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Teachers as Builders of Respectful School Climates: Implications for Adolescent Drug Use Norms and Depressive Symptoms in High School

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Abstract Positive school climates have been found to have favorable effects on adolescent health risk behaviors and mental health outcomes. However, the mechanisms by which teacher behavior may promote such effects in high schools have not been extensively studied. Based on social control theory and a social developmental-contextual model, it was predicted that by respecting students' points of view and decision making capabilities, teachers can help build respectful school climates that encourage healthy norms of behavior. Structural equation modeling with a nationally representative sample of 476 youth ages 14–18 supported the model. Adolescents who reported higher teacher support and regard for student perspectives in their high schools were more likely to see their schools as having respectful climates and healthy norms of drug use which was associated with lower levels of personal drug use. Students in such schools also reported greater social belonging and fewer symptoms of depression.

Keywords School environment · Social norms · High school · Teacher–student relationships · Substance use · Depressive symptoms

School climate, school connectedness, and school bonding are among the many overlapping terms used in research on students' perceptions and feelings regarding their school social environment (Libbey 2004; Maddox and Prinz 2003). While both terminology and measurement have varied, several studies in the United States have found “school climate” to be both directly and indirectly related to health risk behaviors, such as smoking, drinking, drug use, truancy, fighting, weapon carrying (Catalano et al. 2004; Coker and Borders 2001; Kuperminc et al. 1997, 2001; Loukas and Robinson 2004; Maddox and Prinz 2003; Roeser and Eccles 1998; Roeser et al. 2000; Simons-Morton et al. 1999; Welsh 2001) and to mental health problems, such as symptoms of depression, anxiety, and suicidality (Kuperminc et al. 1997, 2001; Loukas and Robinson 2004; Roeser and Eccles 1998; Roeser et al. 2000). Research using data from the National Longitudinal Study of Adolescent Health determined that school connectedness, which included indicators such as feeling close to others at school and teachers caring about the students, was associated with lower levels of distress and suicidality, violence, tobacco, marijuana, and alcohol use, and delay in sexual intercourse (Bonny et al. 2000; Resnick et al. 1997).

International research has found similar results. Analyses of data from the World Health Organization international survey, “Health Behavior in School-aged Children,” revealed that health risk behaviors, particularly smoking and drinking, were positively associated with school alienation (Nutbeam et al. 1993) and negatively associated with school satisfaction and positive perceptions

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of the school psychological environment (Samdal et al. 2000). This research included Canada, Australia, and many countries throughout Europe. Thus, both within the United States and across several other countries, a strong connection has been established between student's experiences of the school environment and health risk behaviors.

One explanation for the favorable effects of school climate, social control theory (Hirschi 1969), suggests that schools with positive climates increase students' attachment to healthy norms of behavior that are promoted and modeled by teachers and other adults in that environment. Consistent with this explanation, high schools with norms that condone risk behaviors such as drug use have more individual risk taking behavior (Kumar et al. 2002). In addition, interventions designed on this model and implemented during the *elementary* school years can reduce later health risk behaviors, including delinquency, violence, alcohol abuse, and risky sexual activities (Battistich et al. 2004; Catalano et al. 2004; Hawkins et al. 1999). Nevertheless, although social control theory is helpful in designing school interventions at the elementary level, it is less clear in specifying how teachers and other responsible adults can enhance the attachment of students to healthy norms of behavior in high schools. In this study, we examine the role that teachers and other adults can play to promote healthy norms of behavior in high schools, especially in regard to alcohol, tobacco, and other drug use. Use of such substances has been identified by school counselors and psychologists as a major mental health problem in over 70% of high schools (Romer and McIntosh 2005). In addition, we hypothesize that a respectful school climate might mediate the influence of adults on school risk-taking norms, as well as on mental health outcomes, such as depressive symptoms.

