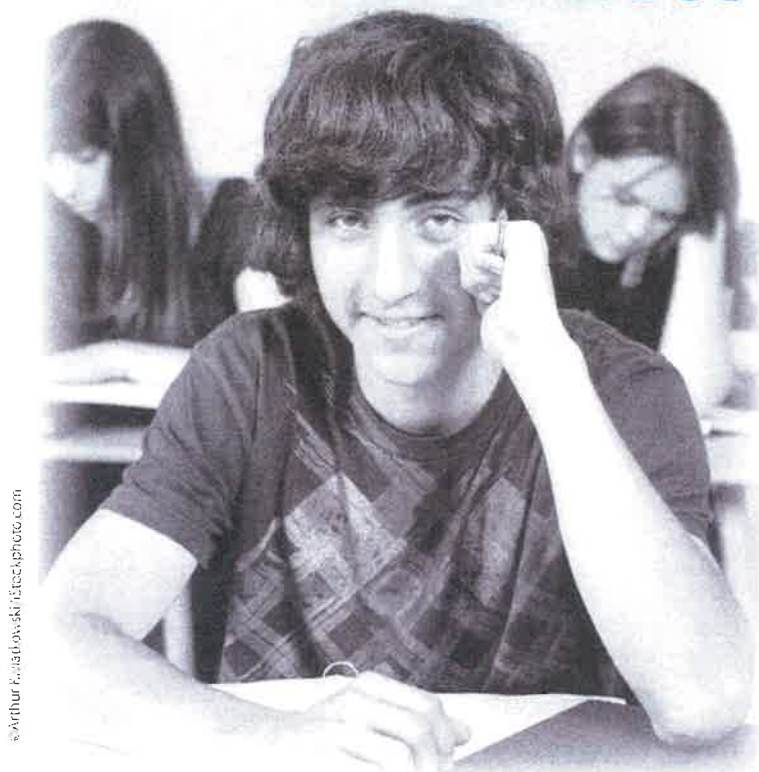


# Predictors and Consequences of School Connectedness:

## *The Case for Prevention*

By Kathryn C. Monahan, Ph.D., Sabrina Oesterle, Ph.D., and J. David Hawkins, Ph.D.

*"By high school, a large proportion of youth are disconnected from school which can lead to a broad range of behavioral, emotional, and academic problems. Improving school connectedness is, therefore, an important issue for schools and a target for preventive efforts."*



©Arthur K. Kowalski / iStockphoto.com

Adolescents spend more time in school than in any other context (Roesser, Eccles, & Sameroff, 2000), and substantial research suggests that feeling connected to one's school during adolescence promotes concurrent and long-term positive youth development (Resnick et al., 1997), including fewer behavioral problems, greater emotional well-being (Eccles et al., 1993), and better academic outcomes (Osterman, 2000). Students who feel connected to school like going to school, they like their teachers and fellow students, and they are committed to learning, completing their assignments, and doing well. While most elementary school students feel connected to their schools, school connectedness generally begins to decline in middle school (Eccles et al., 1993). By high school, as many as 40–60% of all youth—urban, suburban, and rural—report being disconnected from school (Klem & Connell, 2004), indicating that they do not like their teachers, lack interest in school, and do not find schoolwork meaningful or engaging. This diminished connectedness to school places students at risk for maladaptive development, both in adolescence and into adulthood. Consequently, there is strong need for preventive interventions that maintain and increase levels of school connectedness in middle schools and high schools, thus promoting long-term positive development.

In the academic literature, school connectedness is known by various other phrases, such as school attachment or school bonding (Blum, 2005; Hawkins, Catalano, & Miller, 1992). In general, school connectedness consists of two primary and interdependent components: (a) attachment, characterized by close affective relationships with those at school; and (b) commitment, characterized by an investment in school and doing well in school. This social bond to the school influences youths' behaviors through the establishment of a student's "stake" in conforming to the norms and values of the school (Catalano & Hawkins, 1996).

With this conceptualization in mind, this article briefly reviews the literature on school connectedness, focusing on three areas: (a) the implications of school connectedness for youth development, (b) predictors of school connectedness, and (c) the importance of school connectedness as a focus of prevention.

### IMPLICATIONS OF SCHOOL CONNECTEDNESS FOR YOUTH DEVELOPMENT

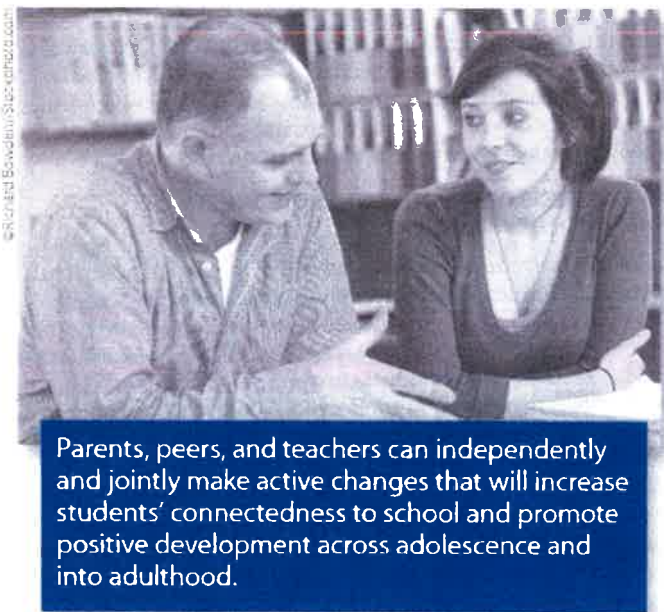
School connectedness is associated with a number of behavioral, emotional, and academic outcomes in adolescence. In general, researchers tend to view school connectedness on a continuum, with higher school connectedness associated with good outcomes and lower school connectedness associated with poor outcomes. With respect to behavior in adolescence, youth who feel connected to their school are less likely to engage in delinquent or violent behavior, to drink alcohol, and to use drugs. Moreover, youth who feel connected to their school are less likely to initiate sexual activity at earlier ages, a risk factor for teen pregnancy and contracting sexually transmitted infections (see Brookmeyer, Fanti, & Henrich, 2006; Catalano et al., 2004; McNeely & Falci, 2004).

