859
49.	Students turn in their homework on time.	0.779
	Fairness	
10.	Adults at this school treat all students with respect.	0.859
11.	Students treat teachers with respect.	0.736
12.	The school rules are fair.	0.799
13.	All students are treated fairly when they break school rules.	0.797
	Racial/Ethnic Conflict	
36.	I have been disrespected by an adult at this school because of my race, ethnicity, or culture.	0.896

#	Item	Loading
37.	There is a lot of tension … between people of different cultures, races, or ethnicities.	0.746
	Respect for Diversity	
38.	Students in this school respect each other's differences.	0.761
39.	Adults in this school respect differences in students.	0.821
40.	Teachers show that … it is important for students of different races and cultures…to get along…	0.885
	Clarity of Rules	
14.	This school clearly informs students what would happen if they break school rules.	0.850
19.	Rules in this school are made clear to students.	0.846
20.	This school makes it clear how students are expected to act.	0.886
	Disciplinary Harshness	
15.	The rules in this school are too strict.	0.688
16.	It is easy for students to get kicked out of class or get suspended.	0.820
17.	Students get in trouble for breaking small rules.	0.830
	Student Peer Relationships	
21.	Students enjoy doing things with each other during school activities.	0.841
22.	Students care about each other.	0.852
23.	Students treat each other with respect.	0.892
24.	Students get along well with each other.	0.871
	Support for Social Emotional Learning	
25.	This school encourages students to feel responsible for how they act.	0.834
26.	Students are often given rewards for being good.	0.678
27.	This school encourages students to understand how others think and feel.	0.858
28.	Students are taught that they can control their own behavior.	0.836
29.	This school helps students solve conflicts with one another.	0.851

#	Item	Loading
30.	This school encourages students to care about how others feel.	0.880
31.	Teachers here make it clear to students that bullying is not tolerated.	0.798
	Antibullying Climate	
32.	If another student was bullying me, I would tell one of the teachers or staff at this school.	0.747
33.	Students tell teachers when other students are being bullied.	0.774
34.	If I tell a teacher that someone is bullying me, the teacher will do something to help.	0.872
35.	Students here try to stop bullying when they see it happening.	0.757
	College and Career Support	
53.	This school helped me put my college/career goals/experiences in a plan updated every year.	0.906
54.	This school has helped me learn about colleges, how to apply to them, and get financial aid.	0.868
55.	This school has helped me think about and explore future career options.	0.923
	Quality of School Facilities	
27.	My school is usually clean and tidy.	0.694
41.	The schoolyard and buildings are clean and in good condition.	0.890
45.	The school grounds are kept clean.	0.875

Source: 2017/18 Secondary CHKS School Climate Module.

TABLE 20

Secondary CHKS School Climate Module Factor Correlations

Domain	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Student Learning Environment	1.00										
(2) Learning Engagement Climate	0.65	1.00									
(3) Fairness	0.84	0.73	1.00								
(4) Racial/Ethnic Conflict	-0.28	-0.14	-0.31	1.00							
(5) Respect for Diversity	0.60	0.55	0.58	-0.30	1.00						
(6) Clarity of Rules	0.74	0.55	0.77	-0.28	0.61	1.00					
(7) Disciplinary Harshness	0.15	0.08	0.09	0.29	-0.04	0.12	1.00				
(8) Student Peer Relationships	0.63	0.69	0.69	-0.22	0.56	0.63	0.11	1.00			
(9) Supports for Social Emotional Learning	0.79	0.67	0.78	-0.25	0.65	0.81	0.10	0.76	1.00		
(10) Antibullying Climate	0.73	0.68	0.76	-0.22	0.60	0.69	0.10	0.73	0.88	1.00	
(11) College & Career Support	0.64	0.62	0.59	-0.15	0.55	0.57	0.05	0.52	0.65	0.61	1.00
(12) Quality of Facilities	0.53	0.59	0.58	-0.18	0.65	0.52	-0.03	0.52	0.57	0.53	0.52

Source: 2017/18 Secondary CHKS School Climate Module. Estimates come from base CFA Model.

TABLE 21

Secondary CHKS Core - DIF by Grade

		Measurement Intercept[a]	Difference in Factor Mean after DIF[b]
#	Item	NonTrad	Effect on Factor Mean
	Student Learning Environment		0.04
5.	Teachers give students a chance to take part in classroom discussions or activities.	-0.26	
	Support for Social Emotional Learning		-0.02
26.	Students are often given rewards for being good.	0.37	
31.	Teachers here make it clear to students that bullying is not tolerated.	-0.23	
	Quality of School Facilities		-0.14
27.	My school is usually clean and tidy.	0.24	
41.	The schoolyard and buildings are clean/in good condition.	-0.25	

Source: 2017/18 Secondary CHKS School Climate Module. Notes: [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of grade (Non-traditional vs. grade 11) on the questionnaire item after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 22

Secondary CHKS School Climate Module - DIF by Race/Ethnicity

		Measurement Intercept[a]		Difference in Factor Mean after DIF[a]	
#	Item	African American	Latinx	African American	Latinx
	Support for Social Emotional Learning				-0.04
26.	Students are often given rewards for being good.		0.24		
	Quality of School Facilities			0.19	
27.	My school is usually clean and tidy.	-0.24			
41.	The schoolyard and buildings are clean/in good condition.	0.24			
45.	The school grounds are kept clean.	0.22			

Source: 2017/18 Secondary CHKS School Climate Module. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of race/ethnicity on the questionnaire item, relative to whites, after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 23

Secondary CHKS School Climate Module - DIF by English Language Proficiency

		Measurement Intercept[a]		Difference in Factor Mean after DIF[a]	
#	Item	English Proficient	Not English Proficient	English Proficient	Not English Proficient
	Student Learning Environment				0.03
5.	Teachers give students a chance to take part in classroom discussions or activities.		-0.20		
	Support for Social Emotional Learning				-0.03
26.	Students are often given rewards for being good.		0.22		

Source: 2017/18 Secondary CHKS School Climate Module. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of English language proficiency on the questionnaire item, relative to English-only students, after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 24

Secondary CHKS School Climate Module Reliability Coefficients by Grade and Gender

Construct	Items	Total	Grade 7	Grade 9	Grade 11	NT	Female	Male
(1) Student Learning Environment	8	0.94	0.93	0.93	0.93	0.97	0.93	0.94
(2) Learning Engagement Climate	5	0.88	0.88	0.88	0.88	0.92	0.88	0.89
(3) Fairness	4	0.84	0.83	0.84	0.84	0.90	0.83	0.85
(4) Racial/Ethnic Conflict	2	0.73	0.72	0.74	0.73	0.83	0.70	0.76
(5) Respect for Diversity	3	0.83	0.80	0.83	0.84	0.90	0.80	0.84
(6) Clarity of Rules	3	0.85	0.83	0.85	0.85	0.89	0.84	0.85
(7) Disciplinary Harshness	3	0.79	0.76	0.79	0.81	0.87	0.77	0.80
(8) Student Peer Relationships	4	0.89	0.87	0.89	0.90	0.93	0.88	0.89
(9) Supports for Social Emotional Learning	7	0.91	0.91	0.91	0.91	0.95	0.90	0.92
(10) Antibullying Climate	4	0.83	0.83	0.83	0.82	0.89	0.82	0.84
(11) College & Career Support	3	0.90	0.89	0.91	0.91	0.94	0.90	0.91
(12) Quality of Facilities	3	0.82	0.82	0.81	0.83	0.77	0.84	0.80

Source: 2017/18 Secondary CHKS School Climate Module.

TABLE 25

Secondary CHKS School Climate Module Reliability Coefficients by Race/Ethnicity

Construct	Items	African Amer	Amer Indian	Asian	Latinx	Pac Island	White	Mixed
(1) Student Learning Environment	8	0.94	0.95	0.92	0.94	0.93	0.93	0.93
(2) Learning Engagement Climate	5	0.89	0.90	0.87	0.88	0.88	0.89	0.88
(3) Fairness	4	0.85	0.87	0.82	0.85	0.82	0.83	0.84
(4) Racial/Ethnic Conflict	2	0.72	0.77	0.71	0.75	0.73	0.71	0.72
(5) Respect for Diversity	3	0.82	0.82	0.81	0.84	0.81	0.81	0.81
(6) Clarity of Rules	3	0.84	0.85	0.84	0.84	0.82	0.85	0.85
(7) Disciplinary Harshness	3	0.81	0.80	0.75	0.80	0.76	0.78	0.78
(8) Student Peer Relationships	4	0.89	0.90	0.87	0.89	0.87	0.89	0.89
(9) Supports for Social Emotional Learning	7	0.92	0.93	0.90	0.92	0.90	0.91	0.91
(10) Antibullying Climate	4	0.84	0.86	0.81	0.84	0.81	0.82	0.83
(11) College & Career Support	3	0.91	0.90	0.89	0.91	0.89	0.90	0.90
(12) Quality of Facilities	3	0.80	0.79	0.84	0.81	0.80	0.83	0.83

Source: 2017/18 Secondary CHKS School Climate Module.

TABLE 26

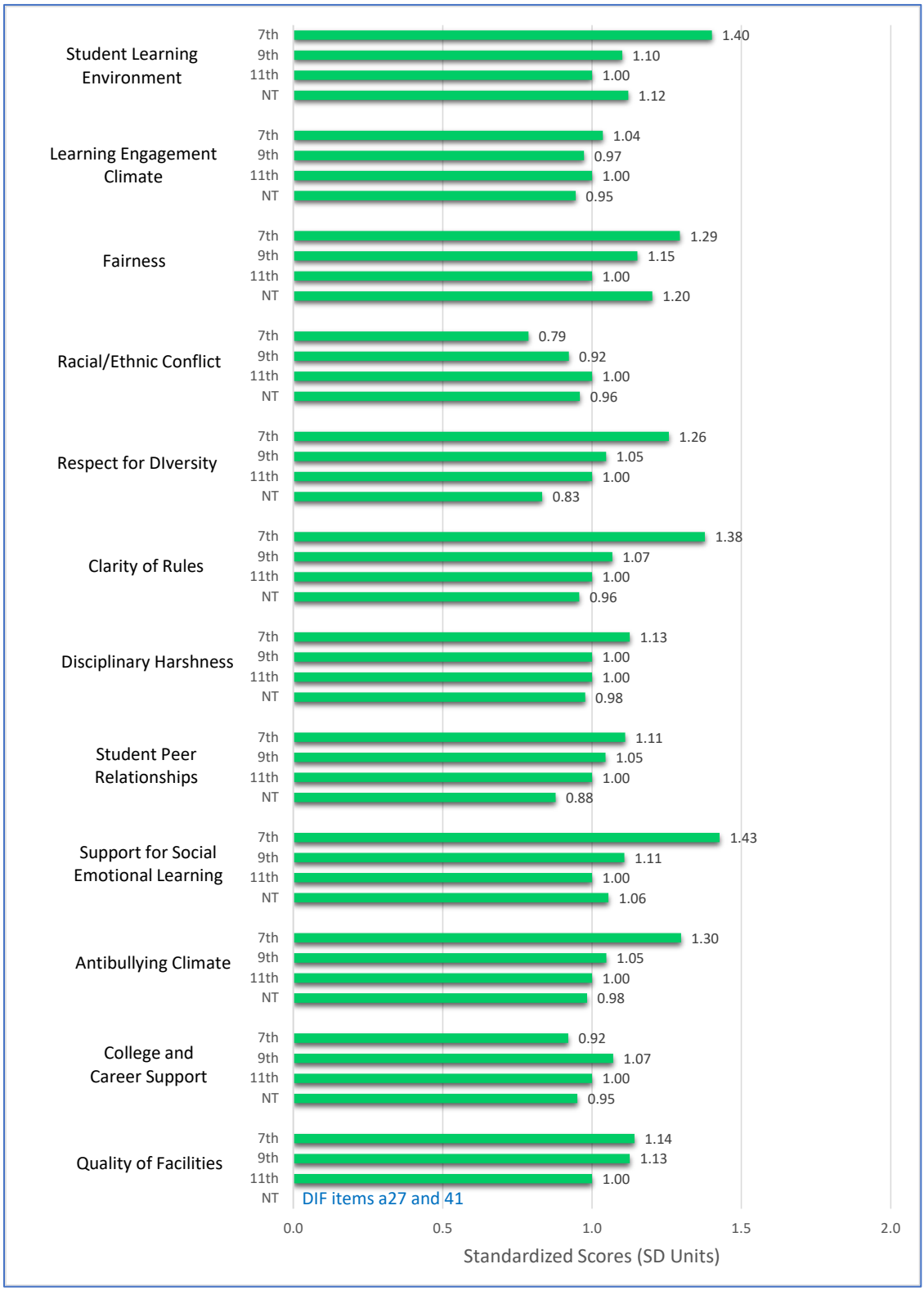
Secondary CHKS School Climate Module Reliability Coefficients by English Language Proficiency

Construct	Items	English Only	English Proficient	Not English Proficient
(1) Student Learning Environment	8	0.93	0.94	0.95
(2) Learning Engagement Climate	5	0.88	0.88	0.88
(3) Fairness	4	0.84	0.85	0.86
(4) Racial/Ethnic Conflict	2	0.73	0.74	0.74
(5) Respect for Diversity	3	0.82	0.83	0.84
(6) Clarity of Rules	3	0.85	0.85	0.83
(7) Disciplinary Harshness	3	0.78	0.80	0.80
(8) Student Peer Relationships	4	0.88	0.89	0.89
(9) Supports for Social Emotional Learning	7	0.91	0.92	0.92
(10) Antibullying Climate	4	0.82	0.84	0.85
(11) College & Career Support	3	0.90	0.91	0.91
(12) Quality of Facilities	3	0.83	0.82	0.78

Source: 2017/18 Secondary School Climate Module.

FIGURE 7

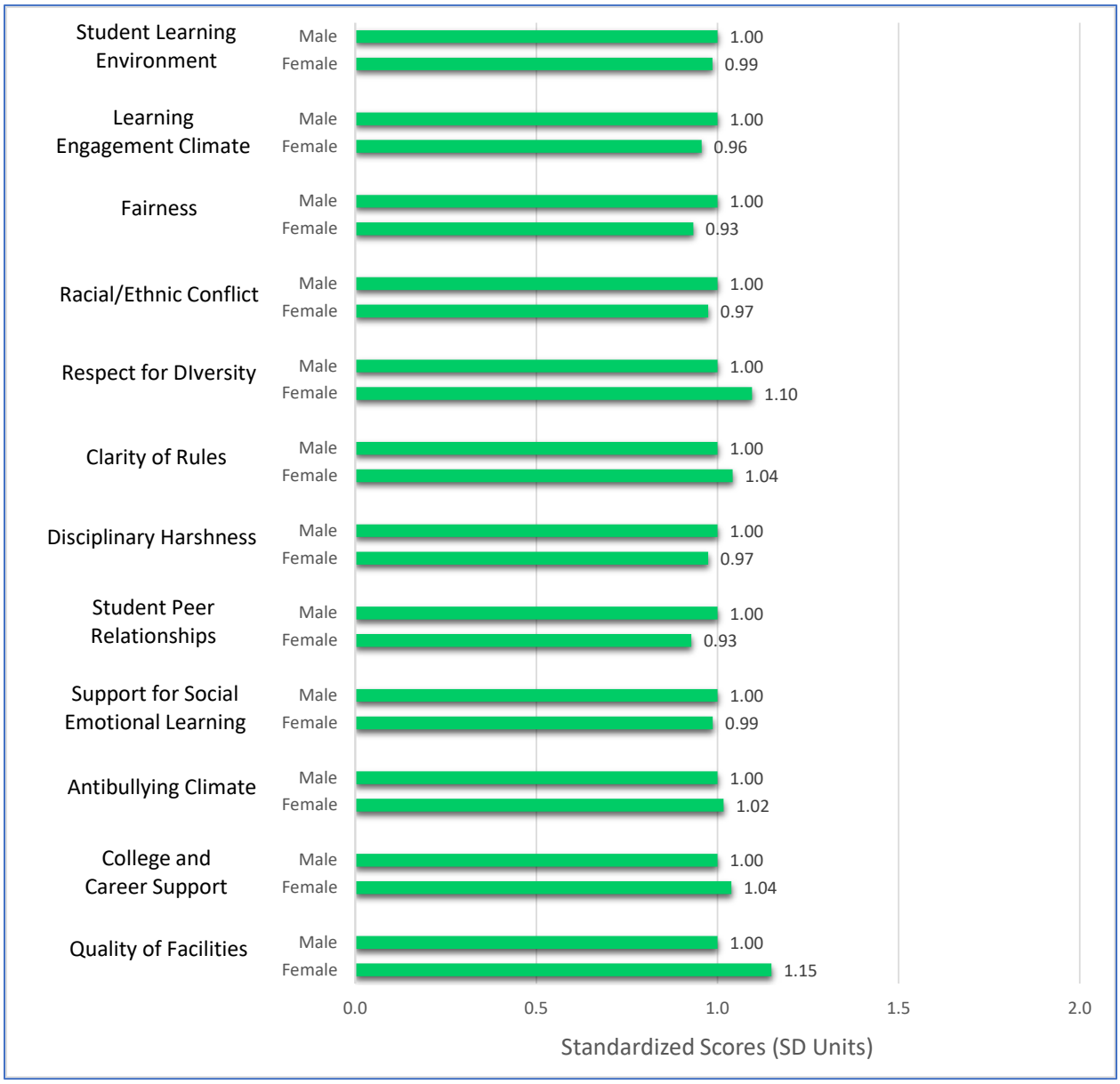
Secondary CHKS School Climate Module – Factor Means by Grade



Source: 2017/18 Secondary CHKS School Climate Module.