We emphasize “respect” as a critical component of school climate for high school students based on a developmental-contextual model of social perspective coordination (LaRusso and Selman 2003; LaRusso and Selman, under review; Selman 2003) that demonstrates the increasing ability of adolescents to recognize multiple social perspectives when faced with decisions and problems in their social environments. A common approach in school climate research is to stress the need for clear standards of behavior and consistent consequences (Gottfredson and Gottfredson 1985; Gottfredson et al. 2005). In such a “rule-oriented” environment, teachers focus on maintaining control over students by strictly enforcing norms of behavior. In contrast, an approach that is more aligned with developmental theory would place emphasis on the need for teachers to help students to make healthy decisions based on respect for their decision making abilities. Such “respect-oriented” climates recognize that clear behavioral expectations are important, but not sufficient

given that adolescents also have a growing need to feel that their perspectives and participation are valued. Younger children, who are less capable of weighing consequences and considering multiple perspectives (Selman 1980), may benefit more from a rule-oriented climate. However, by adolescence, students are more sensitive to the distinction between perspectives held by adults and their own and thus appreciate greater reciprocity in the direction and control of their school. (LaRusso 2004) When the need for respectful relationships remains unmet, adolescents can become mistrustful and cynical, not only toward school authority figures, but also toward risk prevention messages (LaRusso and Selman 2003).

Although few studies of school climate have examined the unique contribution of respect, Ryan and Patrick (2001) found that teacher encouragement of mutual respect was the strongest predictor of changes in academic efficacy and self-regulation in middle schools, and Welsh (2001) found in school-level analyses that perceptions of respect for students was the most important predictor of perceived safety, victimization experiences, and risk behavior in middle school. Such findings suggest that teachers who cultivate a climate of respect in high schools would do a better job of creating health-enhancing norms of behavior than teachers who primarily focus on enforcing rules. In addition, respectful climates may engender less risk taking, not only by encouraging adherence to healthy school norms of behavior, but also by discouraging attraction to peers who engage in health-risk behavior (Loukas et al. 2006).

Respectful climates may also serve as a protective factor for mental health outcomes, such as symptoms of depression and suicidal ideation, which are experienced by a large proportion of high school students (nearly 30%) according to national studies (e.g., Kann et al. 2000). First, respectful climates are likely to be less stressful and more supportive, factors that are associated with fewer mental health problems (Burton et al. 2004; Lewinsohn et al. 1994). Second, respectful climates should engender a greater sense of “social belonging,” which includes being close to other students and feeling happy and comfortable in school. This aspect of student experience has also been extensively studied (Libbey 2004) and found to be positively related to mental health (Bonny et al. 2000; Resnick et al. 1997).

Although both respect and belonging are important and related components of students' perceptions and feelings toward the school environment, they may have different relations with drug use behavior. Students may feel happy in school and close to other students whether they conform to healthy norms or not. Hence, social belonging is likely to reduce depressive symptoms, but not necessarily drug use. Indeed, social belonging may actually be associated with increased risk taking. McNeely and Falci (2004) found that, after controlling for teacher support, social belonging

was a risk factor for the initiation of cigarette and heavy alcohol use. The authors explained that social belonging could include connections with peers who do not conform to healthy norms. Thus, friends' risk-taking may account for the positive relationship between social belonging and individual risk behavior of students.

Finally, an important question that has yet to be explored is which teacher behaviors contribute to a respectful climate. One clear possibility is teacher support, which reflects how willing teachers, counselors, and other adults are to help students with problems. This aspect of teacher behavior has been examined considerably in school climate research and has been found to be an important predictor of student risk behavior (Libbey 2004; McNeeley and Falci 2004). Secondly, relationships that are reciprocal rather than unilateral or authoritarian are essential for building a sense of respect (Cook-Sather 2002; Frei and Shaver 2002; Jones 2002; LaRusso 2004; Selman 2003). Thus, teachers who value students' perspectives and participation in making decisions may be more likely to build climates of respect in high schools.