School connectedness is also linked to mental health and emotional well-being during adolescence. In general, individuals who report low school connectedness are at risk for a number of mental health problems (Goodenow & Grady, 1993). Students who feel connected to school report lower levels of physical and emotional distress during adolescence compared to youth with less school connectedness (Resnick et al., 1997). Youth with strong school connectedness report fewer depressive symptoms in late adolescence and are also less likely to experience suicidal thoughts or attempt suicide (Resnick et al., 1997; Samdal, Nutbeam, Wold, & Kannas, 1998).

Finally, as would be expected, adolescents who feel more connected to their schools show better academic outcomes. Feeling connected to school in adolescence is associated with higher levels of academic motivation and lower levels of classroom misbehavior (Goodenow & Grady, 1993). Students with high school connectedness also have higher grades and are more likely to graduate from high school (Lenczak et al., 2002; Osterman, 2000).

While there is substantial evidence that school connectedness is related to behavioral, emotional, and academic outcomes, it is often difficult for research to determine cause and effect in these associations. Longitudinal research helps provide more conclusive evidence that school connectedness, in fact, predicts positive development. Longitudinal studies measure school connectedness at a time point prior to the developmental outcomes of interest, which are assessed months or years later. While not a definitive proof of causality, a longitudinal study design provides more cogent evidence of a causal link.

Longitudinal evidence of the positive effects of school connectedness has been documented in both middle and high school. In one study, middle school students who reported low school connectedness showed increases in conduct problems, such as delinquent behavior, one year later (Loukas, Ripperger-Suhler, & Florton, 2009). Another study showed that low school connectedness in late middle school was associated with greater anxiety/depressive symptoms and marijuana use in high school and one year post high school, and middle school students with low social connectedness were less likely to complete high school (Bond et al., 2007). Research from the National Longitudinal Study of Adolescent Health, a nationally representative study that follows nearly 60,000 students (grades 8 through 12), found that a sense of belonging to school predicts lower depression and social rejection, fewer school problems, greater optimism, and higher grades one year later (Anderman, 2002).



Parents, peers, and teachers can independently and jointly make active changes that will increase students' connectedness to school and promote positive development across adolescence and into adulthood.

Moreover, studies that examine development over longer periods of time find robust evidence that school connectedness can have lasting effects into young adulthood. Higher levels of school connectedness throughout middle and high school (ages 10 through 18) is negatively associated with substance use, delinquency, gang membership, violence, academic problems, and sexual activity in late adolescence and young adulthood (up to age 21). With few exceptions, these relations do not differ by gender or ethnicity (Catalano et al., 2004) and have been documented

internationally. For instance, in an Australian sample, school connectedness in early adolescence (grade 8, approximately age 14) was related to lower substance use, better mental health, and higher rates of school completion in mid (age 16) and late (age 19) adolescence (Bond et al., 2007).

**The fact that school connectedness is directly linked to positive outcomes and acts as a buffer against other risks makes it an important target for prevention.**

Yet, while there is substantial evidence from longitudinal studies that high levels of school connectedness are linked to subsequent positive outcomes, some research does suggest that the association between school connectedness and youth adjustment is also bidirectional. For example, one study (Loukas et al., 2009) found that lower levels of school connectedness in grades 6 and 7 were associated with greater subsequent conduct problems one year later, but the opposite was also true: greater conduct problems at grades 6 and 7 were also associated with lower school connectedness one year later. This suggests a feedback loop between school connectedness and problem behavior. Low school connectedness increases the chance that students develop conduct problems, which further lowers a sense of school connectedness, which in turn leads to more conduct problems. If this is the case, measures that prevent a disconnection from school may serve to break this cycle.

There is also evidence that school connectedness can help promote positive development in the face of other life stressors. For example, it is well documented that low-quality relationships with parents in early adolescence (grades 6 and 7) are associated with behavior problems such as fighting, lying, and cheating. However, among youth with high levels of school connectedness, low-quality relationships with parents are not related to subsequent behavioral problems (Loukas, Roalson, & Herrera, 2010). This suggests that school connectedness can act as a buffer against other risk factors to promote positive youth development. The fact that school connectedness is directly linked to positive outcomes and acts as a buffer against other risks makes it an important target for prevention.

#### PREDICTORS OF SCHOOL CONNECTEDNESS IN ADOLESCENCE

Targeting school connectedness with preventive efforts requires knowing the mechanisms that contribute to higher levels of school connectedness. By targeting these mechanisms with preventive interventions, we can work to increase school connectedness, and in turn, impact subsequent development. The school environment clearly impacts students' feelings of connectedness, but parents and peers play important roles in encouraging strong school connection among adolescents as well (Steinberg, 1996).