FIGURE 8

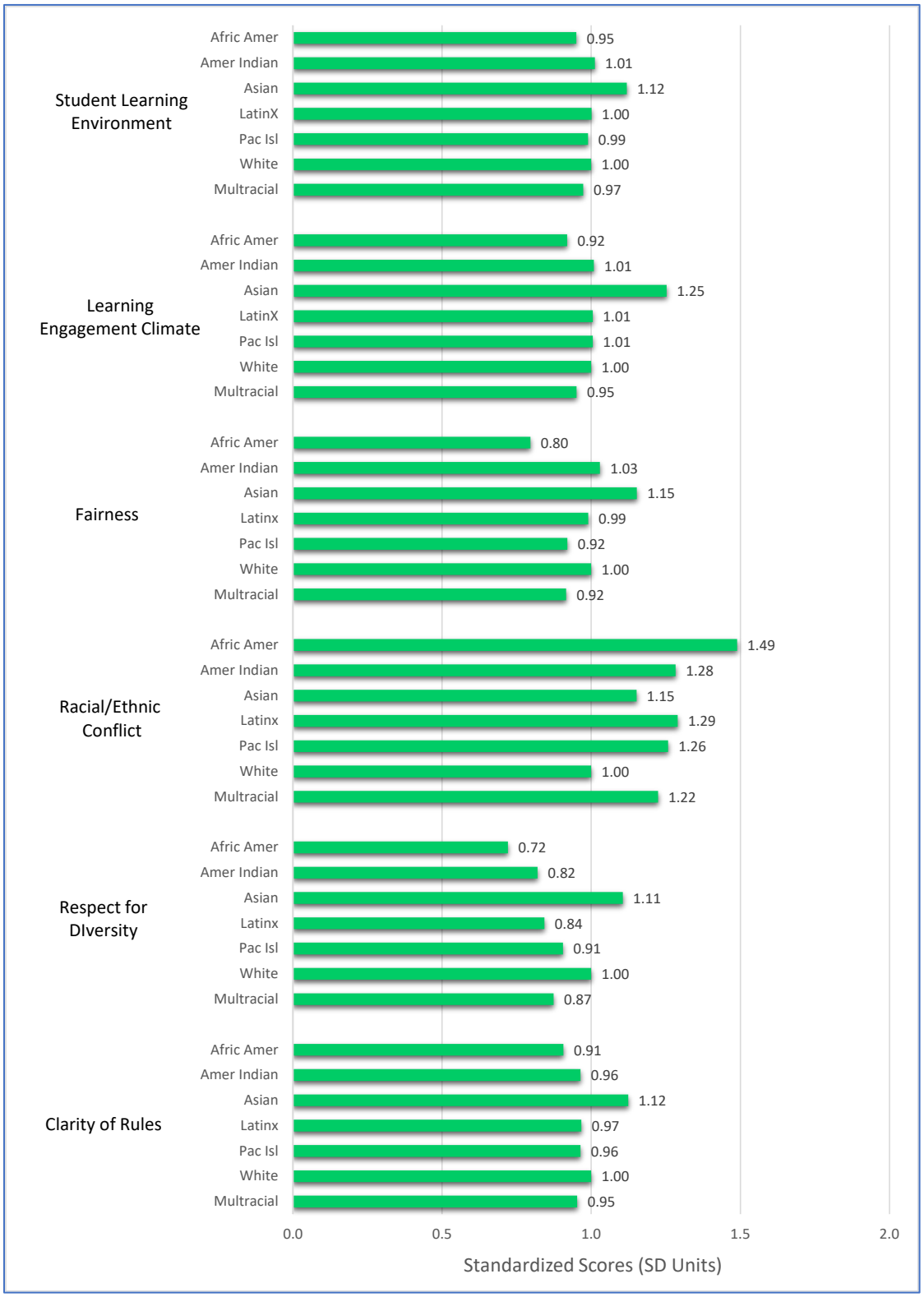
Secondary CHKS School Climate Module – Factor Means by Gender



Source: 2017/18 Secondary CHKS School Climate Module.

FIGURE 9A

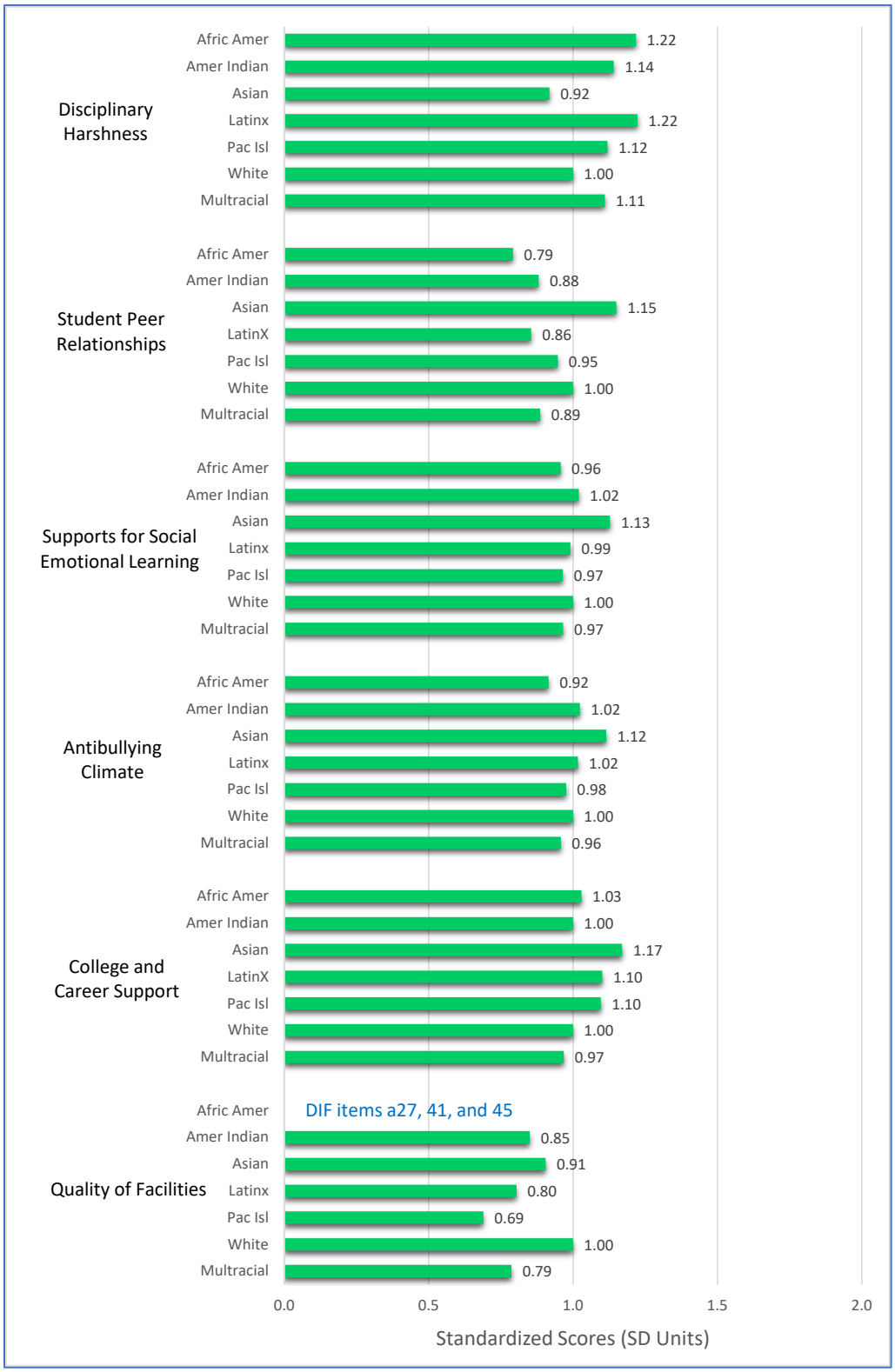
Secondary CHKS School Climate Module – Factor Means by Race/Ethnicity



Source: 2017/18 Secondary CHKS School Climate Module.

FIGURE 9B

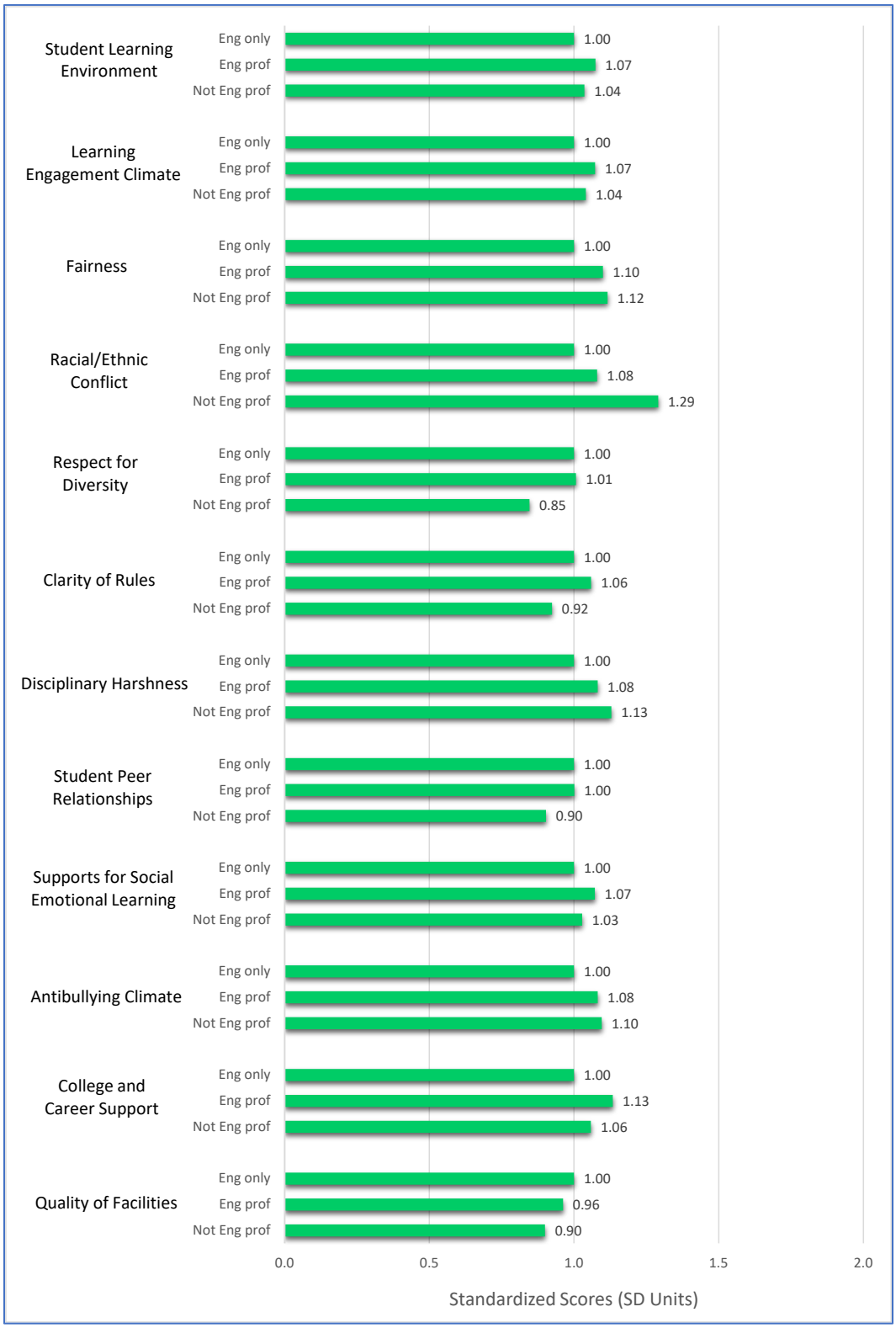
Secondary CHKS School Climate Module – Factor Means by Race/Ethnicity



Source: 2017/18 Secondary CHKS School Climate Module.

FIGURE 10

Secondary CHKS School Climate Module – Factor Means by English Language Proficiency



Source: 2017/18 Secondary CHKS School Climate Module.

California School Staff Survey

Data

The analysis of the CSSS is based on data collected from 71,202 staff in 2,477 schools (see Table 27). Analyses are conducted across the following groups: school type (elementary, middle, high, and non-traditional schools), staff role (teacher, special education teacher, administrator, paraprofessional, classified staff, and other), and race/ethnicity (African American, Asian/Pacific Islander, Latinx, white, and other).

School Type is based on the school ownership code recorded by CDE in the California School Directory. Elementary schools include alternative schools of choice, elementary schools, and K-12 schools that serve students in grades K-5. Middle schools include alternative schools of choice, intermediate/middle schools, and junior high schools that serve students in grades 6-8. High schools include alternative schools of choice and high schools that serve students in grades 9-12. Non-traditional schools include continuation, county community, district community day, juvenile court, opportunity, and special education schools. Approximately 62% of staff from non-traditional schools are in continuation schools, 16% are in special education schools, and 14% are in county community schools.

Staff role is determined from a mark-all-that-apply survey question asking about the respondents' work role in the school (*1. What is your role(s) at this school?*). Roles include teachers, special education teacher, administrator, paraprofessional, classified staff, and other. For these analyses, respondents who selected the administrator response option are coded as administrators even if they also selected a different response option (i.e., teacher). Similarly, non-administrators who selected the special education teacher response are coded as special education teachers, regardless of the other responses they may have selected. For example, a respondent who indicates that she teaches both general education and special education classes is categorized as a special education teacher. Paraprofessionals include teacher assistants and instructional aides. Classified staff include janitors, secretarial or clerical workers, and food service workers. The residual category—other—includes prevention staff nurses and health aids; counselors and psychologists; police, resource officers, and safety personnel; other certified staff (e.g., librarians); and other service providers (e.g., speech therapists).

Race/ethnicity is based on a survey question that asks about racial/ethnic group membership (*5. What is your race or ethnicity?*). Self-reports were used to identify five racial/ethnic groups: African American, Asian/Pacific Islander, Latinx, white, and other. American Indian respondents were grouped into other racial/ethnic group because so few respondents reported that they were American Indian.

Table 27 describes the analytic sample and the distribution of observations across subgroups.

Measurement Structure

A 17-factor CFA model was estimated for the staff sample (see Table A1 in Appendix A for model fit statistics). The model revealed factors for the following constructs:

- Student Learning Environment
- Student Readiness to Learn

- Staff Working Environment
- Staff Collegiality
- Instructional Equity
- Respect for Diversity
- Student Meaningful Participation
- Caring Adult-Student Relationships
- Promotion of Parental Involvement
- Antibullying Climate
- Student Peer Relationships
- Support for Social Emotional Learning
- Fairness and Rule Clarity
- Disciplinary Harshness
- Substance Use/Mental Health/Absences
- Student Antisocial Behavior
- School Disorder

Table 28 shows the items associated with each construct and standardized factor loadings from the CFA model. The loadings range from 0.63 to 0.95 with an average of 0.86 across all constructs, indicating that the items differentiate staff scores on the underlying factors well. The results are consistent with other psychometric analyses (Hanson & Voight, 2014) and with how the instrument is used.