The Current Study

Structural equation modeling with a national sample was used to test our proposed model of high school climates. With this model, we test four primary hypotheses that extend current knowledge on the relationship between school climate and health risks in adolescence. The model contains directional relationships that imply causal influences, and we describe them in this fashion. However, our tests of the model will only allow us to conclude that the data are consistent with these effects. First, we predict that teacher support and regard for students' perspectives independently help to create respectful climates; second, that respectful climates and teacher support produce greater social belonging that is associated with lower levels of individual depressive symptoms; third, that a respectful climate is also associated with fewer depressive symptoms; and finally, that respectful climates discourage friendships with drug using peers and produce healthier school drug use norms both of which in turn influence individual drug use. We test this last prediction by comparing the current model with one in which teacher support and regard for student perspectives influence school norms directly without mediation by respectful climate. In addition, we test the assumption that respect and belonging only influence personal drug use through school norms by comparing the current model with one allowing additional paths from these variables to personal drug use. This allows us to test whether social control theory and social developmental-contextual theory are indeed both necessary to explain the

relationship between school climate and adolescent risk behavior. In this case, we expect to find that climates of respect are important for adolescents (based on social developmental-contextual theory) and that such school climates decrease risk behaviors by increasing students' attachment to healthy norms of behavior (social control theory). While not part of our primary hypotheses, we also include paths in our proposed model in which teacher regard deters friendships with drug-using peers and such friendships are associated with depressive symptoms, in addition to personal drug use.

Methods

Study Population and Data Collection Procedures

The National Annenberg Survey of Youth (NASY) is a nationally representative telephone survey of 14–22-year-olds in the United States designed by the Annenberg Public Policy Center at the University of Pennsylvania (Romer 2003). The sample was obtained using random digit dialing procedures that reaches youth both in and out of school. For this study, approved by the Institutional Review Board of the University of Pennsylvania, we used NASY data collected in the spring and summer of 2003. For youth under the age of 18, parents or guardians provided permission to interview their child. In households with more than one eligible youth, the one with the most recent birthday was interviewed. Respondents who were currently in high school or who had attended high school and were under age 19 ($N = 476$) were asked a series of questions about their experiences at their most recent school. The completed interviews represented an overall response rate of 52.7% that is comparable to the rate obtained by Centers for Disease Control (CDC) (49.8%) in its national risk behavior survey with adults (CDC 2003). We report summary statistics for all variables using data weighted to match marginal percentages defined by the 2000 US Census for age, gender, race, education and region of the country.

Measures

Teacher Support

The NASY assessed teacher support with four items regarding the presence of adult role-models, caring teachers, and teachers or counselors who help with school work and problems. All items were rated on a four point scale to indicate how well the statement describes the adolescent's school (from "very well" to "not at all"), except the item asking participants whether there is at least one teacher

who cares about them at their school, which was rated on a four point scale ranging from “all the time” to “hardly ever” ($\alpha = .69$). Items were adapted from the Survey of Chicago Public Schools developed by the Consortium on Chicago School Research and the Cambridge Public Schools student survey.

Teacher Regard for Students’ Perspectives

The Teacher Regard for Students’ Perspectives scale (TRSP) was used to assess how much teachers and other adults value students’ perspectives and participation in decision-making. The TRSP is based on items from the Relationship Questionnaire (Rel-Q), a valid and reliable measure based on a developmental framework that emphasizes social perspective coordination (Selman 1980; Shultz et al. 2003). Items were also derived from adolescents’ responses in focus groups exploring the relational atmosphere of their schools (LaRusso and Selman 2003). The TRSP included five sentence stems or dilemmas regarding teachers’ relationships with students, each followed by four response alternatives presented in a random order and scored on a four point scale with higher scores reflecting increasing regard for students’ perspectives and participation. For example, in the following item, scores given for each response alternative are provided in parentheses: “A good teacher in your school is someone who:” (a) “Does not yell” (score = 0); (b) “Keeps the students quiet” (score = 1); (c) “Listens to students’ ideas” (score = 2); or (d) “Encourages students to help make some of the decisions” (score = 3). Participants were asked to choose the response that best fits their interpretations of student–teacher interactions and relationships in their own school ($\alpha = .49$).

