

School Connectedness & Academic Achievement in California High Schools

Students are more likely to succeed when they feel connected to school. In this factsheet, we summarize recent data from the California Healthy Kids Survey (CHKS) in regard to four questions:

- » How many California high school students are connected to school?
- » How is school connectedness related to student performance on standardized tests?
- » How are connectedness and achievement related to the socioeconomic status of the students enrolled in schools?
- » How do the developmental supports provided to students differ in schools with low and high levels of connectedness?

Results show that school connectedness, as measured by a five-item scale on the CHKS, is an important differentiator between low-performing and high-performing high schools, indicating also that the CHKS scale has value as an indicator of school quality.

School connectedness appears to have increased in California in the second half of the last decade, but it still declines markedly after elementary school and a substantial majority of high school students are not highly connected to their schools. The lowest rates of both connectedness and test scores occur in low-income schools. The promotion of school connectedness needs to be an integral part of efforts to turn around low-performing schools and to insure that all students succeed. The results also indicate that central to that effort should be

fostering a greater sense of school safety, developmental support, and fairness in our students.

WHAT IS SCHOOL CONNECTEDNESS?

Connectedness refers to a student's sense of bonding or belonging to school, of liking school and sharing in its values. Research has revealed that it is a powerful factor in promoting student motivation, attendance, performance, and graduation. Simply put, youth who feel connected to school are more likely to want to come to school each morning and do well. School connectedness also has been shown to mitigate or protect against emotional distress, including symptoms of depression and anxiety, and to be associated with less disruptive behavior and involvement in violence, substance abuse, and delinquency (Austin, O'Malley, & Izu, 2011; Blum 2005; Bond et al., 2007; Libbey, 2004; Loukas, Suzuki & Horton, 2006; McNeely, Nonnemaker, & Blum, 2002; National Research Council, 2004).

THE CHKS SCALE. The California Healthy Kids Survey (CHKS) measures school connectedness using five items previously used in the National Survey of Adolescent Health. This School Connectedness Scale assesses the degree to which students agree that at their school they feel close to people, happy, a part of the school, safe, and treated fairly. These are feelings and experiences that are likely to motivate students to attend and try hard in school. The scale thus serves as a measure of the level of student engagement. The scale correlates strongly with risk-behavior involvement, school grades, and school atten-

dance (McNeely, Nonnemaker & Blum 2002; Resnick et al. 1997).

In this factsheet, references to students being “connected” to their school refer to the percentage of students that were categorized as “high” in connectedness based on the average of their responses across the five items.¹ Students categorized as “high” in connectedness reported that they “agree” or “strongly agree” on at least three of the five school climate items.²

HOW CONNECTED TO THEIR SCHOOLS ARE STUDENTS IN CALIFORNIA?

According to the 2009/11 CHKS, a slim majority of 7th graders (51%) scored *high* in school connectedness. This percentage drops to 44% in 9th grade and 43% 11th grade. The percentage of students classified as *low* in connectedness was 10% in 7th grade, rising to 13% in 11th. These youth are at high risk of school failure.

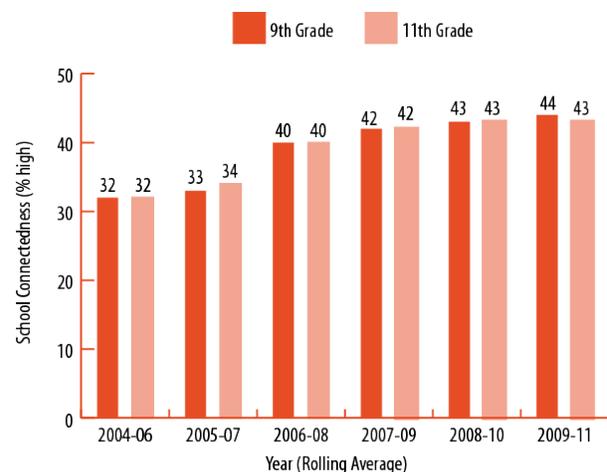
A decline in school connectedness as students progress through school is one of the most consistent findings in school climate research. These results are also consistent with the conclusion reached by Klem and Connell (2004) that, by high school, “as many as 40 to 60 percent of all students ... are chronically disengaged from school.”