Tables 29a and 29b shows the correlations between the 17 factors to assess whether they are adequately distinct from one another. For the most part, the correlations are sufficiently small to justify keeping them separate. However, Student Learning Environment is strongly correlated with **Staff Working Environment** (0.89), **Staff Collegiality** (0.87), **Caring Adult-Student Relationships** (0.91), and **Promotion of Parental Involvement** (0.87). Strong correlations are also evident between **Staff Working Environment** and **Staff Collegiality** (0.87), **Staff Relationships** and **Caring Adult-Student Relationships** (0.86), and **Student Meaningful Participation** and **Instructional Equity** (0.88). Although these domains overlap both conceptually and empirically, separate measures of these six domains are retained because of their usefulness in school improvement efforts.

Item Bias

MIMIC models are estimated to test for differential item functioning across school type, staff roles, and race/ethnicity.

School Type. Table 30 shows measurement intercept differences between elementary schools and middle, high, and NT schools.[17] Differences in measurement intercepts are significant enough to have consequences for school type comparisons on the underlying constructs for six domains: **Instructional Equity**; **Student Meaningful Participation**; **Student Readiness to Learn**; **Disciplinary Harshness**; **Substance Use, Mental Health, and Absenteeism Problems**; and **Student Antisocial Behavior**.

- **Instructional Equity.** Staff in middle schools (0.38) and high schools (0.82) are more likely to report that the school encourages students to enroll in rigorous courses regardless of race/ethnicity (*20. This school encourages students to enroll in rigorous courses regardless of race, ethnicity, or nationality*) than staff in elementary schools, even when all three groups score

[17] See notes in Table 5 for an explanation of the meaning of the measurement intercepts and consequence of DIF for factor means.

the same on Instructional Equity.[18] Conversely, staff in NT schools (-0.50) are less likely to report that the school encourages all students to enroll in rigorous courses than staff in elementary schools. These differences affect comparisons across types of schools on Instructional Equity. Before accounting for this measurement intercept difference, high school staff report levels of Instructional Equity that are 0.17 standard deviations lower than that reported by elementary staff. After accounting for this difference, Instructional Equity scores in high schools are 0.29 standard deviations lower than in elementary schools. Accounting for measurement intercept differences completely eliminates the disparity between NT and elementary schools, causing the difference to drop from -0.13 standard deviations to 0.01 standard deviations. **In summary, the Instructional Equity item that asks about encouragement of students' enrollment in rigorous courses regardless of racial/ethnic background has a different meaning for staff in elementary schools and those in middle, high, and NT schools**. This item should not be used in the Instructional Equity scale when comparisons are being made across school type.

- **Student Meaningful Participation**. Two items meant to assess Student Meaningful Participation appear to mean something different for staff in elementary schools and staff in middle and high schools. Middle and high school staff are more likely than elementary staff to report that their school encourages opportunities for students to decide things (*16. This school encourages opportunities for students to decide things like class activities or rules*) and that all students have equal opportunity to participate in classroom activities (*17… all students have equal opportunities to participate in classroom discussions/activities*), after controlling for the overall level of Student Meaningful Participation. Accounting for DIF on these items affects the mean of Student Meaningful Participation by 0.21 and 0.36 standard deviations for middle and high schools, respectively. **Items 16 and 17 have different meanings for elementary and secondary staff and should not be used in the Student Meaningful Participation scale when comparisons are being made across elementary, middle, and high schools.**

- **Student Readiness to Learn**. Two items exhibit DIF across elementary and high school staff that is substantial enough to affect comparisons of the underlying construct (*62. Students are healthy and physically fit, 78. Students in this school are well-behaved*). Because the measurement intercepts are more positive for high school staff, not accounting for DIF on these items actually masks the severity of the disparity between elementary and high schools on this measure.[19] **Items 62 and 78 do not have equivalent meanings for elementary and high school staff and should not be used in the Student Readiness to Learn scale if comparisons are being made across school types.**

- **Disciplinary Harshness.** Even after controlling for Disciplinary Harshness, middle, high, and NT school staff are more likely than elementary school staff to report that it is easy for a student to get kicked out of class or suspended (*80. It is easy for students to get kicked out of class or get*

[18] The elementary/middle school measurement intercepts is not consequential enough to affect elementary-middle school comparisons on the underlying construct (Instructional Equity).

[19] High school staff report levels of Student Readiness to Learn that are 0.40 standard deviations lower than that reported by elementary school staff. This disparity increases to 0.58 after accounting for DIF.

suspended). The items likely mean something different across elementary and secondary schools because elementary schools have fewer and/or different types of disciplinary issues than secondary schools. Accounting for DIF across school type on this item affects comparisons across elementary schools and high schools/NT by between 0.14 and 0.15 standard deviations. **Given the evidence of DIF for elementary and secondary staff on this item assessing Disciplinary Harshness, care should be taken when making comparisons between these two groups on this construct.**

- **Substance Use, Mental Health, and Absenteeism Problems**. The analysis indicates that the items asking about alcohol, drug, and tobacco use problems at the school mean different things for elementary and secondary school staff. This seems obvious in hindsight—substance use problems at the elementary school level are atypical given the low frequency with which elementary students use alcohol, drugs, or tobacco. **These two substance use problem items** (*90. How much of a problem at this school is student alcohol and drug use?; 91. How much of a problem at this school is tobacco use?*) **do not mean the same thing in elementary and secondary schools and should not be used as part of a scale when comparisons across school types are being made.**

- **Student Antisocial Behavior**. After accounting for differences across school type on the overall level of Student Antisocial Behavior, staff in high school staff report lower disruptive student behavior problems (*94. How much of a problem at this school is disruptive student behavior?*) than elementary staff. This measurement intercept difference increases the disparity in Student Antisocial Behavior Problems between high schools and elementary schools by 0.11 standard deviations. However, differences across elementary, middle, high, and NT schools are so large that accounting for this measurement intercept difference does not meaningfully affect comparisons on the underlying construct. To summarize, staff perceptions of the extent to which disruptive student behavior is a problem at the school appear to mean different things at the high school and elementary school level. **Comparisons across school types on the disruptive student behavior item should be examined in addition to comparing the overall level of Student Antisocial Behavior across groups.**

Staff Role. Table 31 shows measurement intercept differences between general education teachers and special education teachers, administrators, paraprofessionals, classified staff, and other staff.[20] In total, 15 items that are used to assess 10 constructs show evidence of DIF. By far, across staff roles, measurement intercepts are most likely to differ between teachers and administers. However, in only two instances are differences in measurement intercepts significant enough to have consequences for comparisons on the underlying constructs (Table 32): **Student Meaningful Participation** and **Disciplinary Harshness**.

- **Student Meaningful Participation**. One item intended to assess Student Meaningful Participation appears to mean something different for general education teachers compared to special education teachers, administrators, and other staff. At a given level of Student

[20] See notes in Table 5 for an explanation of the meaning of the measurement intercepts and consequence of DIF for factor means.

Meaningful Participation, general education teachers are more likely than other staff to report that students are given equal opportunity to participate in classroom discussions and activities (*17. This school gives all students equal opportunity to participate in classroom discussions or activities.*), with measurement intercept differences ranging from 0.21 to 0.38. Interestingly, teachers report that students have lower levels of Student Meaningful Participation than do other staff, and accounting for these differences between teachers and other staff increases the teacher/administrator and teacher/classified difference by 0.12 standard deviations. **The meaning of item 17 asking about equal opportunities to participate in classroom activities appears to differ for teachers and other staff. This item should either not be used or at least used with caution in the Student Meaningful Participation scale when comparisons are made across staff roles.**

- **Disciplinary Harshness.** At a given level of Disciplinary Harshness, paraprofessional and classified staff are less likely than general education teachers to report teachers are strict (*82. Teachers are very strict here.*). Teachers report higher levels of Disciplinary Harshness than other staff, and accounting for the measurement intercept differences between teachers, paraprofessionals, and classified staff increases the disparity by between 0.08 and 0.10 standard deviations (Table 32). **The item that asks about teacher strictness has a different meaning for teachers than it does for paraprofessionals and classified staff. The item should be used with caution in the Disciplinary Harshness scale when making comparisons across staff roles.**

Staff Race/Ethnicity. Measurement intercept differences were evident for four items across racial/ethnic groups (Table 33), in each case representing DIF between white and African American staff and in one case between white and Latinx staff. However, in no case did accounting for measurement intercept differences meaningfully alter racial/ethnic group comparisons on the measured constructs. **Substantively meaningful bias across racial/ethnic groups on the California Staff Survey items is not evident**.

Construct Reliability

Tables 34-36 show internal consistency reliability estimates for the total sample and by school type, staff role, and staff race/ethnicity. With one exception, reliability for all 17 of the constructs exceeded Nunnaly's (1978) threshold of 0.70 for all subgroups. However, a Cronbach alpha of 0.58 was estimated for the **Substance Use, Mental Health, and Absenteeism Problems** scale. **Because of its low reliability and the estimated DIF described above, the Substance Use, Mental Health, and Absenteeism Problems scale should not be used for elementary schools.** The remaining 16 measures demonstrate good internal consistency reliability.

Demographic Differences on the Measured Constructs

Standardized construct means for each school type, staff role, and by race/ethnicity are presented in Figures 11a through 13b.

School Type. Staff-reported school climate and student well-being outcomes vary substantially across elementary, middle, high, and NT schools (Figures 11a and 11b). **Elementary schools exhibit more**

positive (or less negative) scores on most measures and high schools show the least positive (or most negative) scores.

- Across almost all the measures, elementary staff report higher levels of school climate and student well-being than middle and high school staff. The advantages for elementary schools and disadvantages for high schools are particularly apparent for Student Learning Environment; Caring Adult-Student Relationship; Promotion of Parental Involvement; Antibullying Climate; Support for Social Emotional Learning; Fairness and Rule Clarity, Substance Use, Mental Health, and Absenteeism Problems; and School Disorder.
- Interestingly, **elementary and NT schools exhibit similar scores on the following factors: Student Learning Environment, Working Environment, Staff Collegiality, Respect for Diversity, Caring Adult-Student Relationships, and Support for Social Emotional Learning**.
- **Middle schools exhibit the lowest scores of all school types on Student Peer Relationships and the highest scores on Antisocial Behaviors**.

Staff Role. The results in Figures 12a and 12b demonstrate that school administrators have different perceptions of the school climate characteristics of their schools than other school staff. **Administrators report substantially more positive (or less negative) scores than other staff on almost all of the measures. These differences are particularly pronounced for Staff Working Environment, Student Readiness to Learn, Support for Social Emotional Learning, and School Disorder**. School Disorder is much lower according to administrators. The one exception to this is that administrators report higher levels of Disciplinary Harshness than general education teachers.

Classified and other staff tend to exhibit scores that lie between that of general education teachers and administrators. Another noteworthy difference is that **special education teachers report lower Caring Adult-Student Relationships and less positive Student Peer Relationships than general education teachers**.

Race/Ethnicity. Figures 13a and 13b show factor means by race/ethnicity. In general, African American staff and staff categorized as other report lower levels of positive school climate and higher levels of school problems than other staff. African American/white disparities in school support and well-being are pronounced across most of the measured constructs.

African American exhibit substantially lower scores (or more negative scores) than white staff on 15 of the 17 school climate domains assessed. The two exceptions are Staff Working Environment (where differences across African American, Asian, white, and Latinx staff are minimal) and Substance Use, Mental Health, and Absenteeism Problems (where whites and African American staff report similar levels but Asian and Latinx staff report lower levels of problems).

Few disparities are evident across Asian, white, and Latinx staff. **The one exception is Disciplinary Harshness, where African American, Asian, and Latinx staff report higher levels than white staff.**

TABLE 27

California School Staff Survey Analytic Sample (2017/18)

Survey/Subgroup	Respondents	Percentage
California School Staff Survey	71,186	100.0
Elementary School	31,060	46.6
Middle School	13,241	18.6
High School	24,213	34.0
Non-traditional School	2,672	3.8
African American	1,674	2.3
Asian/Pacific Islander	3,858	5.4
Latinx	13,591	19.1
White	40,903	57.5
Other/Multiethnic/American Indian/Missing	11,160	15.7
Teacher (general education)	40,218	60.1
Teacher (special education)	5,525	8.2
Administrator	2,621	3.9
Paraprofessional	5,343	8.0
Classified staff	6,898	10.3
Other (nurse, counselor, SRO, etc.)	6,359	9.5

Source: 2017/18 CSSS.

TABLE 28

California School Staff Survey Confirmatory Factor Analysis Model

#	Item	Loading
	Student Learning Environment	
6.	This school is a supportive and inviting place for students to learn.	0.872
7.	This school sets high standards for academic performance for all students.	0.816
8.	This school promotes academic success for all students.	0.869
9.	This school emphasizes helping students academically when they need it.	0.827
11.	This school emphasizes teaching lessons in ways relevant to students.	0.813
29.	This school is a safe place for students.	0.878
42.	In this school, adults work hard to ensure a safe and supportive learning environment	0.923
44.	This school motivates students to learn.	0.912
75.	Teachers go out of their way to help students.	0.789
	Staff Working Environment	
12.	This school is a supportive and inviting place for staff to work.	0.911
13.	This school promotes trust and collegiality among staff.	0.905
14.	This school provides the materials, resources, and training needed to do job effectively.	0.753
30.	This school is a safe place for staff.	0.933
43.	This school promotes personnel participation in decision-making...	0.848
	Staff Collegiality	
39.	Adults in this school have close professional relationships with one another.	0.900
40.	Adults in this school support and treat each other with respect.	0.929
41.	Adults in this school feel a responsibility to improve this school.	0.937

#	Item	Loading
	Instructional Equity	
20.	... encourages students to enroll in rigorous courses regardless of race, ethnicity, or nationality.	0.633
21.	... emphasizes using instructional materials that reflect the culture or ethnicity of its students.	0.771
22.	... staff examine their own cultural biases through professional development/other processes.	0.700
23.	This school considers closing the racial/ethnic achievement gap a high priority.	0.752
24.	... high expectations for all students, regardless of their race, ethnicity, or nationality.	0.918
25.	This school fosters an appreciation of student diversity and respect for each other.	0.934
26.	This school emphasizes showing respect for all students' cultural beliefs and practices.	0.921
	Respect for Diversity	
59.	Students in this school respect each other's differences.	0.831
60.	Adults in this school respect differences in students.	0.885
61.	Teachers show ... it is important for students of different races and cultures ... to get along ...	0.910
	Student Meaningful Participation	
16.	This school encourages opportunities for students to decide things like class activities or rules.	0.786
17.	... all students have equal opportunity to participate in classroom discussions/activities.	0.909
18.	... all students have equal opportunity to participate in ... extracurricular/enrichment activities.	0.754
19.	... opportunities to 'make a difference' by helping other people, the school, or the community.	0.767
	Caring Student-Adult Relationships	
33.	Adults in this school really care about every student.	0.879
34.	Adults in this school acknowledge and pay attention to students.	0.940
35.	Adults in this school want every student to do their best.	0.939
36.	Adults in this school listen to what students have to say.	0.930
37.	Adults in this school believe that every student can be a success.	0.919
38.	Adults in this school treat all students fairly.	0.930

#	Item	Loading
	Promotion of Parental Involvement	
31.	This school is welcoming to and facilitates parent involvement.	0.906
46.	This school encourages parents to be active partners in educating their child.	0.880
87.	Teachers ... communicate with parents about what their children are expected to learn in class.	0.806
88.	Parents feel welcome to participate at this school.	0.837
89.	School staff take parents' concerns seriously.	0.857
	Antibullying Climate	
53.	Teachers here make it clear to students that bullying is not tolerated.	0.933
54.	If a student was bullied, he or she would tell one of the teachers or staff at this school.	0.841
55.	Students tell teachers when other students are being bullied.	0.836
56.	If a student tells a teacher that someone is bullying … , the teacher will do something to help.	0.915
57.	Students here try to stop bullying when they see it happening.	0.815
	Student Readiness to Learn	
62.	Students are healthy and physically fit.	0.727
63.	Students arrive at school alert and rested.	0.796
64.	Students are motivated to learn.	0.896
78.	Students in this school are well-behaved.	0.895
	Student Peer Relationships	
65.	Students enjoy spending time together during school activities.	0.883
66.	Students care about one another.	0.930
67.	Students treat each other with respect.	0.937
68.	Student get along well with one another.	0.937

#	Item	Loading
	Support for Social Emotional Learning	
69.	This school encourages students to feel responsible for how they act.	0.901
70.	Students are often given rewards for being good.	0.678
71.	This school encourages students to understand how others think and feel.	0.922
72.	Students are taught that they can control their own behavior.	0.905
73.	This school helps students resolve conflicts with one another.	0.897
74.	This school encourages students to care about how others feel.	0.953
	Fairness and Rule Clarity	
27.	This school clearly communicates to students the consequences of breaking school rules.	0.891
28.	This school handles discipline problems fairly.	0.904
76.	Adults at this school treat all students with respect.	0.929
77.	The school rules are fair.	0.917
83.	Rules in this school are made clear to students.	0.870
84.	This school clearly informs students what will happen if they break school rules	0.857
85.	Students know what the rules are.	0.875
86.	This school makes it clear how students are expected to act.	0.914
	Disciplinary Harshness	
79.	The rules in the school are too strict.	0.693
80.	It is easy for students to get kicked out of class or get suspended.	0.685
81.	Students get in trouble for breaking small rules.	0.778
82.	Teachers are very strict here.	0.848

#	Item	Loading
	Substance Use, Mental Health, and Absenteeism Problems	
90.	Student alcohol and drug use	0.895
91.	Student tobacco use	0.826
96.	Student depression or other mental health problems	0.772
98.	Cutting classes or being truant	0.921
	Student Anti-Social Behavior	
92.	Harassment or bullying among students	0.798
93.	Physical fighting between students	0.807
94.	Disruptive student behavior	0.805
97.	Lack of respect of staff by students	0.855
	School Disorder	
99.	Gang-related activity	0.871
100.	Weapons possession	0.901
101.	Vandalism (including graffiti)	0.858
102.	Theft	0.864

Source: 2017/18 CSSS.