Several characteristics of schools and classrooms have been shown to promote feelings of school connectedness: (a) high academic standards coupled with strong teacher support; (b) an environment in which adult and student relationships are positive and respectful; and (c) a physically and emotionally safe school environment. Positive classroom management, opportunities to participate in extracurricular activities, tolerant disciplinary policies, and small school size have also been linked to increased school connectedness among students (McNeely, Nonnemaker, & Blum, 2002). Teaching methods including a combination of proactive classroom management, interactive teaching, and cooperative learning have been found to increase school connectedness of students (Abbott et al., 1998). In contrast, lack of safety in school,



developmentally inappropriate classroom environments, and poor classroom management have been shown to place youth at risk for disengagement from school (Blum, 2005).

In 2004, the National Research Council and the Institute of Medicine identified a series of factors associated with school connectedness and provided a set of focus areas for schools to target in order to increase school connectedness. From a review and synthesis of the extant literature on school connectedness, the National Research Council suggested that school connectedness can be increased by implementing the following measures in schools:

- not separating students into vocational and college tracks;
- setting high academic standards for all students;
- providing all students with the same core curriculum;
- creating small-sized learning environments;
- forming multidisciplinary education teams;
- ensuring that every student has an advisor;
- providing mentorship programs;
- ensuring the course content is relevant to the lives of students;
- providing service learning and community service projects;
- providing experiential, hands-on learning opportunities;
- extending the class period, school day, and/or school year;
- providing opportunities to catch up for students who are falling behind.

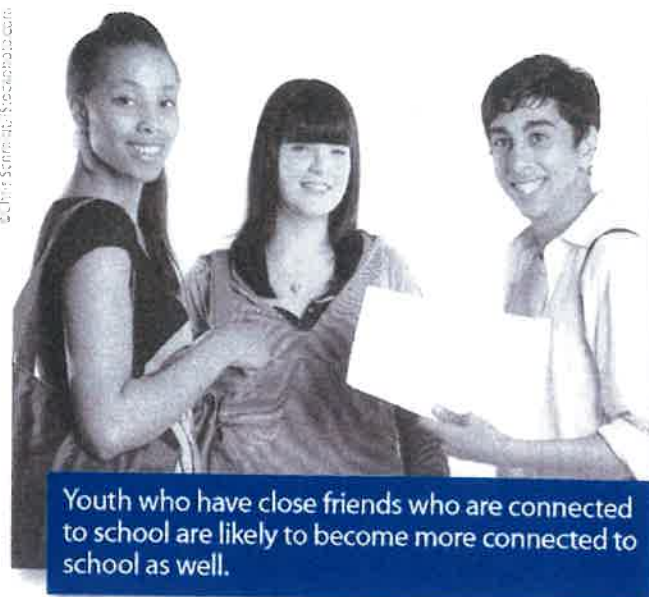
Parents and peers also contribute to feelings of school connectedness among adolescents. Children who grow up in families where parents place a high value on education and provide encouragement for schoolwork are more likely to feel strongly connected to school (Eccles et al., 1993). Adolescents who are socially engaged and accepted by peers, as opposed to being socially isolated and rejected by peers, are more likely to be actively engaged in school (Eccles et al., 1993). Indeed, high school students who are harassed by peers report lower school connectedness (Eisenberg, Neumark-Sztainer, & Perry, 2009). Moreover, the characteristics of one's close friends can influence school connectedness because, over time, individuals tend to become more like their friends. This means that youth who have close friends who are connected to school are likely to become more connected to school as well (see Steinberg, 1996). Thus, both parents and peers are independently important socialization agents for increasing school connectedness, but having support from both may even be more beneficial. In a study of nine high schools in Wisconsin and Northern California, high school students who received academic encouragement from parents and peers performed better in school than youth who received encouragement from only one source (Steinberg et al., 1995). Targeting schools, families, and peers at the same time with preventive efforts will, therefore, have the greatest impact on increasing school connectedness.

Some research does suggest that the association between school connectedness and youth adjustment is also bidirectional.

#### INCREASING SCHOOL CONNECTEDNESS IN ADOLESCENCE

There are now several preventive interventions that have been shown to increase school connectedness. One such intervention is the Raising Healthy Children (RHC) program (formerly called SOAR – Skills, Opportunities, and Recognition), which has been designated an effective program under the Substance Abuse and Mental Health Services Administration (SAMHSA) and the National Registry of Effective Prevention Programs ([www.nrepp.samhsa.gov](http://www.nrepp.samhsa.gov)), as well as a promising program by Blueprints ([www.colorado.edu/](http://www.colorado.edu/)

© Chris Semelak, Sociopolitical.com



Youth who have close friends who are connected to school are likely to become more connected to school as well.

*espp/blueprints/*). RHC is a program that aims to increase skills for successful participation in the family, school, peer group, and community by helping families and schools provide developmentally appropriate opportunities for active involvement and giving consistent recognition for effort, improvement, and achievement. RHC includes social skills training for elementary students, training for teachers to improve methods of classroom management and instruction through the elementary grades, and developmentally appropriate workshops for parents. At the core of RHC is the expectation that increasing opportunities, skills, and recognition for prosocial involvement, while simultaneously reducing antisocial opportunities and recognition for problem behavior, will result in children bonding to prosocial individuals and institutions such as schools; in other words, developing and maintaining strong school connectedness while reducing the likelihood of bonding or connectedness to antisocial others.