The Rel-Q, upon which the TRSP is based, produces a higher alpha as it has more items and utilizes a composite of both response ratings and the selection of a best response for each item (Shultz et al. 2003). However, given the constraints of a telephone survey, we only included five items (and participants were asked to select a best response but not asked to complete response ratings), which although less reliable, still produced a sufficiently sensitive measure for the purposes of our analysis.

Respect

The Respect scale was composed of five items that assess students’ perceptions of the level of respect that teachers have for students, students have for teachers, and students have for each other. Two other items that were highly related to the respect questions were also included in the

final scale: that the rules in the school are clear and that teachers can handle problems in the school. The finding that these additional items correlated highly with the respect items further verifies that a respectful climate can help to set clear rules of behavior while still responding to students’ needs and perspectives. Respondents were asked to indicate whether each item describes their school very well, somewhat, a little, or not at all ($\alpha = .77$). Items came from the Cambridge Public Schools student survey.

Belonging

Belonging was assessed with three items regarding how happy, welcome and comfortable, and close to other students the participants feel at their school using a four-point scale ranging from “all the time,” to “hardly ever” ($\alpha = .69$). These items were adapted from the social belonging scale from the National Longitudinal Study of Adolescent Health, developed by Bollen and Hoyle (1991) and from the Cambridge Public Schools student survey.

Depressive Symptoms

To assess symptoms of depression, the survey used two items from the Youth Risk Behavior Survey (Kann et al. 2000): “During the past 12 months, did you ever seriously consider attempting suicide?” and “During the past 12 months, did you ever feel so sad or hopeless for two weeks or more in a row that you stopped doing your usual activities?” Approximately 7.2% of the sample reported having seriously considered suicide and 19% reported experiencing symptoms of hopelessness. These characteristics were correlated ($r = .28$, $p < .01$), as would be expected. Hence we used the items as indicators of an underlying depressive symptoms factor.

Perceived School Norms for Drug Use

To assess school norms for risk behavior, we enquired about the perceived prevalence of three drug uses among students at the respondents’ schools: “Thinking about the people your age who attend your school, how many would you say currently:” (a) “smoke cigarettes?,” (b) “drink beer, wine or liquor?,” or (c) “smoke marijuana or hashish?” Items were presented in a random order and responses were recorded as “more than half,” “between a half and a quarter,” “less than one-quarter,” “or just about no one.” As expected, responses to the risk questions were correlated ($\alpha = .80$). Hence, we used the three items as

indicators of an underlying factor for the perceived prevalence of school risk behavior. Approximately 7.8% of the sample did not report on the school's risk profile for any behavior. However, as described below, we used full information maximum likelihood imputation for missing data (Arbuckle and Wothke 1999) to retain the full sample for all tests of the model.

Perceived Friend Drug Use

In order to assess the perceived prevalence of the same risk behaviors among their friends, respondents were asked, "Thinking about your friends and the people your age that you spend time with, how many would you say currently:" (a) "smoke cigarettes?", (b) "drink beer, wine or liquor?", or (c) "smoke marijuana or hashish?" Each question was followed by the same responses as above ($\alpha = .79$).

Self Reports of Drug Use

To assess engagement in each of the risk behaviors, respondents were asked a two step question, "Have you ever done any of the following: (a) "smoked a cigarette?," (b) "had a drink of beer, wine or liquor?," (c) "smoked marijuana or hashish?" For those who said yes in each case, they were asked if they had engaged in the behavior in the last 30 days. Responses were coded into three levels of use, indicating never (0), some use in the past (1), and use in the past 30 days (2). As with the other risk assessments, responses were highly related ($\alpha = .69$).

Demographics

The NASY included information on region of the country, racial-ethnic identity, urban versus rural or suburban residence, school size, age, and gender (See Table 1.) The data file was supplemented with data from the US Census to assess the median income level of the respondent's neighborhood based on self-reported postal zip code. Approximately 5.7% of the sample did not provide their zipcode. For these respondents, we also used the same imputation procedure as for other missing data.