TABLE 29A

California School Staff Survey Factor Correlations

Domain	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Student Learning Environment	1										
(2) Staff Working Environment	0.89	1									
(3) Staff Collegiality	0.87	0.87	1								
(4) Instructional Equity	0.88	0.79	0.77	1							
(5) Respect for Diversity	0.81	0.70	0.75	0.82	1						
(6) Student Meaningful Participat.	0.86	0.77	0.74	0.88	0.75	1					
(7) Caring Adult-Student Relations	0.91	0.76	0.86	0.83	0.82	0.80	1				
(8) Promotion of Parental Involve.	0.87	0.78	0.77	0.81	0.79	0.81	0.82	1			
(9) Antibullying Climate	0.78	0.67	0.70	0.72	0.82	0.70	0.77	0.77	1		
(10) Student Readiness to Learn	0.72	0.65	0.61	0.62	0.66	0.63	0.63	0.68	0.66	1	
(11) Student Peer Relationships	0.73	0.65	0.64	0.66	0.78	0.66	0.68	0.71	0.71	0.85	1
(12) Support for SEL	0.82	0.75	0.73	0.78	0.79	0.74	0.77	0.82	0.79	0.71	0.76
(13) Fairness and Rule Clarity	0.82	0.76	0.72	0.73	0.74	0.71	0.77	0.81	0.73	0.65	0.66
(14) Disciplinary Harshness	0.04	0.12	0.07	0.07	-0.02	0.03	-0.03	0.00	0.07	0.25	0.10
(15) Substance Use, Mental Health, and Absenteeism Problems	-0.40	-0.35	-0.34	-0.30	-0.37	-0.28	-0.37	-0.41	-0.44	-0.53	-0.43
(16) Student Antisocial Behavior	-0.55	-0.51	-0.45	-0.45	-0.54	-0.45	-0.47	-0.50	-0.54	-0.74	-0.67
(17) School Disorder	-0.44	-0.41	-0.37	-0.33	-0.41	-0.32	-0.40	-0.42	-0.43	-0.56	-0.49

Source: 2017/18 CSSS. Estimates come from base CFA Model.

TABLE 29B

California School Staff Survey Factor Correlations

Domain	(12)	(13)	(14)	(15)	(16)	(17)
(12) Support for Social Emotional Learning	1					
(13) Fairness and Rule Clarity	0.83	1				
(14) Disciplinary Harshness	0.10	0.12	1			
(15) Substance Use, Mental Health, and Absenteeism Problems	-0.45	-0.41	-0.07	1		
(16) Student Anti-Social Behavior	-0.53	-0.52	-0.11	0.64	1	
(17) School Disorder	-0.44	-0.42	-0.02	0.77	0.77	1

Source: 2017/18 CSSS. Estimates come from base CFA Model.

TABLE 30

California School Staff Survey - DIF by School Type

		Measurement Intercept[a]			Difference in Factor Mean after DIF[b]		
#	Item	Middle	High	NT	Middle	High	NT
	Student Learning Environment						0.03
7.	This school sets high standards for academic performance for all students.			-0.62			
9.	This school emphasizes helping students academically when they need it.			0.21			
75.	Teachers go out of their way to help students.			0.23			
	Instructional Equity				-0.06	-0.11	0.14
20.	... encourages students to enroll in rigorous courses regardless of race, ethnicity, or nationality.	0.38	0.82	-0.50			
24.	... high expectations for all students, regardless of their race, ethnicity, or nationality.		-0.26				
	Respect for Diversity				0.10		
59.	Students in this school respect each other's differences.	-0.28					
	Student Meaningful Participation				0.21	0.36	
16.	This school encourages opportunities for students to decide things like class activities or rules.	-0.36	-0.56				
17.	... all students have equal opportunity to participate in classroom discussions/activities.	-0.33	-0.60				

		Measurement Intercept[a]			Difference in Factor Mean after DIF[b]		
#	Item	Middle	High	NT	Middle	High	NT
	Promotion of Parental Involvement					0.05	-0.08
31.	This school is welcoming to and facilitates parent involvement.			0.22			
87.	Teachers ... communicate with parents about what their children are expected to learn in class.		-0.27	-0.22			
89.	School staff take parents' concerns seriously.			0.36			
	Antibullying Climate				-0.04	-0.04	-0.01
55.	Students tell teachers when other students are being bullied.			-0.20			
56.	If a student tells a teacher that someone is bullying ... , the teacher will do something to help.	0.22	0.22	0.32			
	Student Readiness to Learn				0.07	-0.18	-0.08
62.	Students are healthy and physically fit.		0.23				
64.	Students are motivated to learn.	-0.22					
78.	Students in this school are well-behaved.		0.44	0.32			
	Student Peer Relationships					0.05	0.08
65.	Students enjoy spending time together during school activities.		-0.22	-0.30			
	Support for Social Emotional Learning					0.06	
70.	Students are often given rewards for being good.		-0.45				
	Disciplinary Harshness				-0.09	-0.14	-0.15
80.	It is easy for students to get kicked out of class or get suspended.	0.25	0.41	0.46			

		Measurement Intercept[a]			Difference in Factor Mean after DIF[b]		
#	Item	Middle	High	NT	Middle	High	NT
	Substance Use, Mental Health, and Absenteeism Problems				-0.22	-0.21	-0.37
90.	Student alcohol and drug use	0.86	1.10	1.31			
91.	Student tobacco use	0.71	0.78	0.93			
	Student Antisocial Behavior				-0.06	0.11	0.10
92.	Harassment or bullying among students	0.20		-0.31			
94.	Disruptive student behavior		-0.33				
	School Disorder				0.09	-0.07	0.12
99.	Gang-related activity		0.34	0.51			
101.	Vandalism (including graffiti)			-0.32			
102.	Theft	-0.26		-0.60			

Source: 2017/18 CSSS. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of school type on the questionnaire item, relative to elementary schools, after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 31

California School Staff Survey - DIF by Role (Measurement Intercepts)

		Measurement Intercept[a]				
#	Item	Spec Ed Teacher	Administra-tor	Paraprofes-sional	Classified	Other
	Student Learning Environment					
29.	This school is a safe place for students.		0.45			
75.	Teachers go out of their way to help stu-dents.			-0.22	-0.33	
	Instructional Equity					
21.	... emphasizes using instructional materials that reflect the culture or ethnicity of its students.				0.22	
22.	... staff examine their own cultural biases through professional development/other processes.				0.24	
	Respect for Diversity					
59.	Students in this school respect each other's differences.		0.22			
	Student Meaningful Participation					
17.	... all students have equal opportunity to participate in classroom discussions/activi-ties.	-0.21	-0.35	-0.21	-0.38	-0.29
	Promotion of Parental Involvement					
87.	Teachers ... communicate with parents about what their children are expected to learn in class.		-0.28			
	Antibullying Climate					
56.	If a student tells a teacher that someone is bullying ... , the teacher will do something to help.				-0.23	
	Student Readiness to Learn					
78.	Students in this school are well-behaved.			-0.22	-0.24	

		Measurement Intercept[a]				
#	Item	Spec Ed Teacher	Administra-tor	Paraprofes-sional	Classified	Other
	Fairness and Rule Clarity					
27.	This school clearly communicates to students the consequences of breaking school rules.		0.24			
28.	This school handles discipline problems fairly.		0.52			
76.	Adults at this school treat all students with respect.		-0.38			
	Disciplinary Harshness					
82.	Teachers are very strict here.			-0.28	-0.24	
	Substance Use, Mental Health, and Absenteeism Problems					
96.	Student depression or other mental health problems		0.28		-0.23	

Source: 2017/18 CSSS. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of staff role on the questionnaire item, relative to general education teachers, after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 32

California School Staff Survey - DIF by Role (Factor Means)

	Difference in Factor Mean after DIF[a]				
Item	**Spec Ed Teacher**	**Administra-tor**	**Paraprofes-sional**	**Classified**	**Other**
Student Learning Environment		-0.02	0.03	0.04	
Instructional Equity				-0.08	
Respect for Diversity		-0.07			
Student Meaningful Participation	0.07	0.12	0.07	0.12	0.10
Promotion of Parental Involvement		0.07			
Antibullying Climate				0.05	
Student Readiness to Learn			0.07	0.08	
Fairness and Rule Clarity		-0.05			
Disciplinary Harshness			0.10	0.08	
Substance Use, Mental Health, and Absenteeism Problems		-0.08		0.07	

Source: 2017/18 CSSS. *Notes:* [a]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 33

California School Staff Survey - DIF by Race/Ethnicity

		Measurement Intercept[a]		Difference in Factor Mean after DIF[a]	
#	Item	African American	Latinx	African American	Latinx
	Student Learning Environment			0.02	0.02
75.	Teachers go out of their way to help students.	-0.23	-0.22		
	Fairness and Rule Clarity			0.04	
76.	Adults at this school treat all students with respect.	-0.26			
	Disciplinary Harshness			0.08	
82.	Teachers are very strict here.	-0.23			
	Student Anti-Social Behavior			-0.07	
93.	Physical fighting between students	0.22			

Source: 2017/18 CSSS. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of race/ethnicity on the questionnaire item, relative to whites, after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 34

California School Staff Survey Reliability Coefficients by School Type

Construct	Items	Total	Elementary School	Middle School	High School	NonTrad School
(1) Student Learning Environment	9	0.92	0.93	0.92	0.92	0.91
(2) Staff Working Environment	5	0.88	0.88	0.89	0.88	0.87
(3) Staff Collegiality	3	0.89	0.90	0.89	0.88	0.89
(4) Instructional Equity	7	0.88	0.89	0.90	0.89	0.89
(5) Respect for Diversity	3	0.81	0.81	0.77	0.81	0.78
(6) Student Meaningful Participat.	4	0.81	0.81	0.82	0.81	0.81
(7) Caring Adult-Student Relations	6	0.94	0.95	0.94	0.94	0.94
(8) Promotion of Parental Involve.	5	0.87	0.88	0.87	0.86	0.86
(9) Antibullying Climate	5	0.87	0.88	0.86	0.86	0.85
(10) Student Readiness to Learn	4	0.83	0.84	0.85	0.81	0.82
(11) Student Peer Relationships	4	0.89	0.90	0.88	0.88	0.88
(12) Support for SEL	6	0.91	0.91	0.91	0.89	0.90
(13) Fairness and Rule Clarity	8	0.93	0.92	0.92	0.92	0.92
(14) Disciplinary Harshness	4	0.78	0.76	0.78	0.80	0.79
(15) Substance Use, Mental Health, and Absenteeism Problems	4	0.82	0.58	0.73	0.70	0.81
(16) Student Anti-Social Behavior	4	0.83	0.83	0.84	0.81	0.81
(17) School Disorder	4	0.84	0.76	0.84	0.83	0.85

Source: 2017/18 CSSS.

TABLE 35

California School Staff Survey Reliability Coefficients by Staff Role

Construct	Items	Gen Ed Teacher	Spec Ed Teacher	Adminis-trator	Para-profe-sional	Classified	Other
(1) Student Learning Environment	9	0.92	0.93	0.93	0.93	0.94	0.93
(2) Staff Working Environment	5	0.88	0.88	0.86	0.88	0.89	0.88
(3) Staff Collegiality	3	0.89	0.90	0.89	0.89	0.90	0.89
(4) Instructional Equity	7	0.87	0.90	0.88	0.90	0.92	0.90
(5) Respect for Diversity	3	0.80	0.81	0.82	0.82	0.83	0.83
(6) Student Meaningful Participat.	4	0.79	0.83	0.80	0.85	0.88	0.84
(7) Caring Adult-Student Relations	6	0.94	0.95	0.94	0.95	0.95	0.94
(8) Promotion of Parental Involve.	5	0.87	0.88	0.87	0.89	0.89	0.88
(9) Antibullying Climate	5	0.87	0.87	0.87	0.89	0.90	0.89
(10) Student Readiness to Learn	4	0.83	0.83	0.81	0.85	0.86	0.83
(11) Student Peer Relationships	4	0.89	0.88	0.90	0.89	0.92	0.90
(12) Support for Social Emotional Lrn	6	0.91	0.91	0.89	0.91	0.92	0.91
(13) Fairness and Rule Clarity	8	0.92	0.92	0.92	0.92	0.93	0.93
(14) Disciplinary Harshness	4	0.76	0.79	0.79	0.80	0.81	0.79
(15) Substance Use, Mental Health, and Absenteeism Problems	4	0.81	0.82	0.80	0.84	0.85	0.84
(16) Student Anti-Social Behavior	4	0.83	0.84	0.80	0.85	0.85	0.83
(17) School Disorder	4	0.83	0.86	0.79	0.87	0.86	0.84

Source: 2017/18 CSSS.