School connectedness has increased in California, beginning in the middle of the last decade (Figure 1). In the first four years of the decade, between 32%–33% of high school students reported that they were connected to school. The percentage then increased markedly in the 2006–08 school years, by 7 points, followed by a more

gradual rising trend. School connectedness in 2009/11, compared to 2005–07, was 11 points higher in 9th grade and 10 points higher in 11th.

Nevertheless, that six out of ten high school students still are not high in connectedness, and over one-tenth are low, shows how far we still have to go in improving school climate and learning engagement in California. Not only are too many students disengaged from schools, but, as shown in Figure 2, a high level of student disconnectedness characterizes a substantial minority of high schools in California. The percentage of students high in connectedness is less than one-third of the student body in 18.5% of high schools. In only about 3% of high schools do more than two-thirds of students report high connectedness.

Figure 1. School Connectedness by Survey Year



Source: 2004/05 to 2010/11 Cal-SCHLS student survey.

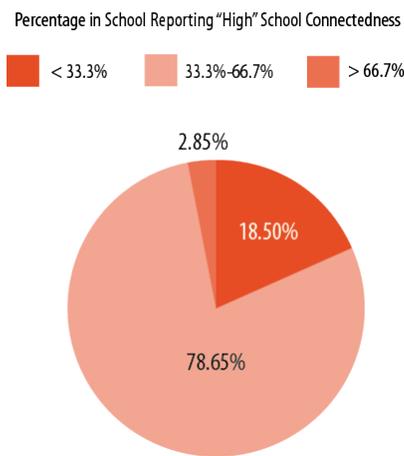
Notes: Weighted percentages for 9th and 11th grade students in California public high schools.

1 We classified students into three levels of school connectedness based on the average of their responses across the five items: students whose average was greater than 3.75 we coded as high in connectedness; those whose average was between 2.50 and 3.75 as moderate; and those whose average was less than 2.50 as low.

2 This is the case for 99.5% of students classified as exhibiting “high” connectedness, as defined above. Approximately 0.5% of those students reported that they “strongly agree” on two of the items and “neither agree nor disagree” on three of the items.

Prepared by WestEd for the California Department of Education, under contract for the Safe and Supportive Schools Initiative.

Figure 2. Distribution of schools in California by percentage of students who report high school connectedness



Source: 2008/10 Cal-SCHLS student survey—11th graders.

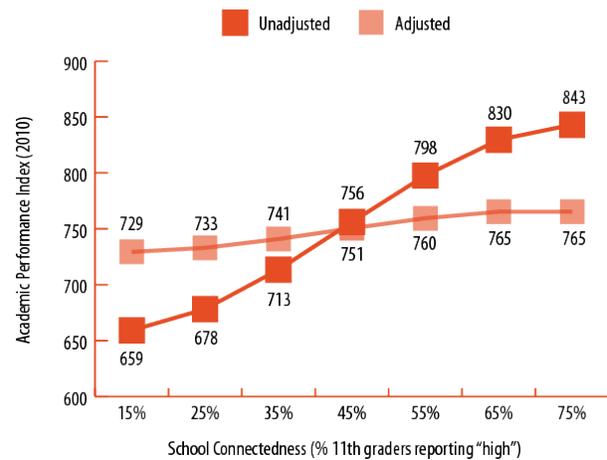
HOW IS SCHOOL CONNECTEDNESS RELATED TO ACADEMIC PERFORMANCE?

Figure 3 shows that as the average level of school connectedness increases among 11th graders, so does the average Academic Performance Index (API).³ The unadjusted results (darker red trend line) show that API scores rise as school connectedness increase. API scores average 659 in schools in which only 15% of student report being connected to school, compared to 756 in schools where 45% of students report high connectedness (state average) and 843 in schools in which 75% of students report being connected to school. In short, API scores are about 200 points higher in schools with the highest levels of connectedness compared to schools with the lowest school connectedness.

This difference was reduced substantially after taking into account adjusting school differences in the social and demographic composition of students (Figure 3, lighter red trend line). API score differences between schools with the lowest and highest levels of school connectedness were reduced to about 45 points. *But the differences were still significant.*

3 The analytical sample consisted of 789 California public high schools that administered the CHKS during the 2008–10 period.