Analysis

We identified relations among school climate dimensions, school drug use norms, friend drug use, individual drug use, depressive symptoms, and demographic characteristics using linear regression and correlation techniques. We then

applied structural equation modeling to determine the relations between the variables in Fig. 1 using the program AMOS (Arbuckle and Wothke 1999). This program can also implement imputation for missing values using maximum likelihood procedures. We present solutions from this analysis using these imputed values; however, it should be noted that using case-wise deletion would not markedly change the relations we report. For the sake of simplicity, the model in Fig. 1 does not show the indicators for each factor or correlations between errors in the factors or variables. The loadings for the indicators are presented in the results.

An important advantage of SEM is that it permits tests of the proposed relations between variables while also taking into account measurement error in the assessment of indicators. It is also possible to test alternative models using goodness of fit indices, such as a χ^2 test of overall fit. Models that differ from each other only by the inclusion of additional parameters may be tested using differences in the value of χ^2 produced by the alternative solutions. In addition, we examined the root mean square error of prediction (RMSEA), a measure that is expected to be less than .05 in a good-fitting model (Maruyama 1998). We also examined the comparative fit index (CFI), a measure that

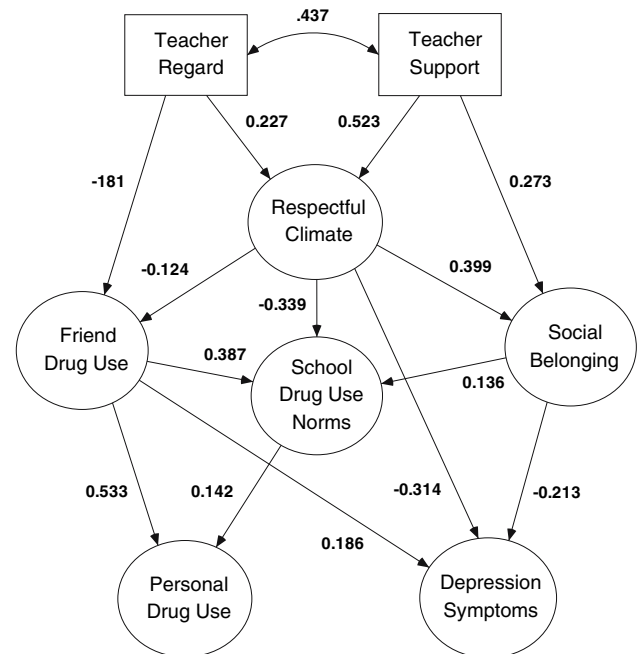


Fig. 1 Causal model of proposed relations among teacher behavior toward students, respectful climate, social belonging, friend drug use, school drug use norms, and individual drug use and depressive symptoms. Rectangles represent variables with only one indicator; ovals represent factors with multiple indicators. Indicators and other sources of factor variation are not shown. The correlation between Personal Drug Use and Depression Symptoms (not shown) was zero. Parameters represent standardized coefficients in model (see Table 4 for details of model estimates). The model produced an acceptable fit, RMSEA = .023, CFI = .988

Table 1 Mean standardized scores for all measured variables by weighted percentages of demographic characteristics