TABLE 36

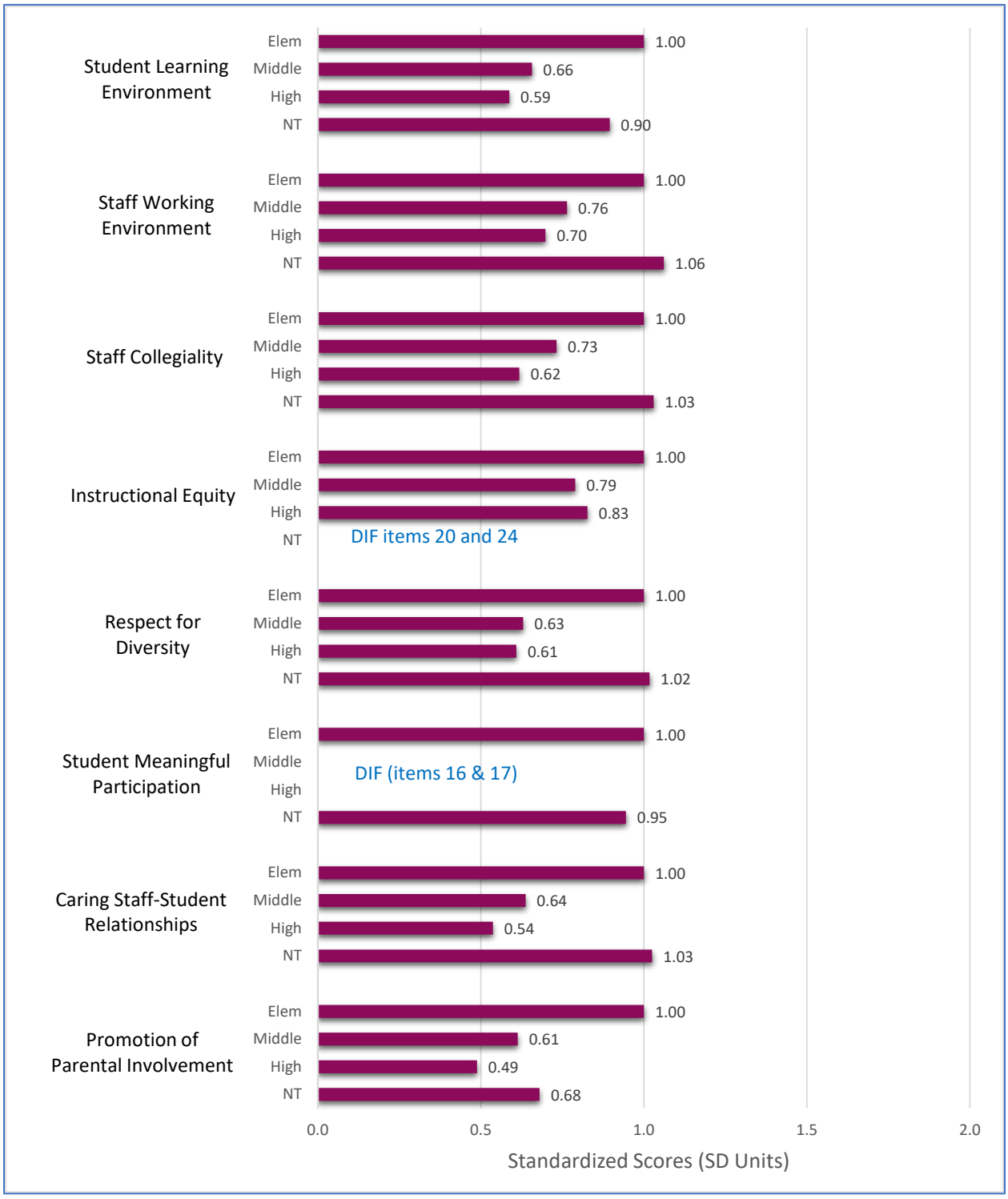
California School Staff Survey Reliability Coefficients Race/Ethnicity

Construct	Items	African American	Asian/Pacific Islander	White	Latinx	Other
(1) Student Learning Environment	9	0.93	0.93	0.92	0.93	0.92
(2) Staff Working Environment	5	0.88	0.88	0.88	0.88	0.89
(3) Staff Collegiality	3	0.88	0.90	0.89	0.90	0.90
(4) Instructional Equity	7	0.91	0.88	0.87	0.90	0.90
(5) Respect for Diversity	3	0.83	0.82	0.80	0.82	0.81
(6) Student Meaningful Participat.	4	0.84	0.84	0.79	0.83	0.82
(7) Caring Adult-Student Relations	6	0.94	0.94	0.94	0.95	0.94
(8) Promotion of Parental Involve.	5	0.87	0.87	0.87	0.88	0.88
(9) Antibullying Climate	5	0.87	0.87	0.87	0.88	0.88
(10) Student Readiness to Learn	4	0.84	0.84	0.83	0.83	0.84
(11) Student Peer Relationships	4	0.88	0.90	0.89	0.89	0.89
(12) Support for Social Emotional Lrn	6	0.90	0.91	0.91	0.91	0.92
(13) Fairness and Rule Clarity	8	0.92	0.92	0.93	0.93	0.93
(14) Disciplinary Harshness	4	0.79	0.80	0.75	0.80	0.79
(15) Substance Use, Mental Health, and Absenteeism Problems	4	0.81	0.82	0.82	0.83	0.82
(16) Student Anti-Social Behavior	4	0.83	0.84	0.83	0.84	0.85
(17) School Disorder	4	0.83	0.85	0.83	0.86	0.86

Source: 2017/18 CSSS.

FIGURE 11A

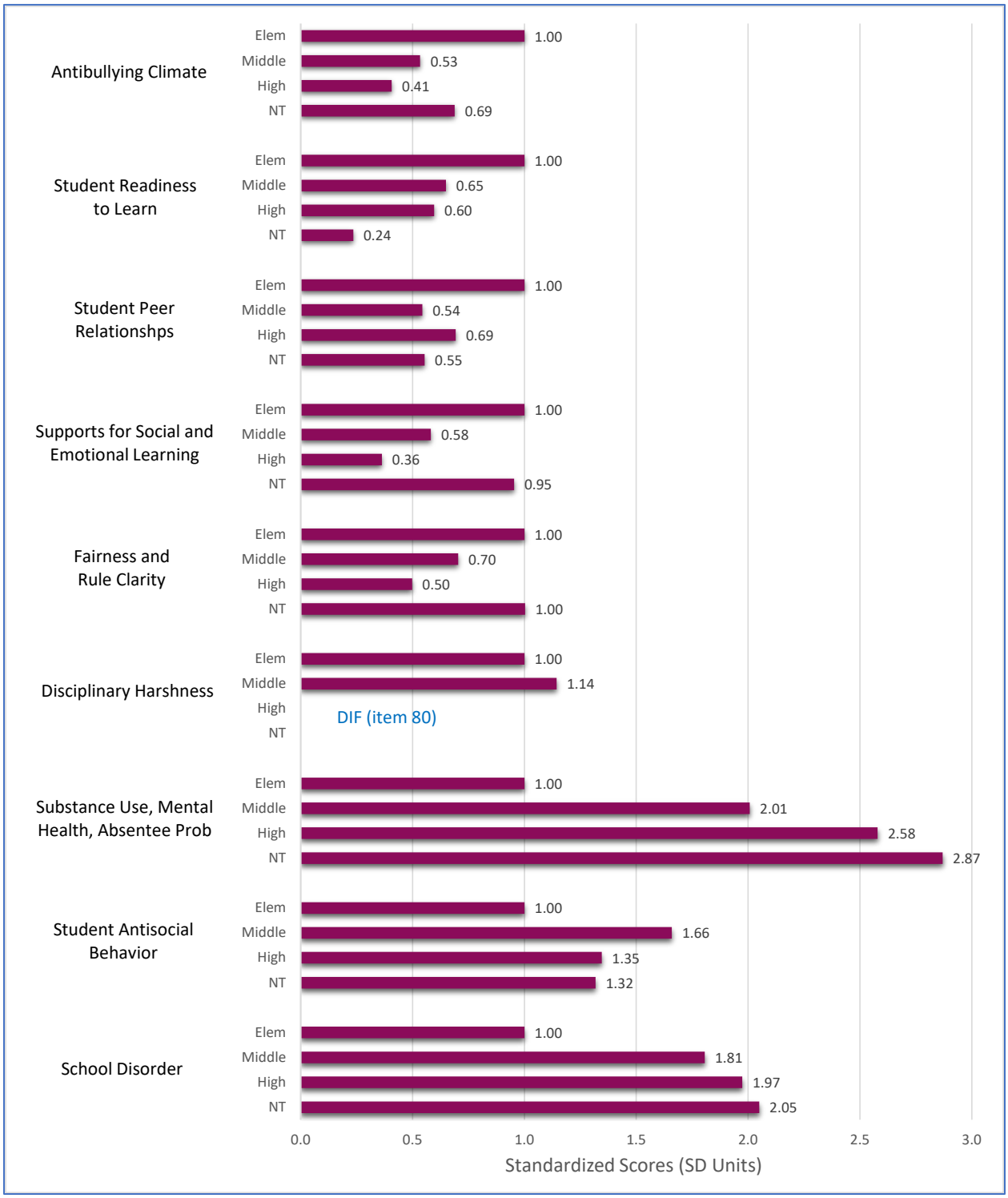
California School Staff Survey – Factor Means by School Type



Source: 2017/18 CSSS.

FIGURE 11B

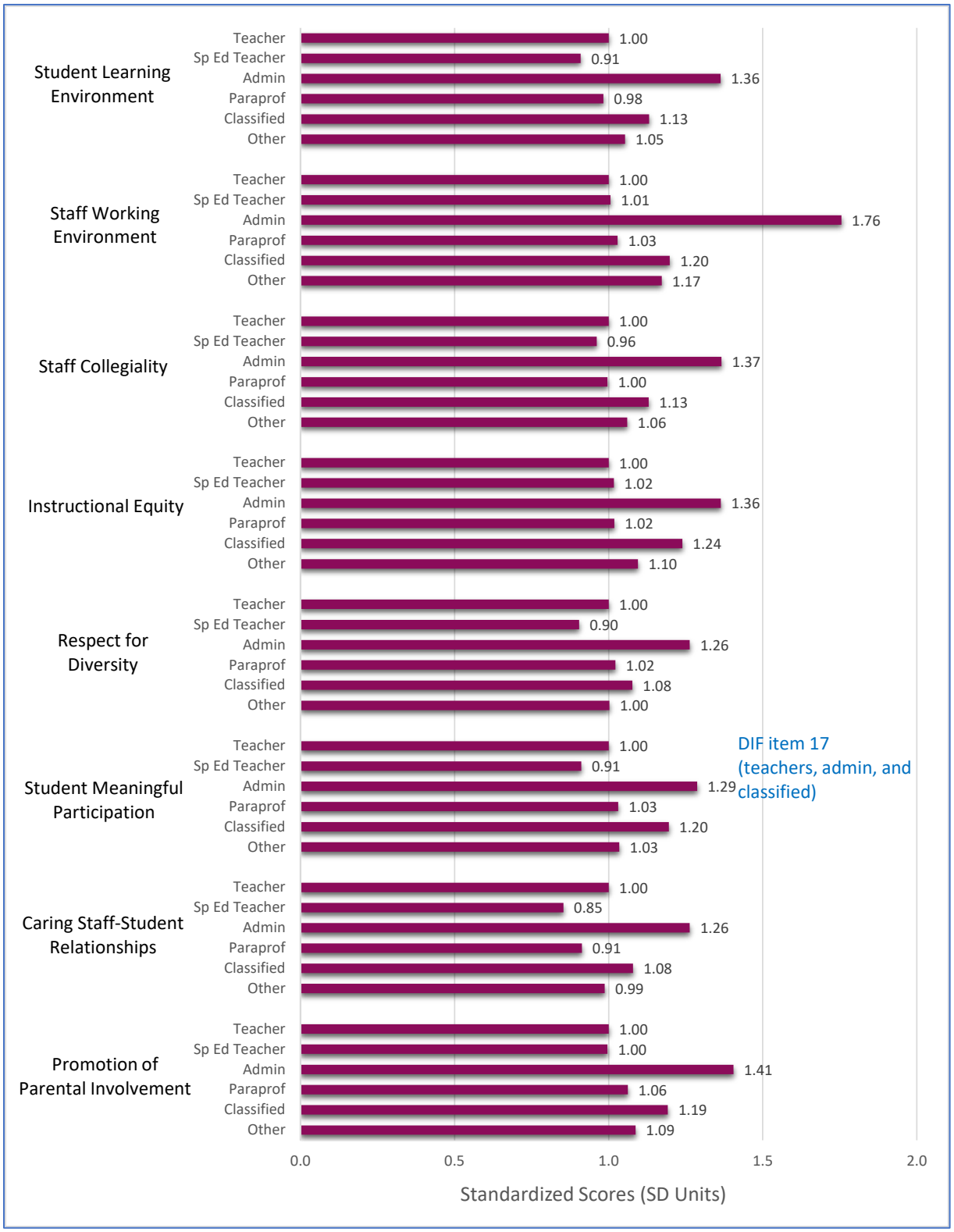
California School Staff Survey – Factor Means by School Type



Source: 2017/18 CSSS.

FIGURE 12A

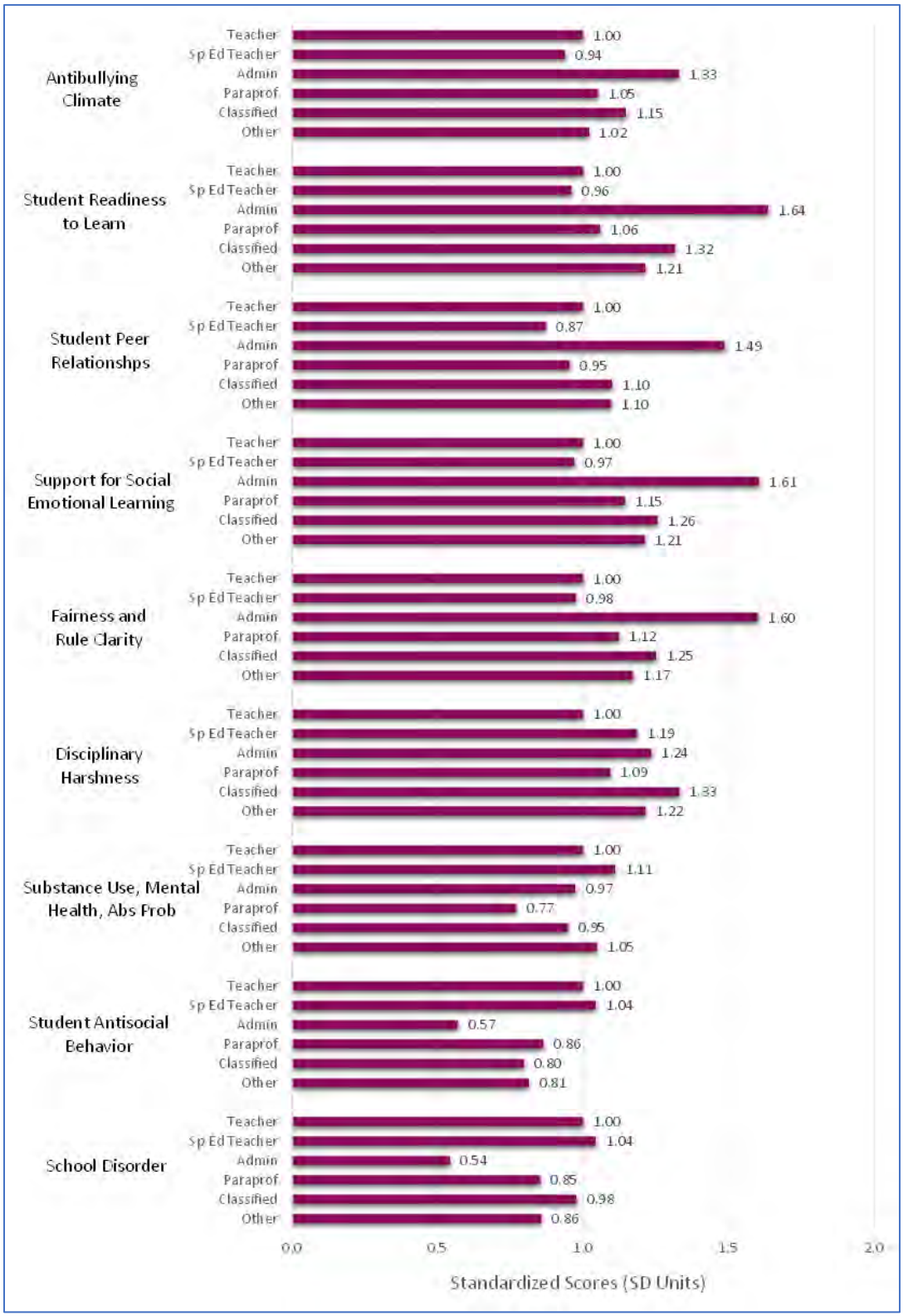
California School Staff Survey – Factor Means by Staff Role



Source: 2017/18 CSSS.