Figure 3. API score by school connectedness (high schools)



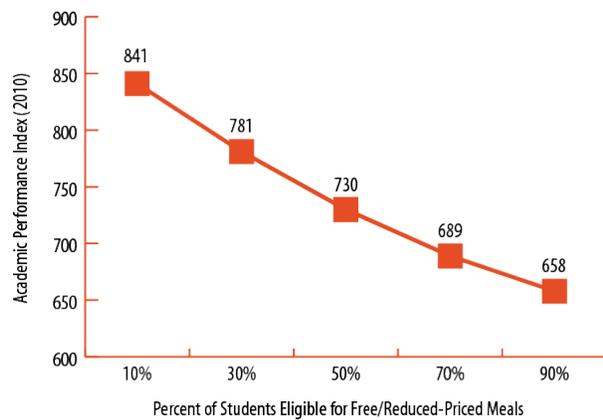
Source: 2008/10 Cal-SCHLS student survey (11th graders) and 2010 API research data file.

Notes: Unadjusted results (red trend line) show the relationship between the percentage of 11th graders in the school who report high levels of school connectedness to the school API score. Adjusted results (blue trend line) show this relation after controlling for school enrollment, school racial/ethnic composition, proportion of English learners, proportion of students eligible for free/reduced-price meals, and average parental education.

HOW ARE CONNECTEDNESS, ACHIEVEMENT, AND SOCIOECONOMIC STATUS RELATED?

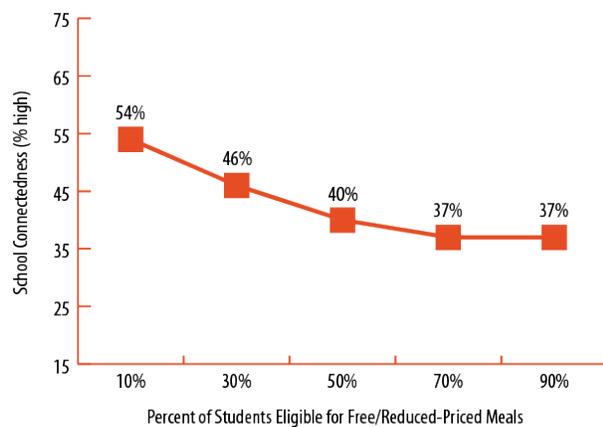
Although the school climate differences across API groups in the above analysis remained significant even after controlling student demographics, that they were reduced is consistent with the large body of research showing that a school's level of poverty is highly correlated with academic performance. Figures 4 and 5 show how a school's level of poverty is related to both school performance and school connectedness. As the percentage of students eligible for free/reduced-price meals (FRPM) increases from 10% to 90% of student enrollment, API scores drop from 841 to 658—almost 200 points. The same pattern is evident for school connectedness—although the decline is not linear at high rates of FRPM eligibility. These results reveal that the more likely it is that a school serves poor students, the more likely it is to have *both* lower test scores and school connectedness.

Figure 4. API scores and free/reduced-price meal eligibility



Source: 2010 API research data file.

Figure 5. School connectedness and free/reduced-price meal eligibility



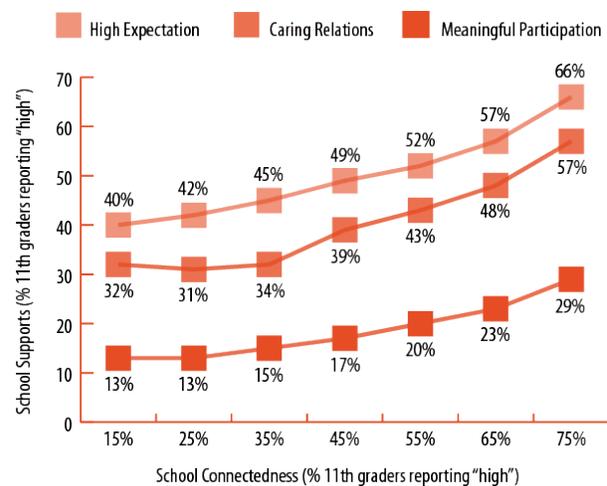
Source: 2008/10 Cal-SCHLS student survey (11th graders) and 2010 API research data file.