RHC has been tested in two longitudinal studies (the Seattle Social Development Project and the Raising Healthy Children project) which followed elementary school students into young adulthood, and compared those who were exposed to the intervention with control students who did not receive the intervention. In both studies, youth who were enrolled in the intervention showed fewer declines in school connectedness from middle school through high school, higher levels of school connectedness and academic achievement in their senior year of high school, and fewer school problems, violence, alcohol abuse, and risky sexual activity compared to those who received no intervention (Catalano et al., 2004; Hawkins, Guo, Hill, Battin-Pearson, & Abbott, 2001). Moreover, school connectedness was also found to be particularly protective for youth in higher risk environments (Catalano et al., 2004). For youth at risk for poor developmental outcomes because of familial illicit drug use, heavy alcohol use, or domestic violence, school connectedness may play an especially important role in promoting positive youth outcomes. These findings are consistent with prior research that indicates that school connectedness predicts positive youth development and can also buffer against risk to promote positive development.

Results from these two RHC intervention studies suggest that levels of school connectedness can be improved—and that these increases can lead to subsequent positive development in multiple domains. An important message of these interventions is that a comprehensive approach that targets teachers, parents, and youths works to produce better outcomes. In addition to making changes



in the school environment that promote positive school behavior (i.e., increasing teacher effectiveness and setting high standards for all students), parents can also increase connectedness to school by stressing the importance of school, and peers can influence school connectedness by their own behaviors and beliefs. That is, parents, peers, and teachers can independently and jointly make active changes that will increase students' connectedness to school and promote positive development across adolescence and into adulthood.

## CONCLUSIONS

By high school, a large proportion of youth are disconnected from school which can lead to a broad range of behavioral, emotional, and academic problems. Improving school connectedness is, therefore, an important issue for schools and a target for preventive efforts. The U.S. Department of Education (2005) has made online training in this area available to school administrators (see <http://www2.ed.gov/admins/lead/safety/training/connect/>). Tested and effective preventive interventions aimed at increasing adolescents' feelings of connection to their schools are available and make it possible to promote positive behavioral and emotional adjustment while also improving academic outcomes. →



Kathryn Monahan



Sabrina Oesterle



J. David Hawkins

**Kathryn C. Monahan** ([monahan@u.washington.edu](mailto:monahan@u.washington.edu)) is a Research Scientist at the Social Development Research Group in the School of Social Work at the University of Washington. Dr. Monahan is interested in individual and contextual predictors of adolescent problem behavior. She is especially interested in at-risk youth and longitudinal patterns of development.

**Sabrina Oesterle** is Research Assistant Professor with the Social Development Research Group, School of Social Work at the University of Washington. Dr. Oesterle's work is in life course research, the transition to adulthood, longitudinal research methods, and the prevention of health and behavior problems and the promotion of well-being.

**J. David Hawkins** is Endowed Professor of Prevention, Social Development Research Group, School of Social Work, University of Washington; past President of the Society for Prevention Research; and a fellow of the American Society of Criminology and the Academy of Experimental Criminology. His research studies include the Seattle Social Development Project, an ongoing longitudinal study that includes a nested preventive intervention, and the Community Youth Development Study, a randomized controlled trial of the Communities That Care prevention operating system involving 24 communities.

This work was supported by a research grant from the National Institute on Drug Abuse (R01 DA015183-10) with co-funding from the National Cancer Institute, the National Institute of Child Health and Human Development, the National Institute of Mental Health, and the Center for Substance Abuse Prevention. The content of this article is solely the responsibility of the authors and does not necessarily represent the official views of the funding agencies.

Copyright © 2010, Integrated Research Services, Inc.