FIGURE 12B

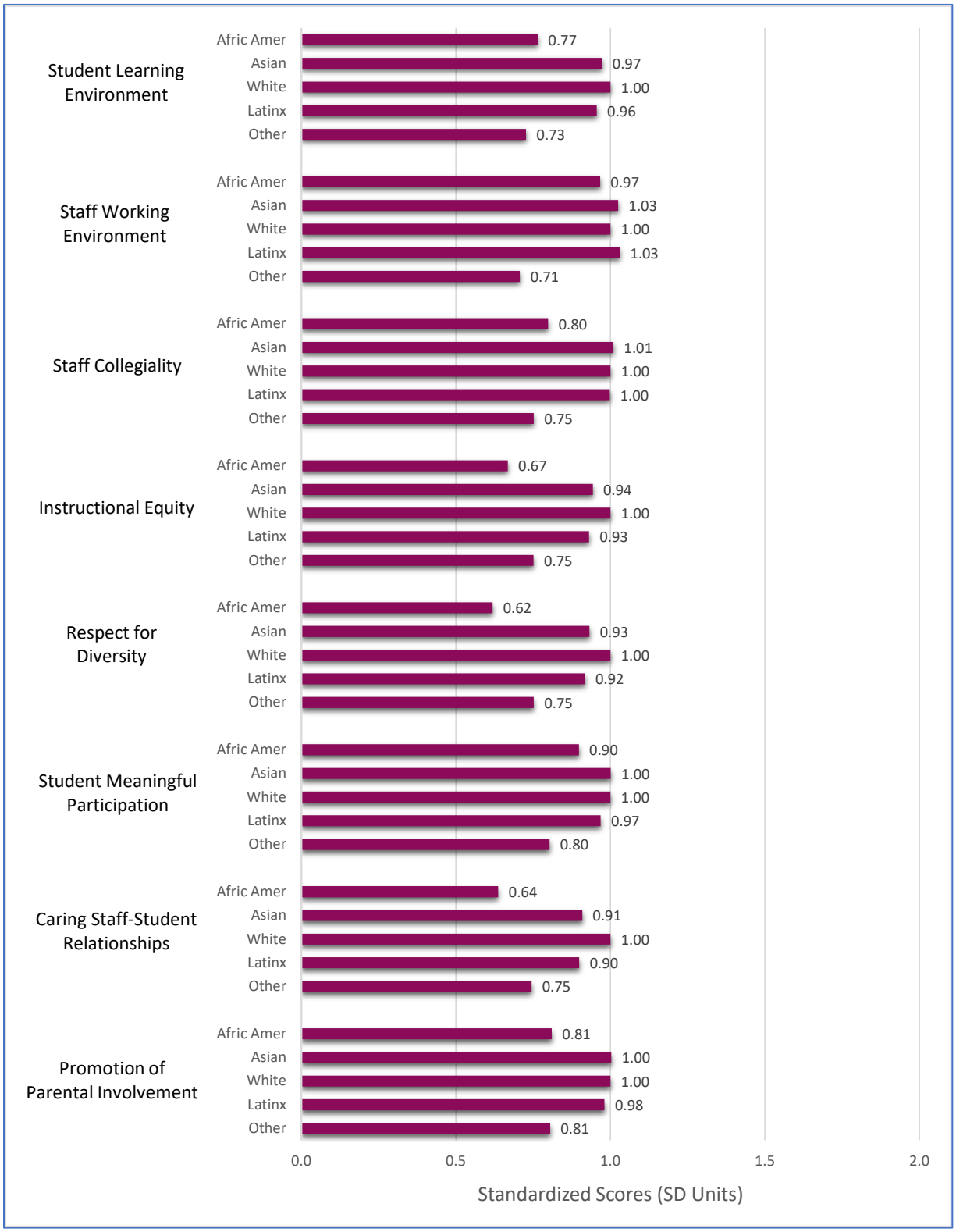
California School Staff Survey – Factor Means by Staff Role



Source: 2017/18 CSSS.

FIGURE 13A

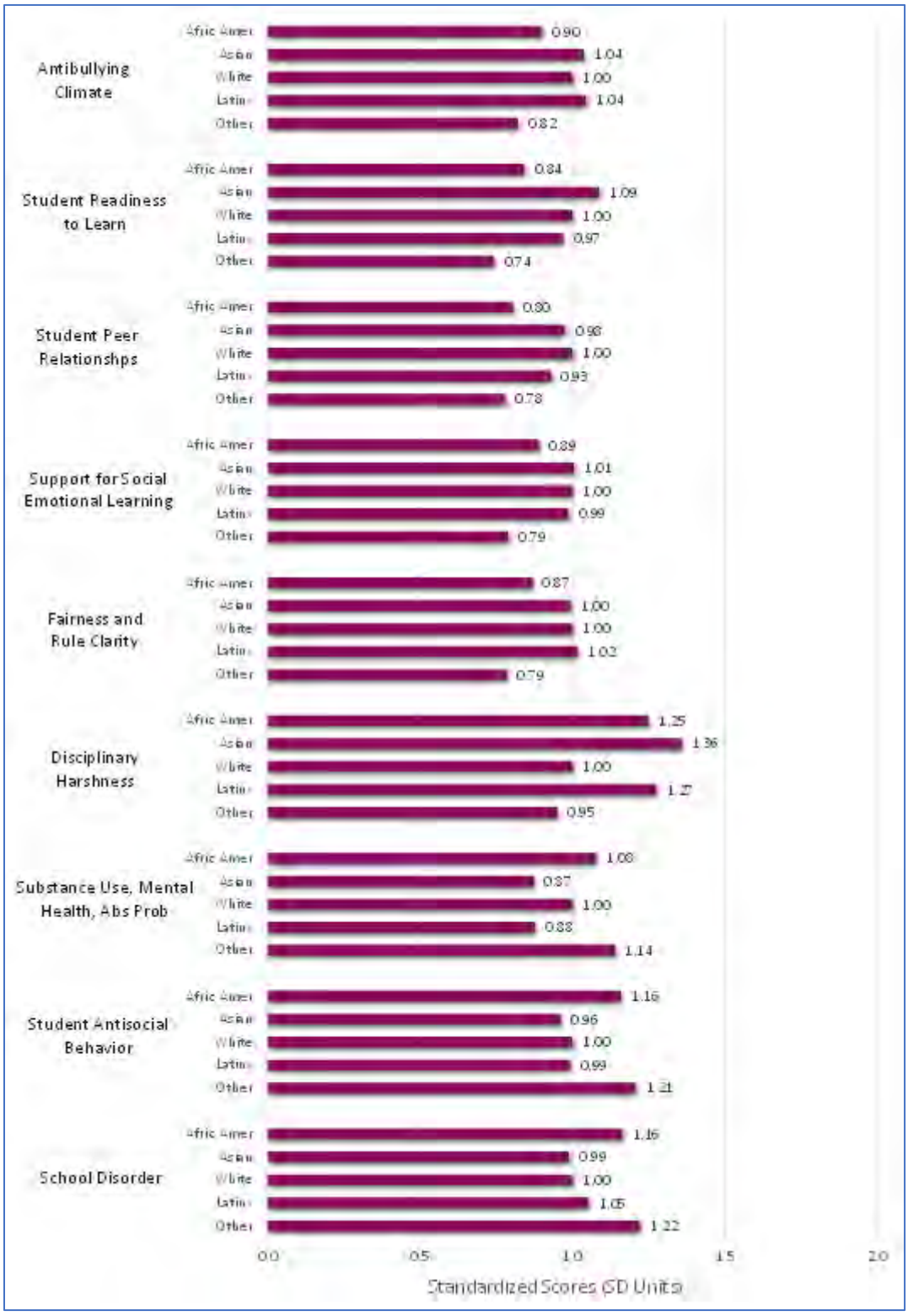
California School Staff Survey – Factor Means by Ethnicity



Source: 2017/18 CSSS.

FIGURE 13B

California School Staff Survey – Factor Means by Ethnicity



Source: 2017/18 CSSS.

California School Parent Survey

Data

The analysis of the CSPS is based on data collected from 147,418 parents in 1,743 schools (see Table 37). "Don't know" responses on the survey items are treated as missing data in the analysis. Analyses are conducted across the following groups: school type (elementary, middle, and high school), grade level of student (K-3rd, 4th-5th, 6th-8th, and 9th-12th), race/ethnicity (African American, Asian, Filipino, Latinx, white, multiethnic, and other), and self-reported eligibility for free/reduced-price meals (not eligible, eligible).

School Type is based on the school ownership code recorded by CDE in the California School Directory and is described under California School Staff Survey. Because of their low numbers, parents of students enrolled in NT schools are excluded from the analyses.

Grade Level of Student is assessed using a survey question asking about the students' current grade (*6. In what grade is your child?*). Grades are collapsed into four categories: K-3rd, 4th-5th, 6th-8th, and 9th-12th.

Race/Ethnicity is based on a survey question that asks about racial/ethnic group membership (*4. What is your race or ethnicity?*). Self-reports were used to identify seven racial/ethnic groups: African American, Asian, Filipino, Latinx, white, multiethnic, and other. Because so few respondents indicated that they were American Indian or Native Hawaiian, these groups along with respondents with missing race/ethnicity data were collapsed into the other category.

Free/Reduced-Price Meals is based on a survey question that asks about subsidized meal eligibility (*5. Does one or more of your children receive a free or reduced-price breakfast or lunch at this school?*). Respondents who answered "no" or declined to answer this question were classified as not eligible for free/reduced-price meals. Those answering "yes" were coded as eligible for free/reduced-price meals.

Measurement Structure

A six-factor CFA model was estimated for the parent sample (see Table A1 in Appendix A for model fit statistics). The model revealed factors for the following constructs:

- Student Learning Environment
- Promotion of Parental Involvement
- Communication with Parents about School
- Parental Involvement at School
- Substance Use Problems
- School Disorder

Table 38 shows the standardized factor loadings from the six-factor CFA model. **An important difference between the parent model and the student/staff models is that the parent Student Learning Environment factor is more global and is based on far more items**. Student Learning Environment is comprised of 21 survey items—many of which were intended to assess more fine-grained measures such as caring adult-student relationships, rule clarity, and support for social emotional learning. Still, the loadings range from 0.60 to 1.00 with an average of 0.86 across all constructs. The items thus appear to differentiate parent scores on the underlying factors well.

Table 39 shows the correlations between the six factors to assess discriminant validity. Thirteen of the 15 correlations are sufficiently small to justify keeping the domains separate. However, **Student Learning Environment** is strongly correlated with **Promotion of Parental Involvement** (0.92) and **Substance Use Problems** is strongly correlated with **School Disorder** (0.94). These domains overlap considerable. Although debatable, **separate measures of these four domains are retained to maintain comparability with the student and staff survey measures**.

Item Bias

Differential item functioning is tested across school type, grade levels of students, race/ethnicity, and free/reduced-price meals using MIMIC models.

School Type. Table 40 shows measurement intercept differences and resulting difference in factor means between elementary schools and middle, high schools.[21] School type measurement intercept differences are detected for 12 items that measure three constructs. For the most part, when significant intercept differences are found, the results suggest that parents of elementary students interpret the survey questions differently from parents of high school students. **Only for the Parental Involvement in School factor are differences in measurement intercepts significant enough to have consequences for school type comparisons**. Specifically, parents of high school students report that they are less likely than parents of elementary school students to attend a PTA meeting (*55. Attended a meeting of the parent-teacher organization or association*) or regularly scheduled parent-teacher conference (*56. Gone to a regularly scheduled parent-teacher conference with the child's teacher*). Recall that these group differences are present when the parents in both of these groups have equal levels of **Parental Involvement in School**. These measurement intercept differences make sense, as parent-teacher conferences are rarely scheduled in high school and parent participation in high school parent-teacher organizations is less frequent. Accounting for the measurement intercept differences only slightly reduces the large disparity between elementary and high school parents with regards to parental involvement at school.[22] **To summarize, the meaning of the survey items asking about PTA meeting attendance and attendance at regularly scheduled parent-teacher conferences differ for parents of elementary and high school students. Comparisons across school types on these items should be examined in addition to comparing the overall level of Parental Involvement at School.**

Grade Level of Students. Measurement intercept differences were present for 13 items across student grade levels (Table 41). For the most part, difference in measurement intercepts were detected between parents of grade 4-5 students and parents of grade 9-12 students. In no case did accounting for measurement intercept differences meaningfully alter grade-level group comparisons on the measured constructs. **Substantively meaningful bias across grade level groups on the California Parent Survey Items is not evident**.

[21] See notes in Table 5 for an explanation of the meaning of the measurement intercepts and consequence of DIF for factor means.

[22] Without adjustments, high school parents report levels of Parental Involvement at School that are 0.62 standard deviations lower than elementary school parents. This difference drops to 0.52 standard deviations after adjusting for DIF.

Race/Ethnicity. Table 42 shows measurement intercept differences between white parents and parents in other racial/ethnic groups and Table 43 shows the results of the effects of measurement invariance on construct group comparisons.[23] In total, 13 items used to assess five constructs show evidence of DIF. By far, differences in intercepts between whites and non-whites are most apparent. Few differences are present between non-white groups. In only two instances are differences in measurement intercepts significant enough to have consequences for comparisons on the underlying constructs: **Parental Involvement at School** and **School Disorder**.

- **Parental Involvement at School**. Two survey items that assess Parental Involvement at School appears to mean something different for white and non-white parents. After controlling for Parental Involvement at School, non-white parents are more likely than white parents to attend a PTA meeting (*55. Attended a meeting of the parent-teacher organization or association*) or regularly scheduled parent-teacher conference (*56. Gone to a regularly scheduled parent-teacher conference with the child's teacher*). After accounting for these measurement intercept differences, white/non-white disparities in Parental Involvement in School increase by 0.21, 0.25, and 0.24 standard deviations for Asian, Filipino, and Latinx parents (white parents report the highest Parental Involvement in School). As noted for school type above, **the meaning of the survey items asking about PTA meeting attendance and attendance at regularly scheduled parent-teacher conferences differ for white and non-white parents. Comparisons across racial and ethnic groups on these items should be examined in addition to comparing the overall level of Parental Involvement at School.**

- **School Disorder.** At a given level of School Disorder, non-white parents are more likely than white parents to report school problems related to gang-related activity (*49. Based on your experience, how much of a problem at this school is gang-related activity?*) and weapons possession (*49. Based on your experience, how much of a problem at this school is weapons possession?*), with difference in measurements intercepts ranging from 0.58 to 0.75 standard deviations (Table 43). In addition, African American parents report higher levels of school problems related to physical fighting (*46. Based on your experience, how much of a problem at this school is physical fighting between students?*) and racial/ethnic conflict (*47. Based on your experience, how much of a problem at this school is racial/ethnic conflict among students?*). Other items assessing School Disorder show racial/ethnic group differences in measurement intercepts. The combined effects of the white-African American differences reduces the disparities on the underlying School Disorder factor by 0.23 standard deviations. In total, the results indicate a high degree of measurement invariance across race/ethnicity for the items that measure School Disorder. Much of this invariance for specific items has countervailing effects on mean comparisons. **Because the meaning of most of the items that measure School Disorder differ across racial and ethnic groups, comparisons across racial and ethnic groups on the individual items should be examined. The overall School Disorder scale should not be used because of the extensive measurement invariance found on the items that comprise the scale.**

[23] See notes in Table 5 for an explanation of the meaning of the measurement intercepts and consequence of DIF for factor means.

Free/Reduced-Price Meals. Table 44 shows measurement intercept differences and resulting difference in factor means between parents who are and are not eligible for free/reduced-price meals.[24] Although measurement intercept differences are detected for six items that measure three constructs, **only for the Parental Involvement in School factor are differences in measurement intercepts significant enough to have consequences for group comparisons**. These results are similar to the results for school type and race/ethnicity described above. Specifically, low income parents are more likely than other parents to attend a PTA meeting (*55. Attended a meeting of the parent-teacher organization or association*), attend a regularly scheduled parent-teacher conference (*56. Gone to a regularly scheduled parent-teacher conference with the child's teacher*), and serve on a school committee (*56. Served on a school committee*), even when the parents in both of these groups have equal levels of **Parental Involvement in School**. Accounting for these measurement intercept differences increases the group difference in Parental Involvement in School by 0.31 standard deviations (parents eligible for free/reduced-price meals exhibit lower involvement in school. **To summarize, the meaning of the survey items asking about PTA meeting attendance, attendance at regularly scheduled parent-teacher conferences, serving on a school committee differ for parents who are and are not eligible for subsidized meals. Comparisons across free/reduced-price lunch eligibility categories on these items should be examined in addition to comparing the overall level of Parental Involvement at School.**

Construct Reliability

Tables 45-48 show reliability estimates for the total sample and by school type, student grade-level, race/ethnicity, and free/reduced-price meal eligibility. Reliability for all five of the six constructs exceeded Nunnaly's (1978) threshold of 0.70 for all subgroups. The reliability of the Parental Involvement in School scale (0.69) falls slightly below the threshold. **The Parental Involvement at School scale should be used with caution given its low reliability and the estimated DIF described above. The remaining five measures demonstrate good internal consistency reliability.**

Demographic Differences on the Measured Constructs

Figures 14 through 17 show standardized construct means by school type, student grade-level, parent race/ethnicity, and family free/reduced-price meal eligibility status.