Demographic Characteristic	% Of sample (N = 476)	Teacher support	Teacher regard	Respectful climate	Social belonging	School drug use norms	Friend drug use norms	Personal drug use	Depressive Symptoms
Age									
14	9.8	-.063	-.032	-.029	-.223	-.464	-.231	-.378	.028
15	22.8	.062	-.135	-.022	.091	-.089	-.138	-.359	-.073
16	23.5	-.028	-.031	-.066	.003	.082	-.092	-.089	.052
17	23.5	.079	.125	.085	-.010	.236	.056	.087	.054
18	20.4	-.100	-.060	-.090	-.031	-.030	.304	.507	-.055
Gender									
Male	51.2	.011	-.062	.096	.088	-.247	-.031	.076	-.189
Female	48.8	-.012	.017	-.144	-.110	.240	.033	-.077	.198
Race/ethnicity									
White*	64.3	.076	.000	.123	.064	-.084	.001	.081	-.018
Black	15.4	-.021	-.103	-.472	-.277	.253	-.044	-.280	.126
Hispanic	15.4	-.273	-.068	-.175	-.030	.038	.131	-.022	-.004
Other	4.9	-.058	.063	-.015	-.055	.208	-.275	-.205	-.146
Region									
Northeast	17.0	.199	.171	.011	.042	-.013	-.028	-.026	.023
Midwest	24.1	-.054	-.205	-.069	-.010	-.115	-.026	.100	.112
South	34.9	-.001	.059	-.055	.013	.151	.065	.022	-.021
West*	24.0	-.088	-.098	.051	.013	-.088	-.047	-.136	-.099
Median neighborhood income									
<\$30,950	18.7	-.021	.088	-.072	-.072	.090	-.038	-.001	.069
\$36,000	19.2	.017	.003	-.101	-.050	.081	.003	-.179	.140
\$44,030	24.8	-.111	-.176	-.100	-.044	.020	.144	.218	-.027
\$60,410	19.2	.097	.009	.105	.145	-.115	-.149	-.128	-.118
>\$60,410	18.1	.053	.011	.087	-.015	-.084	-.005	.032	-.057
Urban–rural									
Urban	25.7	-.008	.018	-.018	-.016	-.025	.045	.002	-.078
Suburban*	51.6	.003	-.045	-.059	-.037	.010	.012	-.006	-.033
Rural	22.4	.003	-.022	.060	.061	.006	-.079	.011	.085
School size									
<500	20.4	.035	-.079	.058	-.010	-.252	.008	.053	.199
500–1,000	34.3	.047	.027	-.060	-.010	.043	-.024	-.051	-.021
1,000–1,500	20.5	.015	.025	.018	.019	-.018	.027	-.014	-.127
>1,500	24.8	-.106	-.075	-.067	.044	.160	-.017	.037	-.030

Bolded values are significantly different ($p < .05$). Reference categories indicated by *

should be larger than .95 in a good-fitting model (Hu and Bentler 1995).

Results

Demographic Differences for All Measured Variables

Table 1 contains weighted percentages of respondents in various demographic categories as well as demographic differences in means for all measured variables in our model. Regression analyses using demographic predictors

for teacher support and regard, respectful climate and social belonging, accounted for small amounts of variance, ranging from 3.1% to 8.8%. Male youth reported lower teacher regard for students’ perspectives ($p = .030$) but perceived more respect in school ($p = .012$). Black and Hispanic respondents reported less perceived respect in their schools than white youth (p ’s $< .001$) as well as less social belonging (p ’s = .003 and .056 for black and Hispanic youth respectively). In addition, Hispanic youth reported less teacher support than whites ($p < .001$). These differences are consistent with other national studies indicating that nonwhite youth attend schools with less

favorable environments (Gottfredson et al. 2005). School size was only related to respect, although marginally ($p = .081$). Larger schools tended to be seen as having a less respectful climate. Finally, there were regional differences in perceived regard for students' perspectives. However, there were no linear relations between neighborhood income or age and any of the climate scales.

Regression analyses were also conducted for each of the drug use variables and for depressive symptoms. These analyses indicated that females ($p < .001$), older youth ($p = .010$) and youth in larger schools ($p = .003$) perceived riskier norms of drug use in their schools. The relation between school norms and school size is consistent with perceptions reported by school mental health professionals (Romer and McIntosh 2005) and suggests that these perceptions tapped valid variation in this behavior. The only predictor of friend drug use was age, which was positively related to the measure ($p < .001$). Older youth also reported more personal drug use ($p < .001$), and black youth reported less ($p = .002$), both findings that are commonly observed in national surveys of drug use (Kann et al. 2000; Johnston et al. 2004). The only predictor of depressive symptoms was gender, with females reporting more symptoms than males ($p = .001$), a finding consistent with results from the Youth Risk Behavior Survey (Kann et al. 2000).