## References

- Abbott, R.D., O'Donnell, J., Hawkins, J.D., Hill, K.G., Kosterman, R., & Catalano, R.F. (1998). Changing teaching practices to promote achievement and bonding to school. *American Journal of Orthopsychiatry*, 68, 542-552.
- Anderman, E.M. (2002). School effects on psychological outcomes during adolescence. *Journal of Educational Psychology*, 94, 795-809.
- Blum, R.W. (2005). *School Connectedness: Improving the Lives of Students*. Baltimore: Johns Hopkins Bloomberg School of Public Health.
- Bond, L., Butler, H., Thomas, L., Carlin, J., Glover, S., Bowes, G., et al. (2007). Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health, and academic outcomes. *Journal of Adolescent Health*, 40, e9-e18.
- Brockmeyer, K.A., Fanti, K.A., & Henrich, C.C. (2006). Schools, parents, and youth violence: A multilevel, ecological analysis. *Journal of Clinical Child and Adolescent Psychology*, 35, 504-514.
- Catalano, R.F., Haggerty, K.P., Oesterle, S., Fleming, C.B., & Hawkins, J.D. (2004). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. *Journal of School Health*, 74, 252-261.
- Catalano, R.F., & Hawkins, J.D. (1996). The social development model: A theory of antisocial behavior. In J.D. Hawkins (Ed.), *Delinquency and Crime: Current Theories* (pp. 149-197). New York: Cambridge University Press.
- Eccles, J.S., Midgley, C., Wigfield, A., Buchanan, C.M., Reuman, D., Flanagan, C., et al. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *The American Psychologist*, 48, 90-101.
- Eisenberg, M.E., Neumark-Sztainer, D., & Perry, C.L. (2009). Peer harassment, school connectedness, and academic achievement. *Journal of School Health*, 73, 331-316.
- Goodnow, C., & Grady, K.E. (1993). The relationship of school belonging and friends' values to academic motivation among urban adolescent students. *Journal of Experimental Education*, 62, 60-71.
- Hawkins, J.D., Catalano, R.F., & Miller, J.Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, 112, 64-105.
- Hawkins, J.D., Guo, J., Hill, K.G., Barrin-Pearson, S., & Abbott, R.D. (2001). Long-term effects of the Seattle Social Development Intervention on school bonding trajectories. *Applied Developmental Science*, 5, 225-236.
- Klem, A.M., & Connell, J.P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health*, 74, 262-273.
- Loucas, A., Abbott, R.D., Hawkins, J.D., Kosterman, R., & Catalano, R.F. (2002). Effects of the Seattle social development project on sexual behavior, pregnancy, birth, and sexually transmitted disease outcomes by age 21 years. *Archives of Pediatrics & Adolescent Medicine*, 156, 438-447.
- Loukas, A., Ripberger-Suhler, K.G., & Horton, K.D. (2009). Examining temporal associations between school connectedness and early adolescent adjustment. *Journal of Youth & Adolescence*, 38, 804-812.
- Loukas, A., Roalson, L.A., & Herrera, D.E. (2010). School connectedness buffers the effects of negative family relations and poor effortful control on early adolescent conduct problems. *Journal of Research on Adolescence*, 20, 13-22.
- McNeely, C., & Falci, C. (2004). School connectedness and the transition into and out of health-risk behavior among adolescents: A comparison of social belonging and teacher support. *Journal of School Health*, 74, 284-292.
- McNeely, C., Nonnemaker, J.M., & Blum, R.W. (2002). Promoting school connectedness: Evidence from the National Longitudinal Study of Adolescent Health. *Journal of School Health*, 72, 138-146.
- National Research Council and Institute of Medicine. (2004). *Engaging Schools: Fostering High School Students' Motivation to Learn*. Washington, DC: The National Academies Press.
- Osterman, K.F. (2000). Students' need for belonging in the school community. *Review of Educational Research*, 70, 323-367.
- Resnick, M.D., Bearman, P.S., Blum, R.W., Bauman, K.E., Harris, K.M., Jones, J., et al. (1997). Protecting adolescents from harm. *JAMA: Journal of the American Medical Association*, 278, 823-832.
- Roeser, R.W., Eccles, J.S., & Sameroff, A.J. (2000). School as a context of early adolescents' academic and social-emotional development: A summary of research findings. *Elementary School Journal*, 100, 443-471.
- Samdal, O., Nutbeam, D., Wold, B., & Kannas, L. (1998). Achieving health and educational goals through schools—a study of the importance of the school climate and the students' satisfaction with school. *Health Education Research*, 13, 383-397.
- Steinberg, L.D. (1996). *Beyond the Classroom: Why School Reform has Failed and What Parents Need to Do*. New York: Simon and Schuster.
- Steinberg, L.D., Darling, N.E., Fletcher, A.C., Brown, B.B., & Dornbusch, S.M. (1995). Authoritative parenting and adolescent adjustment: An ecological journey. In P. Moen, G.H. Elder, Jr., & K. Lüscher (Eds.), *Examining Lives in Context: Perspectives on the Ecology of Human Development* (pp. 423-466). Washington, DC: American Psychological Association.
- U.S. Department of Education. (2005). School connectedness and meaningful student participation. Lead & Manage My School. Retrieved March 16, 2010, from [http://www2.ed.gov/admins/lead/safety/training/connect/school\\_pg3.html](http://www2.ed.gov/admins/lead/safety/training/connect/school_pg3.html)

## NEXT TOPIC

Creating Supportive Environments for Lesbian, Gay, Bisexual, and Transgender Youth

Coming November 2010







*Information for School Districts  
and School Administrators*

# Fostering School Connectedness

## Improving Student Health and Academic Achievement

**S**chool connectedness is the belief held by students that the adults and peers in their school care about their learning as well as about them as individuals. Students who feel connected to school are more likely to have a number of positive health and academic outcomes. This fact sheet answers questions about school connectedness and identifies strategies school districts and administrators can use to foster it among their students.

### **Why is it important for students to feel connected to school?**

School connectedness is an important factor in both health and learning. Students who feel connected to school are

- More likely to attend school regularly, stay in school longer, and have higher grades and test scores.
- Less likely to smoke cigarettes, drink alcohol, or have sexual intercourse.
- Less likely to carry weapons, become involved in violence, or be injured from dangerous activities such as drinking and driving or not wearing seat belts.
- Less likely to have emotional problems, suffer from eating disorders, or experience suicidal thoughts or attempts.

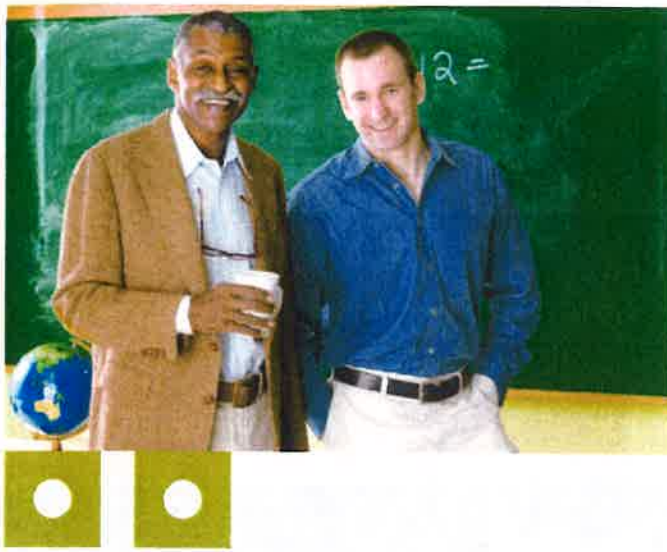
Implementation of evidence-based health promotion programs, coupled with strategies to promote school connectedness, can help schools have the greatest impact on the health and education outcomes of their students.