School Type. Differences across school type are consistent across measures – **parents of elementary students report higher scores with regards to the Student Learning Environment, Promotion of Parental Involvement, Communications with Parents about School, and Parental Involvement at School than parents of middle and high schoolers**. Parents of elementary students are also less likely to report that there are problems with Substance Use or general School Disorder at the school. In general,

[24] See notes in Table 5 for an explanation of the meaning of the measurement intercepts and consequence of DIF for factor means.

the parents of high school students exhibit the lowest scores while parents of middle school students exhibit scores that lie between those of parents of elementary and high school students.

Student Grade Level. Differences across student grade level are consistent with those for school type. **Student Learning Environment and Communication with Parents about School are highest among parents of K-3rd students and decline as school grade increases. Promotion of Parental Involvement, Parental Involvement at School, and School Disorder primarily differ across elementary and secondary grades, but not within elementary or secondary grades**.

Race/Ethnicity. Racial/ethnic disparities vary by domain (Figure 16). Filipino and Latinx parents report the highest scores on Student Learning Environment, Promotion of Parental Involvement, and Communication with Parents about School; while whites and those classified as other report the lowest levels. However, white parents report the highest levels of Parental Involvement at School, followed distantly by parents of Asian/Pacific Islander and Filipino decent. African American and Latinx parents report the lowest levels of Parental Involvement at School.[25] African American, Filipino, and Multiethnic parents report lower Substance Use Problems than other groups. White and multiethnic parents report the lowest levels of School Disorder while Asian/Pacific Islander and Latinx parents report the highest levels.[26]

Free/Reduced-Price Meal Eligibility. **Parents of students eligible for free/reduced-price meals exhibit higher scores on Student Learning Environment, Promotion of Parental Involvement, and Communication with Parents about School, but substantially lower levels of Parental Involvement at School**.[27] Parents of students eligible for free/reduced-price meals do not differ from their counterparts on reported Substance Use Problems at school, but do report higher levels of School Disorder.

[25] The disparities between white and non-white scores on Parental Involvement at School widen even more after adjusting for differential item functioning.

[26] The level if Disorder for African Americans is not reported because of item bias.

[27] The disparity between FRM and Not FRM students increases even more after accounting for differential item functioning.

TABLE 37

California School Parent Survey Analytic Sample (2017/18)

Survey/Subgroup	Respondents	Percentage
California School Parent Survey	147,418	100.0
Elementary School	87,311	59.6
Middle School	24,308	16.6
High School	34,830	23.8
Student in grades K-3	47,517	33.4
Student in grades 4-5	28,515	20.0
Student in grades 6-8	31,472	22.1
Student in grades 9-12	34,791	24.5
African American	4,024	2.7
Asian	12,488	8.5
Filipino	3,786	2.6
Latinx	64,916	44.0
White	38,921	26.4
Multiethnic	12,913	8.8
American Indian/Native Hawaiian/Missing	10,370	7.0
Not eligible - free/reduced price meals	71,560	48.5
Eligible - free/reduced price meals	75,858	51.5

Source: 2017/18 CSPS.

TABLE 38

California School Parent Survey Confirmatory Factor Analysis Model

#	Item	Loading
	Student Learning Environment	
9.	This school promotes academic success for all students.	0.860
10.	This school treats all students with respect.	0.873
11.	This school clearly tells students in advance what will happen if they break school rules.	0.812
12.	This school encourages all students to enroll in challenging courses regardless of their race, ethnicity, or nationality.	0.850
13.	This school gives all students opportunities to 'make a difference' by helping other people, the school, or the community.	0.867
15.	This school provides quality counseling or other ways to help students with social or emotional needs.	0.851
16.	This school is a supportive and inviting place for students to learn.	0.921
19.	This school communicates the importance of respecting all cultural beliefs and practices.	0.869
20.	This school gives my child opportunities to participate in classroom activities.	0.890
21.	This school provides instructional materials that reflect my child's culture, ethnicity, or nationality.	0.840
22.	This school enforces school rules equally for my child and all students.	0.883
23.	This school provides quality activities that meet my child's interests and talents, such as sports, clubs, and music.	0.807
24.	This school has quality programs for my child's talents, gifts, or special needs.	0.840
25.	This school is a safe place for my child.	0.852
30.	This school provides high quality instruction to my child.	0.915
31.	This school motivates students to learn.	0.928
32.	This school has teachers that go out of their way to help students.	0.856
33.	This school has adults that really care about students.	0.894
34.	This school has high expectations for all students.	0.891

#	Item	Loading
35.	This school encourages students to care about how others feel.	0.909
36.	This school helps students resolve conflicts with one another.	0.894
	Promotion of Parental Involvement	
17.	This school allows input and welcomes parents' contributions.	0.922
26.	This school promptly responds to phone calls, messages, or e-mails.	0.859
27.	School encourages me to be an active partner with the school in educating my child.	0.911
28.	School actively seeks input of parents before making import decisions.	0.864
38.	Parents feel welcome to participate at this school.	0.901
39.	School staff treat parents with respect.	0.926
40.	School staff take parent concerns seriously.	0.941
41.	School staff are helpful to parents.	0.953
	Communication with Parents about School	
14.	This school keeps me well-informed about school activities.	0.933
37.	Teachers communicate with parents about what students are expected to learn.	0.945
60.	Letting you know how your child is doing in school between report cards.	0.729
61.	Providing information about how to help your child with homework.	0.832
62.	Providing information about why your child is placed in particular groups or classes.	0.846
63.	Providing information on your expected role at your child's school.	0.863
64.	Providing information on how to help your child plan for college or vocational school.	0.753
	Parental Involvement in School	
52.	Attended a school or class event, such as a play, dance, sports event, or science fair.	0.633
53.	Served as a volunteer in child's classroom or elsewhere in the school.	0.724
54.	General school meeting, for example, open house, or a back-to-school night.	0.668
55.	Attended a meeting of the parent-teacher organization or association.	0.596

#	Item	Loading
56.	Gone to a regularly scheduled parent-teacher conference with the child's teacher.	0.741
57.	Participated in fundraising for the school	0.669
58.	Served on a school committee.	0.608
	Substance Use Problems	
42.	Student tobacco use	0.987
43.	Student use of e-cigarettes or other vaping device	0.985
44.	Student alcohol and drug use	0.993
	School Disorder	
45.	Harassment or bullying of students	0.915
46.	Physical fighting between students	0.946
47.	Racial/ethnic conflict among students	0.956
48.	Students not respecting staff	0.939
49.	Gang-related activity	1.004
50.	Weapons possession	1.003
51.	Vandalism	0.962

Source: 2017/18 CSPS.

TABLE 39

California School Parent Survey Factor Correlations

Domain	(1)	(2)	(3)	(4)	(5)	(6)
(1) Student Learning Environment	1					
(2) Promotion of Parental Involvement	0.92	1				
(3) Communication with Parents about School	0.79	0.80	1			
(4) Parental Involvement at School	0.11	0.14	0.18	1		
(5) Substance Use Problems	-0.25	-0.28	-0.30	-0.29	1	
(6) School Disorder	-0.29	-0.28	-0.28	-0.18	0.94	1

Source: 2017/18 CSPS. Estimates come from base CFA Model.

TABLE 40

California School Parent Survey - DIF by School Type

		Measurement Intercept[a]		Difference in Factor Mean after DIF[a]	
#	Item	Middle School	High School	Middle School	High School
	Student Learning Environment				-0.06
12.	This school encourages all students to enroll in challenging courses regardless of their race, ethnicity, or nationality.		0.20		
23.	This school provides quality activities that meet my child's interests and talents, such as sports, clubs, and music.		0.39		
24.	This school has quality programs for my child's talents, gifts, or special needs.		0.35		
	Communication w Parents abt School			-0.04	0.03
37.	Teachers communicate with parents about what students are expected to learn.		-0.31		
60.	Letting you know how your child is doing in school between report cards.	0.27			
61.	Providing information about how to help your child with homework.		-0.31		
64.	Providing information on how to help your child plan for college or vocational school.		0.53		
	Parental Involvement in School			0.01	0.11
52.	Attended a school or class event, such as a play, dance, sports event, or science fair.		0.23		
54.	General school meeting, for example, open house or a back-to-school night.	0.39			
55.	Attended a meeting of the parent-teacher organization or association.		-0.21		

		Measurement Intercept[a]		Difference in Factor Mean after DIF[a]	
#	Item	Middle School	High School	Middle School	High School
56.	Gone to a regularly scheduled parent-teacher conference with the child's teacher.	-0.80	-1.23		
58.	Served on a school committee.	0.23	0.22		

Source: 2017/18 CSSS. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of school type on the questionnaire item, relative elementary schools, after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 41

California School Parent Survey - DIF by Grade of Student

		Measurement Intercept[a]			Difference in Factor Mean after DIF[b]		
#	Item	4th-5th	6th-8th	9th-12th	4th-5th	6th-8th	9th-12th
	Student Learning Environment						-0.03
23.	This school provides quality activities that meet my child's interests and talents, such as sports, clubs, and music.			0.37			
24.	This school has quality programs for my child's talents, gifts, or special needs.			0.32			
	Communication w. Parents abt School					-0.04	-0.01
37.	Teachers communicate with parents about what students are expected to learn.			-0.27			
60.	Letting you know how your child is doing in school between report cards.		0.25	0.22			
61.	Providing information about how to help your child with homework.			-0.30			
64.	Providing information on how to help your child plan for college or vocational school.			0.56			
	Parental Involvement in School					-0.03	-0.06
52.	Attended a school or class event, such as a play, dance, sports event, or science fair.			0.31			
54.	General school meeting, for example, open house or a back-to-school night.		0.36	0.23			
56.	Gone to a regularly scheduled parent-teacher conference with the child's teacher.		-0.65	-1.14			
58.	Served on a school committee.		0.27	0.38			

		Measurement Intercept[a]			Difference in Factor Mean after DIF[b]		
#	Item	4th-5th	6th-8th	9th-12th	4th-5th	6th-8th	9th-12th
	Substance Use Problems						-0.06
43.	Student use of e-cigarettes or other vaping device			0.24			
	School Disorder					0.06	0.06
49.	Gang-related activity		-0.23	-0.22			
50.	Weapons possession		-0.32	-0.37			

Source: 2017/18 CSSS. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of school grade on the questionnaire item, relative to grades K-3rd, after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 42

California School Parent Survey - DIF by Race/Ethnicity (Measurement Intercepts)

		Measurement Intercept[a]				
#	Item	Asian	African Amer	Filipino	Latinx	Mixed
	Student Learning Environment					
21.	This school provides instructional materials that reflect my child's culture, ethnicity, or nationality.		-0.36			
	Promotion of Parental Involvement					
28.	School actively seeks input of parents before making import decisions.	0.21		0.26	0.29	
	Parental Involvement in School					
54.	General school meeting, for example, open house or a back-to-school night.		-0.26			
55.	Attended a meeting of the parent-teacher organization or association.	0.59	0.47	0.49	0.64	0.21
56.	Gone to a regularly scheduled parent-teacher conference with the child's teacher.	0.43	0.57	0.41	0.79	0.29
57.	Participated in fundraising for the school.		-0.27	0.25	-0.23	
	Substance Use Problems					
43.	Student use of e-cigarettes or other vaping device.				-0.21	
	School Disorder					
45.	Harassment or bullying of students	-0.21		-0.26	-0.32	
46.	Physical fighting between students		0.21			
47.	Racial/ethnic conflict among students		0.38			
48.	Students not respecting staff	-0.23		-0.26	-0.23	

		Measurement Intercept[a]				
#	Item	Asian	African Amer	Filipino	Latinx	Mixed
49.	Gang-related activity	0.65	0.69	0.58	0.67	
50.	Weapons possession	0.74	0.75	0.66	0.73	

Source: 2017/18 CSSS. *Notes:* [a] Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of race/ethnicity on the questionnaire item, relative to whites, after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated

TABLE 43

California School Parent Survey - DIF by Race/Ethnicity (Factor Means)

	Difference in Factor Mean after DIF[a]				
Item	Asian	African Amer	Filipino	Latinx	Mixed
Student Learning Environment		0.03			
Promotion of Parental Involvement	-0.03		-0.03	-0.04	
Parental Involvement in School	-0.21	-0.09	-0.25	-0.24	-0.10
Substance Use Problems				0.08	
School Disorder	-0.01	-0.23	-0.02	0.02	

Source: 2017/18 CSPS. *Notes:* [a]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 44

California School Parent Survey - DIF by Eligibility for Free/Reduced-Price Meals

		Measurement Intercept[a]	Difference in Factor Mean after DIF[b]
#	Item	Free/Reduced-Price Meals	Free/Reduced-Price Meals
	Promotion of Parental Involvement		-0.03
28.	School actively seeks input of parents before making import decisions.	0.24	
	Parental Involvement in School		-0.31
55.	Attended a meeting of the parent-teacher organization or association.	0.58	
56.	Gone to a regularly scheduled parent-teacher conference with the child's teacher.	0.77	
58.	Served on a school committee.	0.23	
	School Disorder		-0.09
49.	Gang-related activity	0.52	
50.	Weapons possession	0.53	

Source: 2017/18 CSPS. *Notes:* [a]Measurement intercepts, which capture differential item functioning, represent the standardized direct effects of self-reported eligibility for free/reduced-meals, relative to non-eligibility, on the questionnaire item after controlling for scores on the underlying factor. Only intercepts greater than +/- 0.20 standard deviations are estimated. [b]Differences in factor means after adjusting for DIF capture the influence of DIF on comparisons across groups on the underlying factor, in standard deviation units. Differences in factor means marked in BLUE are large enough to be substantively meaningful.

TABLE 45

California School Parent Survey Reliability Coefficients by School Type

Construct	Items	Total	Elem	Middle	High
(1) Student Learning Environment	21	0.97	0.97	0.97	0.97
(2) Promotion of Parental Involvement	8	0.94	0.94	0.94	0.94
(3) Communication w Parents abt Schl	7	0.89	0.89	0.89	0.89
(4) Parental Involvement at School	7	0.69	0.66	0.62	0.69
(5) Substance Use Problems	3	0.97	0.99	0.96	0.93
(6) School Disorder	7	0.96	0.97	0.96	0.95

Source: 2017/18 CSPS.

TABLE 46

California School Parent Survey Reliability Coefficients by Student Grade

Construct	Items	K-3rd	4th-5th	6th-8th	9th-12th
(1) Student Learning Environment	21	0.97	0.97	0.97	0.97
(2) Promotion of Parental Involvement	8	0.94	0.94	0.94	0.94
(3) Communication w Parents abt Schl	7	0.89	0.89	0.89	0.89
(4) Parental Involvement at School	7	0.66	0.66	0.65	0.69
(5) Substance Use Problems	3	0.99	0.99	0.97	0.93
(6) School Disorder	7	0.97	0.96	0.96	0.95

Source: 2017/18 CSPS.

TABLE 47

California School Parent Survey Reliability Coefficients by Race/Ethnicity

Construct	Items	Asian/ Pac Isl	African Amer	Filipino	Latinx	White	Multi-ethnic	Other
(1) Student Learning Environment	21	0.97	0.97	0.97	0.97	0.97	0.97	0.97
(2) Promotion of Parental Involvement	8	0.94	0.93	0.94	0.94	0.94	0.94	0.95
(3) Communication w Parents abt Schl	7	0.89	0.89	0.88	0.89	0.88	0.89	0.90
(4) Parental Involvement at School	7	0.70	0.72	0.71	0.69	0.69	0.69	0.69
(5) Substance Use Problems	3	0.99	0.97	0.97	0.98	0.94	0.94	0.97
(6) School Disorder	7	0.98	0.95	0.96	0.97	0.86	0.88	0.94

Source: 2017/18 CSPS.