Relations among Factors in Hypothesized Model

The intercorrelations among the factors in our hypothesized model are displayed in Table 2. Teacher regard, teacher support, respectful climate and social belonging are all positively correlated. In addition, teacher regard, teacher support, and respectful climate each have a significant negative relationship with friend and personal drug use, and depressive symptoms. Social belonging is related only to depressive symptoms. A central hypothesis of our paper is that teachers valuing students' perspectives and building a respectful climate is particularly important for

adolescents and will promote healthier behavioral norms such as substance use among students. Accordingly, the intercorrelations indicate that teacher regard and respectful climate are related to school drug use norms. In addition, positive school drug use norms are related to greater friend and personal drug use.

Model Tests

Although the intercorrelations support hypotheses regarding the role of teacher behavior, respectful climate, and social belonging in drug use, they do not provide direct evidence for the hypotheses we proposed to test. For this, we turn to the SEM. Table 3 contains the loadings of the indicators for each factor in the model. It is evident that each factor has strong loadings from its indicators, suggesting that the factors were well represented by their measures. Furthermore, a test of this measurement model revealed that the model provided a good fit to the data, RMSEA = .034, 90% Confidence Interval (CI) = .022, .045 with a CFI of .979.

Table 4 contains the coefficients for relations between factors. The hypothesized model provided an excellent fit to the data as reflected in small errors of prediction (RSMEA = .023, CI = .007, .035) and overall goodness of fit (CFI = .988). This model with the standardized parameter values is illustrated in Fig. 1. As predicted by hypothesis 1, both teacher support and teacher regard for students' perspectives were positively and independently related to respectful climate. This finding supports our theoretical approach by showing that teacher regard is related to respect apart from the influence of teacher support. Consistent with hypothesis 2, teacher support and respectful climate were each related to social belonging, which was inversely related to depressive symptoms. As predicted by hypothesis 3, respect was also directly related to lower levels of depressive symptoms apart from the influence of social belonging and teacher support.

Table 2 Intercorrelations among factors in hypothesized model

Variable	1	2	3	4	5	6	7
1. Teacher support	1						
2. Teacher regard for students' perspectives	.437**	1					
3. Respectful climate	.543**	.411**	1				
4. Social belonging	.428**	.212**	.446**	1			
5. School drug use norms	-.071	-.172**	-.279**	-.054	1		
6. Friend drug use	-.109*	-.206**	-.173**	-.034	.413**	1	
7. Personal drug use	-.128**	-.227**	-.153**	.040	.320**	.506**	1
8. Depression symptoms	-.195**	-.111*	-.310**	-.249**	-.215**	.128**	.175**

* $p < .05$; ** $p < .01$

Table 3 Regression coefficients in measurement models for factors (see Fig. 1)

Path	Estimate	Standard error	Critical ratio	Standardized estimate	Probability
Respectful climate → R1	1.000			.627	
Respectful climate → R2	1.238	.104	11.95	.881	.000
Social belonging → B1	1.000			.654	
Social belonging → B2	.860	.093	9.23	.544	.000
Social belonging → B3	1.149	.106	10.82	.763	.000
Friend drug use → F1	1.000			.751	
Friend drug use → F2	.960	.069	13.97	.723	.000
Friend drug use → F3	1.047	.073	14.37	.787	.000
School drug use → S1	1.000			.723	
School drug use → S2	1.050	.080	13.07	.787	.000
School drug use → S3	1.280	.104	11.95	.714	.000
Personal drug use → P1	1.000				
Personal drug use → P2	1.082	.114	9.50	.754	.000
Personal drug use → P3	1.204	.125	9.63	.701	.000
Depression → D1	1.000			.399	
Depression → D2	2.830	.654	4.34	.721	.000

Note: Coefficients with a value of 1.000 were fixed to permit identification of the model. Respect was indexed by two composite scores obtained by averaging items referring to respect between teachers and students, students and teachers, and students with each other (R1) and rules being clear and teachers knowing how to deal with problems (R2). Social belonging was indexed with items referring to how often students felt welcome and comfortable (B1), close to other students (B2), and happy at school (B3). Risk behaviors were indexed by use of cigarettes (F1, S1, P1), alcohol (F2, S2, P2), and marijuana (F3, S3, P3). The model also included correlations between errors in each friend, school, and personal risk perception item