### **What factors can increase school connectedness?**

Four factors can help strengthen school connectedness for students: **adult support, belonging to a positive peer group, commitment to education, and a positive school environment.** School staff members are important adults in students' lives; the time, interest, attention, and emotional support they give students can engage them in school and learning.



Centers for Disease  
Control and Prevention  
National Center for HIV/AIDS,  
Viral Hepatitis, STD, and  
TB Prevention



## What steps can school administrators take to increase school connectedness?

*School Connectedness: Strategies for Increasing Protective Factors Among Youth* (Division of Adolescent and School Health, CDC, 2009) describes six science-based strategies for fostering school connectedness. The chart below outlines the six strategies and describes specific actions school districts and administrators can take to influence their implementation in schools.

## Strategies and Actions School Administrators Can Take to Increase School Connectedness

ACTIONS	<b>Strategy 1</b> <i>Create processes that engage students, families, and communities and that facilitate academic achievement and staff empowerment.</i>
	<ul style="list-style-type: none"> <li>• <b>Lead</b> students, faculty, staff, and parents to develop shared standards of learning and behavior.</li> <li>• <b>Team</b> with teachers and staff to improve the school climate and students' sense of connectedness to school.</li> <li>• <b>Engage</b> teams of students, faculty, staff, parents, and community members to plan school policies and activities.</li> <li>• <b>Give</b> teachers and principals the appropriate decision-making authority to use school resources to enhance their school's physical and psychosocial environment.</li> <li>• <b>Empower</b> students to communicate openly with school staff and parents, such as through parent-teacher-student conferences and teacher evaluations.</li> <li>• <b>Engage</b> community partners to provide health and social services at school that students and their families need, such as dental services, vaccinations, and child care.</li> </ul>
	<b>Strategy 2</b> <i>Provide education and opportunities to enable families to be actively involved in their children's academic and school life.</i>
	<ul style="list-style-type: none"> <li>• <b>Offer</b> workshops and trainings for parents to increase their ability to be actively involved in their children's school life and to help their children develop academic and life skills.</li> <li>• <b>Create</b> opportunities to involve and accommodate parents with varied schedules, resources, and skills, to help them participate in meaningful school and classroom activities as well as share their culture and expectations.</li> <li>• <b>Translate</b> materials into languages spoken in students' homes and provide interpreters at events when needed.</li> <li>• <b>Communicate</b> the school's behavioral and academic expectations to families via school newsletters, conferences, and Web sites and encourage families to reinforce those expectations at home.</li> <li>• <b>Assign</b> school staff members to work with specific students and their families to help connect the family to the school and classroom.</li> </ul>
	<b>Strategy 3</b> <i>Provide students with the academic, emotional, and social skills they need to engage in school.</i>
	<ul style="list-style-type: none"> <li>• <b>Provide</b> opportunities for students to improve their academic, social, and interpersonal skills through personal tutoring programs or summer and vacation learning camps.</li> <li>• <b>Support</b> academic interscholastic competitions, debates, and other projects within and among schools.</li> <li>• <b>Use</b> school sporting events and physical education classes to promote teamwork, sportsmanship, and nonviolence.</li> </ul>



**Strategy  
4**

*Promote the use of effective classroom management and teaching methods to foster a positive learning environment.*

- **Reduce** class sizes to ensure more time for individualized assistance.
- **Provide** opportunities—such as service learning, creative projects, and extracurricular activities—that promote meaningful student involvement, learning, and recognition.

**Strategy  
5**

*Provide professional development and support for teachers and other school staff to enable them to meet the diverse cognitive, emotional, and social needs of their students.*

- **Hire** teachers who have expertise in child development, who apply student-centered pedagogy, and who use diverse classroom management techniques and teaching methods to meet the needs of different learning styles.
- **Offer** professional development to teachers on organizing the classroom to promote a positive environment, applying developmentally appropriate discipline strategies, and assisting students in developing self-control.
- **Educate** school staff on strategies for communicating with parents and involving them in their children's school life.
- **Provide** trainings on all school curricula to be used and on effective teaching methods.
- **Ensure** that teachers have the materials, time, resources, and support to use skills learned in training.
- **Build** learning teams that can observe experienced teachers who effectively manage classrooms and facilitate group work.
- **Develop** a teacher-coaching program that promotes problem solving and sharing in a supportive work environment.

**Strategy  
6**

*Create trusting and caring relationships that promote open communication among administrators, teachers, staff, students, families, and communities.*

- **Consider** structuring the school to allow teachers to stay with the same students for consecutive years.
- **Allow** students and parents to use the school facility outside of school hours for recreation or health promotion programs.
- **Apply** and fairly **enforce** reasonable and consistent disciplinary policies that are jointly agreed upon by students and staff.
- **Hold** school-wide, experience-broadening activities that enable students to learn about different cultures, people with disabilities, and other topics.
- **Support** student clubs and activities that promote a positive school climate, such as gay-straight alliances and multicultural clubs.
- **Provide** opportunities for students of all levels to interact, develop friendships, and engage in teamwork.
- **Create** opportunities for students to communicate, work, and partner with adults, such as service learning activities and internships.
- **Involve** students in parent-teacher conferences, curriculum selection committees, and school health teams.
- **Have** principals, teachers, and other school staff commit to and model respectful behavior toward each other.
- **Challenge** all school staff to greet each student by name.
- **Encourage** staff to build stronger relationships with students who are experiencing academic challenges or social problems, such as bullying or harassment.
- **Ensure** that school staff members have access to a school counselor, psychologist, or other expert for consultations or student/family referrals when needed.
- **Communicate** expectations, values, and norms that support positive health and academic behaviors to the entire school community.