TABLE 48

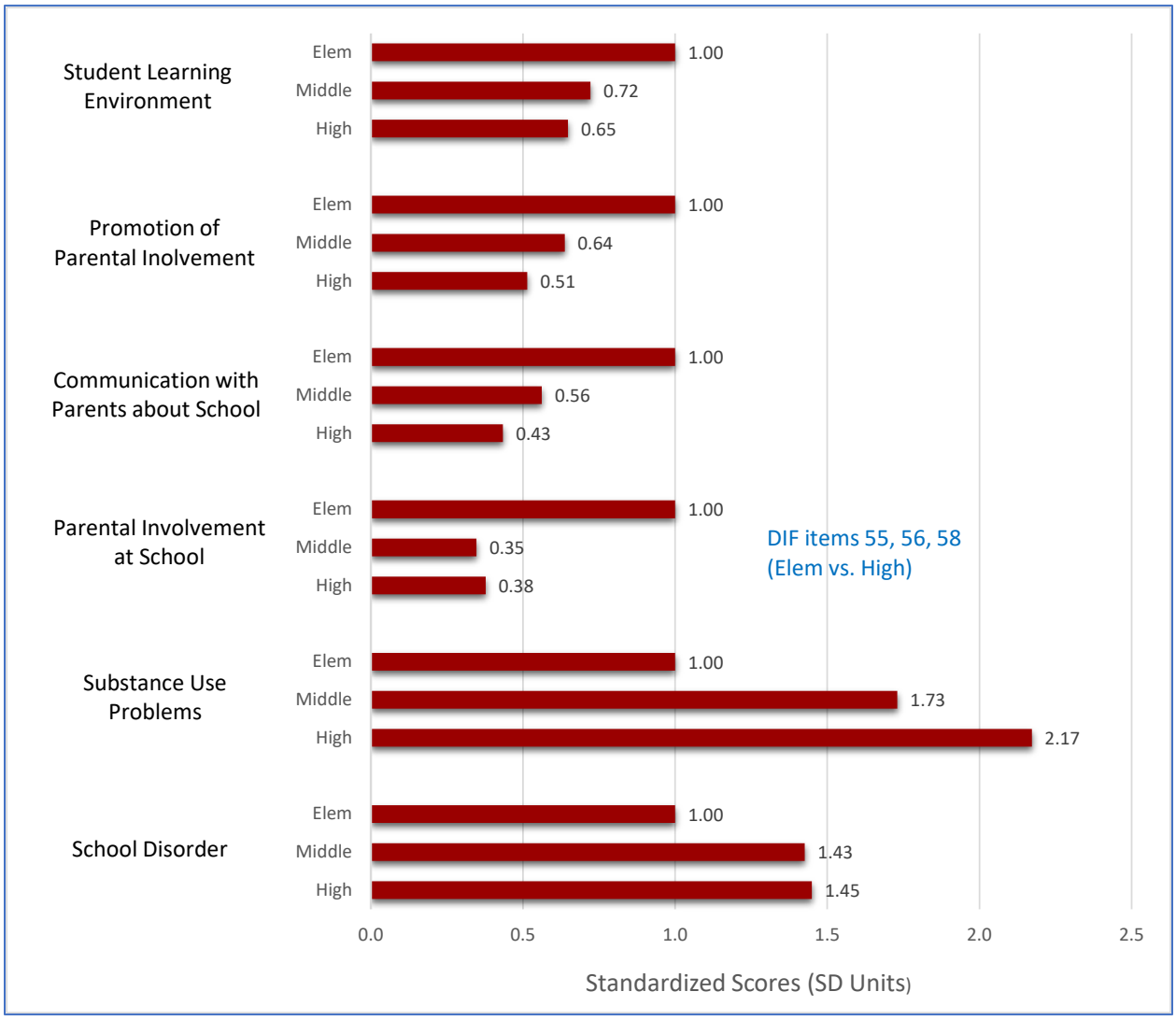
California School Parent Survey Reliability Coefficients by Free/Reduced-Price Meal Eligibility

Construct	Items	Free/Reduced-Price Eligible	Not Free/Reduced-Price Eligible
(1) Student Learning Environment	21	0.97	0.97
(2) Promotion of Parental Involvement	8	0.94	0.94
(3) Communication w Parents abt Schl	7	0.89	0.89
(4) Parental Involvement at School	7	0.69	0.69
(5) Substance Use Problems	3	0.98	0.95
(6) School Disorder	7	0.97	0.91

Source: 2017/18 CSPS.

FIGURE 14

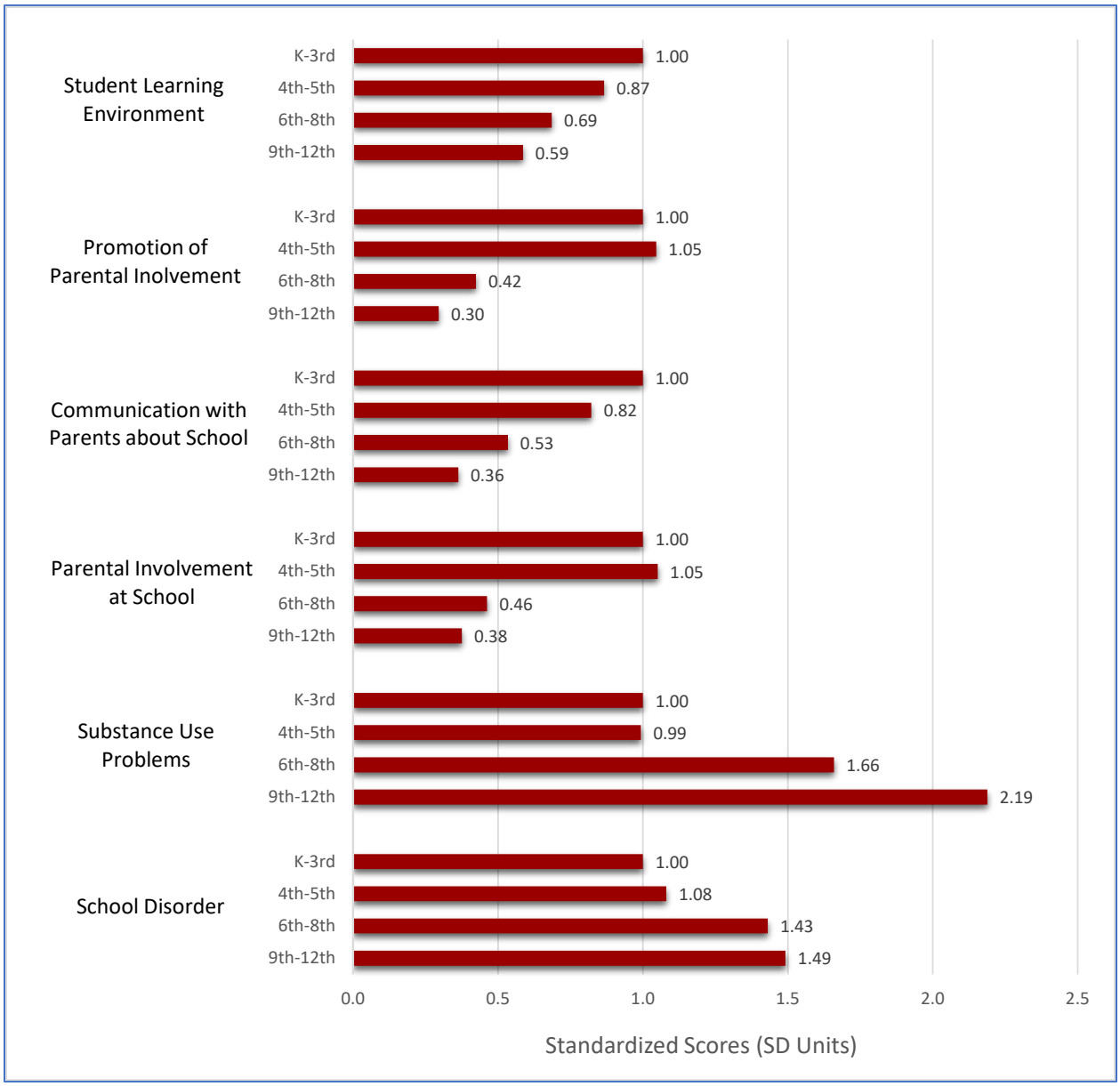
California School Parent Survey – Factor Means by School Type



Source: 2017/18 CSPS.

FIGURE 15

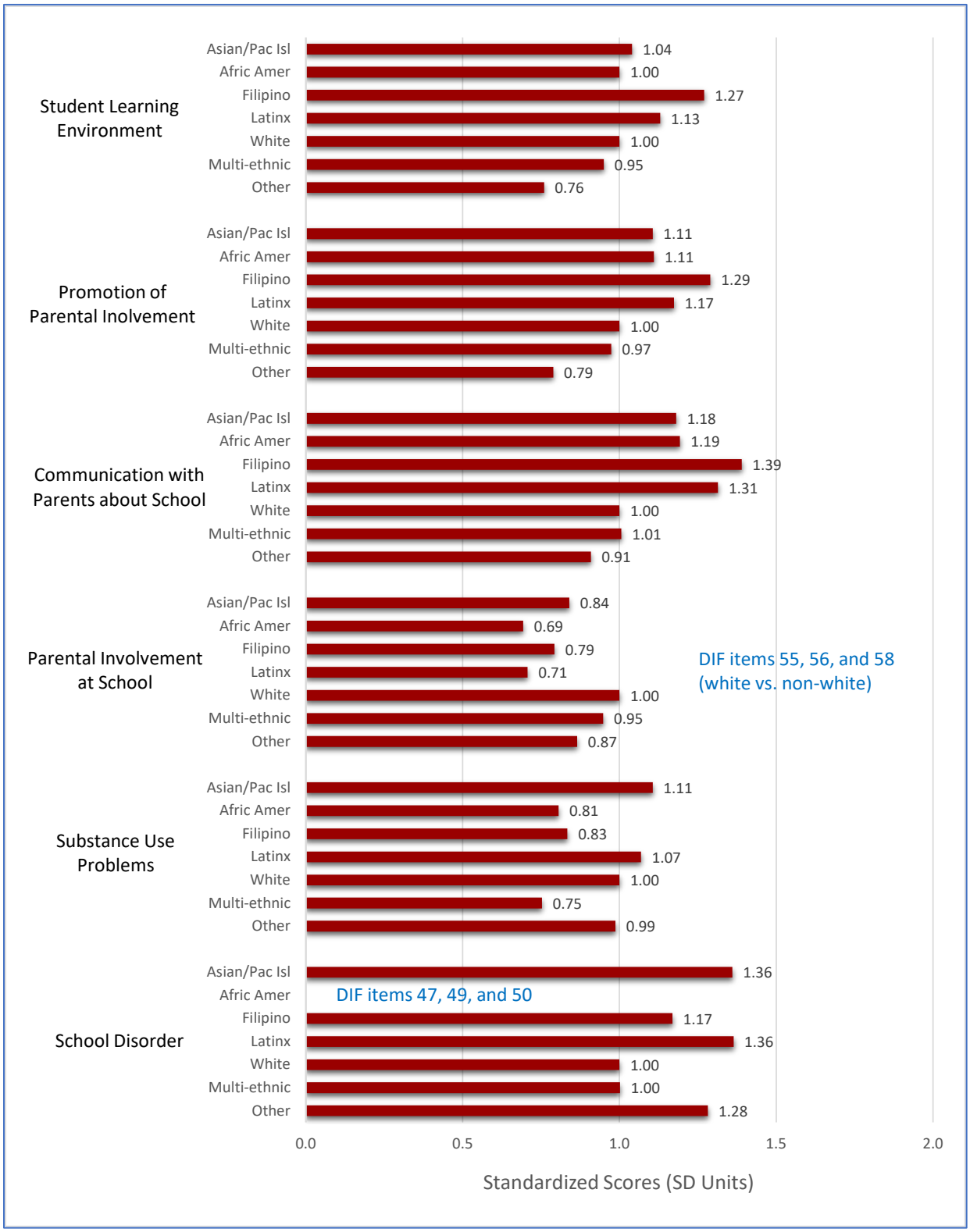
California School Parent Survey – Factor Means by Student Grade Level



Source: 2017/18 CSPS.

FIGURE 16

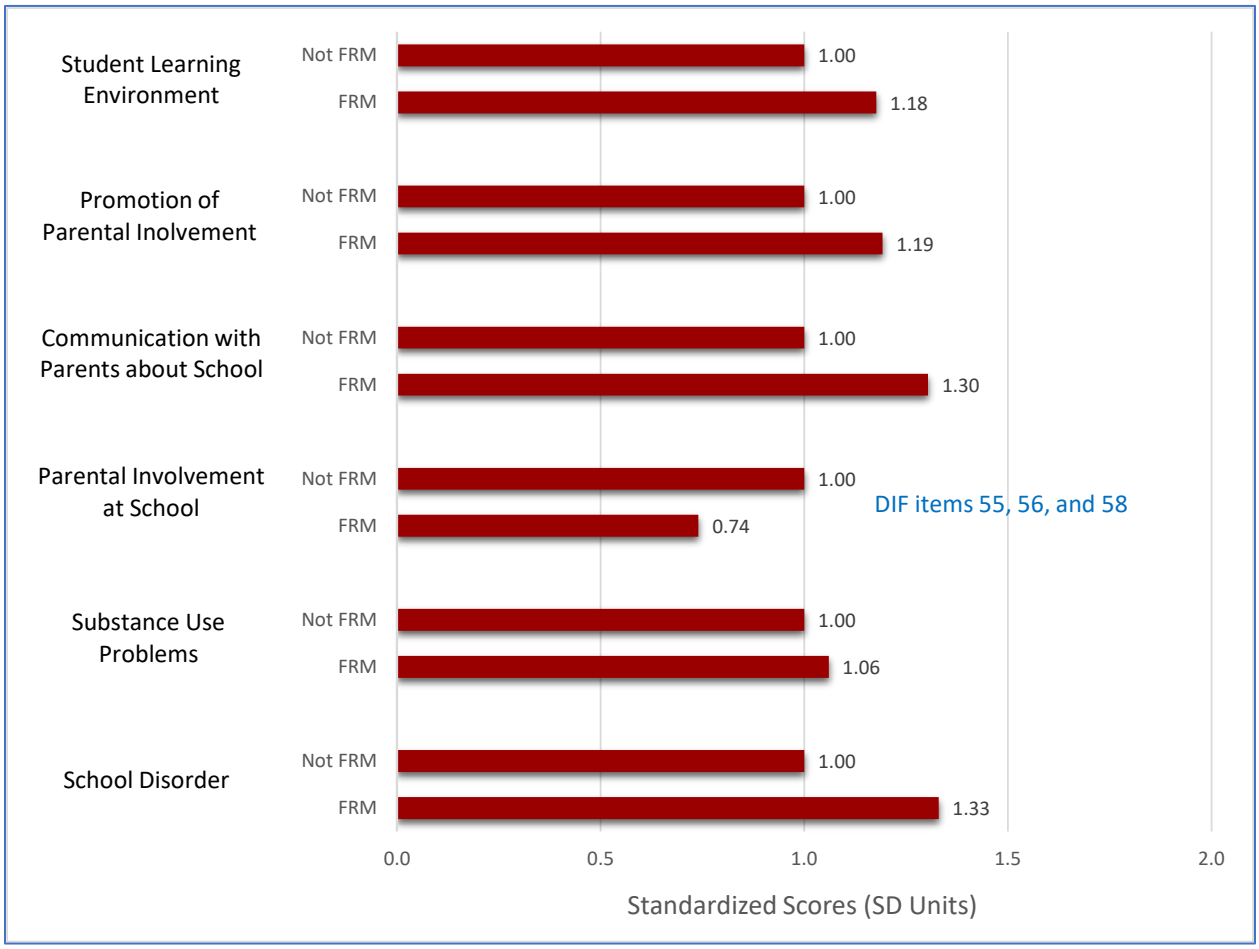
California School Parent Survey – Factor Means by Race/Ethnicity



Source: 2017/18 CSPS.

FIGURE 17

California School Parent Survey – Factor Means by Free/Reduced-Price Meal Eligibility



Source: 2017/18 CSPS.

Appendix A – Base CFA Goodness of Fit Information

TABLE A1

Goodness of Fit Information – CalSCHLS CFA Models

Survey/Subgroup	Elementary Survey	Secondary Core	Secondary School Climate	Staff Survey	Parent Survey
Sample Size	111,402	556,961	157,368	71,186	147,418
Free Parameters	262	268	311	476	204
RMSEA	0.040	0.032	0.040	0.060	0.056
CFI	0.935	0.965	.912	0.931	0.980
TLI	0.928	0.963	.902	0.926	0.979

Source: 2017/18 CalSCHLS Data.

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