SCHOOL CONNECTEDNESS AND DEVELOPMENTAL SUPPORT

Is the level of developmental supports provided by a school—caring relationships with adults in the school, exposure to high expectations, and opportunities for meaningful participation—related to school connectedness? Prior research suggests that these school supports help promote school connectedness by fostering

a greater sense of belonging, being cared for, involvement, and fairness⁴. Consistent with this research, Figure 6 shows that high schools with the highest percentages of students who report that they are connected to school also have the highest levels of each of these three dimensions of school developmental support. For example, only 32% of students report high levels of caring relationships with adults in schools with the lowest school connectedness (15%), compared to 57% of students in schools with the highest school connectedness (75%). In short, school supports are strongly related to school connectedness. As discussed further below, the evidence that these three developmental supports may help mitigate against the adverse effects of poverty is particularly relevant to improving connectedness in high poverty schools.

Figure 6. Developmental supports in schools with different levels of school connectedness



Source: 2008/10 Cal-SCHLS student survey—11th graders.

SUMMARY AND DISCUSSION

These analyses are based on non-experimental, correlational data but they are consistent in showing that the level of school connectedness in a school is linked to academic achievement in the school as measured by standardized test scores in California. There is a signifi-

4 See S3 Factsheets #1 and 2 on how these supports are linked to higher achievement test scores and other positive academic outcomes.

cantly larger unmet need for promoting school connectedness in low-performing schools than in high-performing schools. This was particularly true of high-poverty schools, which, on average, were the lowest performing and lowest in school connectedness, and the highest in minority enrollment. Underlying the income and racial/ethnic achievement gap there is a School Connectedness Gap.

If all schools were equal in terms of SES, race/ethnicity, and other demographic factors, there would be less of an association between school connectedness and school performance. Nevertheless, this relationship persists in its significance even after controlling for student and school characteristics. Improving school connectedness and engagement should be an essential strategy in all efforts to improve academic achievement, school attendance, and graduation in all schools.

TREND INFLUENCES

The finding that school connectedness improved overall in California secondary schools in the second half of the decade does beg the question: "What might have produced this increase?" To try to answer this, we looked at trends in indicators that are related to school connectedness and found that there also were increases after 2005–07 for both the percentage of high school students experiencing a caring adult relationship in school and feeling safe or very safe at school. This suggests that around the mid-decade there was a broader trend occurring to foster more positive (safe and supportive) school climates that, in turn, fostered a higher level of school connectedness.

One possible explanation for these positive trends may be, at least in part, the impact of school districts starting to receive CHKS data about school connectedness, safety, and developmental supports among their students. Although this is purely speculative, the receipt of these data in the early decade may have raised awareness of the need to improve these conditions. It is important for schools to continue to administer the survey and use the data to guide efforts to improve connectedness. Despite these improvements, the latest CHKS results show that

six out of ten high school students are not high in connectedness. We still have far to go.

HOW DO WE PROMOTE CONNECTEDNESS?

The nature of the questions in the CHKS scale, and the results of these analyses, provide a roadmap: foster a sense of belonging, participation, enjoyment, safety, and fairness. High schools in which students experience high levels of caring relationships with adults, high expectations messages, and opportunities for meaningful participation also have high levels of school connectedness. These developmental supports contribute to a sense of belonging, participation, and enjoyment. They may be particularly important in the high-poverty schools that are both low-performing and low in connectedness. Resilience research indicates that these three supports are protective factors that help mitigate against the many risk factors and barriers to learning associated with poverty, that they help youth thrive even in the face of these challenges.

There are various other methods for fostering connectedness and engaging students emotionally, from using high-interest, multisensory education materials to linking school projects to students' personal interests and providing them opportunities for dialogue. Schools can boost students' sense of belonging by including positive behavior management practices at the classroom and school levels, reducing school size, and encouraging participation in extracurricular activities (McNeely, Nonnemaker & Blum, 2002). Attention to safety needs to be directed not only to preventing physical violence but also to promotion of emotional safety, reducing verbal and emotional bullying and addressing the mental health needs of youth. Strategies for improving these dimensions of school climate are summarized in the California S3 *What Works Briefs*, which can be downloaded at <http://californiaS3.wested.org>.

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Suggested citation: Austin, G., Hanson, T., & Voight, A. (2013). *School connectedness and academic achievement in California high schools*. S3 Factsheet #5. Los Alamitos: WestEd.