### ***School Connectedness Is Especially Important for At-Risk Youth***

School connectedness is particularly important for young people who are at increased risk for feeling alienated or isolated from others. Any student who is “different” from the social norm may have difficulty connecting with other students and adults in the school, and may be more likely to feel unsafe. Those at greater risk for feeling disconnected include students with disabilities, students who are lesbian, gay, bisexual, transgender, or question their sexual orientation, students who are homeless, or any student who is chronically truant due to a variety of circumstances. Strong family involvement and supportive school personnel, inclusive school environments, and curricula that reflect the realities of a diverse student body can help students become more connected to their school.

### ***What should school administrators consider when planning for action to improve school connectedness?***

Advancing students’ health and academic outcomes by improving school connectedness is a team effort. It involves the school community as well as individuals, groups, and organizations outside the school grounds. Making changes of this kind requires 1) convincing these stakeholders of the importance of school connectedness in helping students learn and stay healthy, 2) involving them in the development, implementation, and evaluation of these actions, and 3) securing their buy-in to ensure the changes happen.

Some of the strategies and actions described in the previous pages require small changes in school processes that can be done in the short term with relative ease, whereas others might be broader and longer-term and might require administrative or budgetary changes. Schools and school districts should determine which actions are most feasible and appropriate, according to the needs of the school and available resources.



## **Resources**

### **School Connectedness: Strategies for Increasing Protective Factors Among Youth**

[www.cdc.gov/HealthyYouth/AdolescentHealth/connectedness.htm](http://www.cdc.gov/HealthyYouth/AdolescentHealth/connectedness.htm)

### **Student Health and Academic Achievement**

[www.cdc.gov/HealthyYouth/health\\_and\\_academics/index.htm](http://www.cdc.gov/HealthyYouth/health_and_academics/index.htm)

### **FindYouthInfo.gov**

[www.findyouthinfo.gov](http://www.findyouthinfo.gov)

### **Enhancing Student Connectedness to Schools**

<http://csmh.umaryland.edu/resources.html/caring%20connectedness%20brief.pdf>

### **School Connectedness: Improving Students’ Lives**

<http://cecp.air.org/download/MCMonographFINAL.pdf>



**U.S. Department of Health and Human Services**  
Centers for Disease Control and Prevention  
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention  
Division of Adolescent and School Health  
[www.cdc.gov/HealthyYouth](http://www.cdc.gov/HealthyYouth)

July 2009



Pages 1, 3, 4,

Student/Parent handbook!

## 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.<sup>1</sup> Students categorized as "high" in connectedness reported that they "agree" or "strongly agree" on at least three of the five school climate items.<sup>2</sup>

### 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.

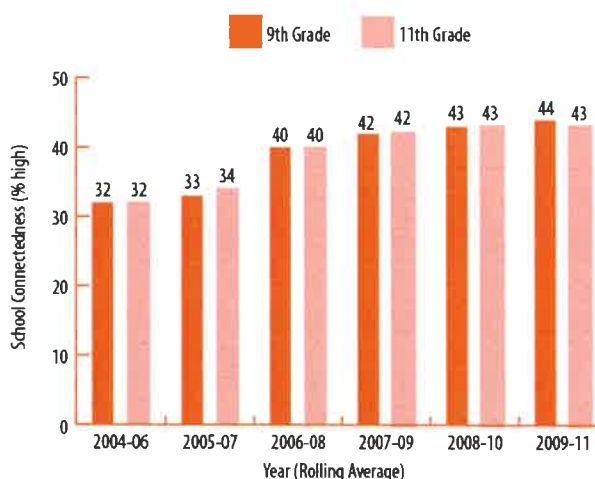
A decline in school connectedness as students progress through school is one of the most consistent findings in school climate research. These results are also consistent with the conclusion reached by Klem and Connell (2004) that, by high school, "as many as 40 to 60 percent of all students ... are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

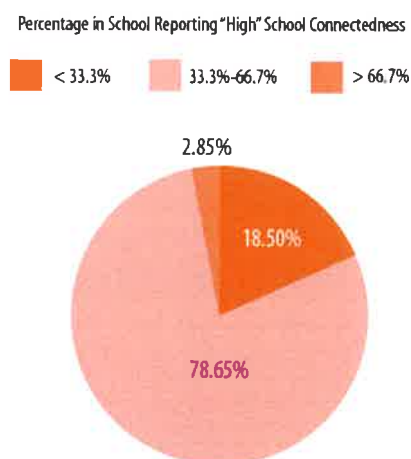
2 This is the case for 99.5% of students classified as exhibiting "high" connectedness, as defined above. Approximately 0.5% of those students reported that they "strongly agree" on two of the items and "neither agree nor disagree" on three of the items.

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.

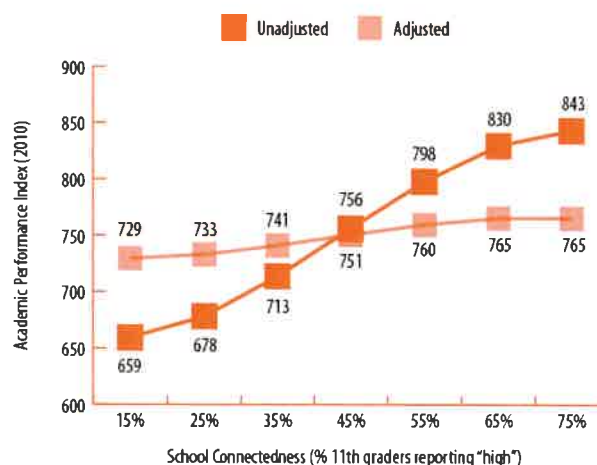
### HOW IS SCHOOL CONNECTEDNESS RELATED TO ACADEMIC PERFORMANCE?

Figure 3 shows that as the average level of school connectedness increases among 11th graders, so does the average Academic Performance Index (API).<sup>3</sup> The unadjusted results (darker red trend line) show that API scores rise as school connectedness increases. 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.*

<sup>3</sup> 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.

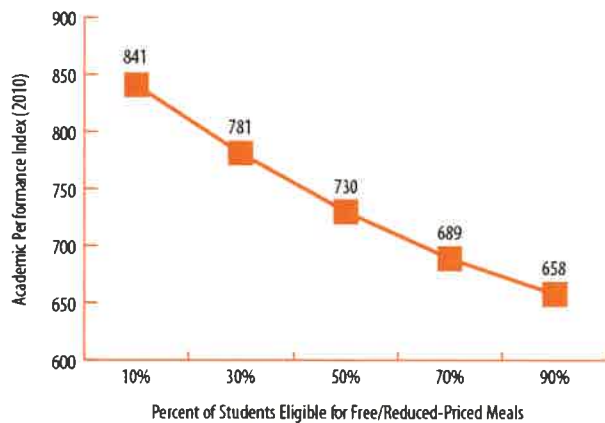
### HOW ARE CONNECTEDNESS, ACHIEVEMENT, AND SOCIOECONOMIC STATUS RELATED?

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.



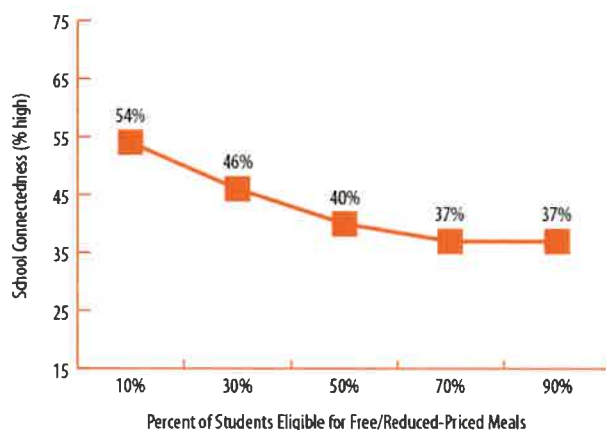


Figure 4. API scores and free/reduced-price meal eligibility



Source: 2010 API research data file.

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



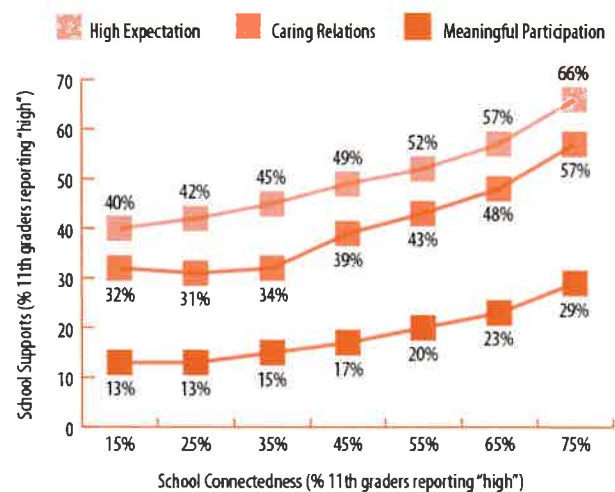
Source: 2008/10 Cal-SCHLS student survey (11th graders) and 2010 API research data file.

### 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 fairness<sup>4</sup>. 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>.





## REFERENCES

- Austin, G., O'Malley, M., & Izu, J. (2011). Making sense of school climate. San Francisco: WestEd. Download at <http://californiaS3.wested.org/tools>.
- Blum, R. (2005). A case for school connectedness. *Educational leadership: The adolescent learner*, 62(7), 16–20.
- Bond, L., et al. (2007). Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health, and academic outcomes. *Journal of Adolescent Health*, 40(4), e9 – e18.
- Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health*, 74(7), 262–273.
- Libbey, H. P. (2004). Measuring student relationships to school: Attachment, bonding, connectedness, and engagement. *Journal of School Health*, 74(7), 274–283.
- Loukas, A., Suzuki, R., & Horton, K. D. (2006). Examining school connectedness as a mediator of school climate effects. *Journal of Research on Adolescence (Blackwell Publishing Limited)*, 16(3), 491–502.
- McNeely, C., Nonnemaker, J., & Blum, R. (2002). Promoting school connectedness: Evidence from the national Longitudinal Study of Adolescent health. *Journal of School Health*, 72(4), 138–146.
- National Research Council and the Institute of Medicine. (2004). *Engaging schools: Fostering high school students' motivation to learn*. Washington, D.C.: The National Academies Press.
- Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., & Udry, J. R. (1997). Protecting adolescents from harm: Findings from the National Longitudinal Study on Adolescent Health. *Journal of the American Medical Association*, 278(10), 823–832.
- Shochet, I. M., Dadds, M. R., Ham, D., & Montague, R. (2006). School connectedness is an underemphasized parameter in adolescent mental health: Results of a community prediction study. *Journal of Clinical Child and Adolescent Psychology*, 35, 170 – 179.

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