Table 4 Regression coefficients for relations between factors of model in Fig. 1

Path	Estimate	Standard error	Critical ratio	Standardized estimate	Probability
Teacher support → respectful climate	.379	.043	8.85	.523	.000
Teacher regard → respectful climate	.206	.044	4.72	.227	.000
Teacher regard → friend drug use	-.264	.085	3.11	-.181	.002
Respectful climate → friend drug use	-.199	.102	-1.96	-.124	.050
Teacher support → social belonging	.202	.051	3.98	.273	.000
Respectful climate → school drug use norms	-.392	.090	-4.38	-.339	.000
Friend drug use → school drug use norms	.280	.044	6.37	.387	.000
Respectful climate → social belonging	.407	.081	5.04	.399	.000
Respectful climate → depression	-.062	.021	-2.93	-.314	.003
Friend drug use → depression	.023	.009	2.47	.186	.013
Social belonging → depression	-.041	.019	-2.13	-.213	.034
Social belonging → school drug use norms	.155	.087	1.77	.136	.076
Friend drug use → Personal drug use	.252	.036	7.07	.533	.000
School drug use norms → personal drug use	.093	.041	2.29	.142	.022

Note: The model also included a correlation between depression and personal drug use ($r = .0$) that was not significant

Consistent with hypothesis 4, although teacher regard was directly and inversely related to friend drug use, respectful climate was also inversely related to friend drug

use, indicating that the relation between teacher regard and friend drug use was partially mediated by school climate. This finding supports the theoretical assumption that

teacher regard helps to create a climate of respectful interpersonal relations that discourages attraction to risk-taking peers. In further regard to hypothesis 4, respect was also independently and inversely related to school drug use norms, and both friend drug use and perceived school drug-use norms were positively related to individual drug use. Thus, as predicted by social control theory and a social developmental-contextual model, adolescents tend to benefit from respectful climates that discourage friendships with drug using peers and produce healthier school drug use norms, both of which are associated with less individual drug use.

It is noteworthy that perceived school norms were related to individual drug use despite controlling for friend drug use. The presence of this relationship verifies an important prediction of the model that school norms can influence individual behavior beyond what is predicted by having drug-using friends. Drug use by friends was also related to depressive symptoms, suggesting that having drug-using friends increases an adolescent's risk for depression. Indeed, the relation between personal drug use and depression was not significant controlling for friend drug use. Despite holding this relationship constant, however, social belonging was still protective for depression.

Social belonging was positively related to perceived school drug use norms, but this relation failed to reach the .05 level of statistical significance. Hence, there was only weak evidence for a relation between this aspect of climate and drug use.

We conducted two additional tests of the model to verify its predictions. First, we allowed each indicator of teacher behavior to directly influence school norms apart from mediation by respect, social belonging and friend drug use. Although this model fit the data better, $\chi^2(2) = 10.30$, $p < .01$, it did so by adding a path from teacher support to school norms (.215). This effect was comparable (.201) to that mediated directly by respect (.523 \times .339 = .176) plus by respect to friend drug use (.523 \times .124 \times .387 = .025). Nevertheless respect fully mediated the effect of teacher regard on school norms, and the rest of the model's estimates remained essentially unchanged. Hence, respect mediated all of the effects of teacher regard and nearly half of teacher support on school norms.

In a second test of the model, we examined the prediction that both respect and belonging had no relationship with individual drug use apart from mediation by school norms. To test the prediction, we included paths from respect and belonging to personal drug use. However, the model's fit did not improve, $\chi^2(2) = 0.87$, $p > .15$, indicating that these paths were indeed not needed to explain the data.

In addition to specific goodness of fit tests, it also noteworthy that the model explained large proportions of

the variation in the school norms (71%) and personal risk behavior (89%) factors. These high proportions of explained variation indicate that climate and friend behavior are highly related to perceived norms of school behavior and that friend behavior and school norms combine to explain an even higher proportion of personal risk behavior. Hence, the data were supportive of the hypothesis that teacher behavior that values students' needs and perspectives can create a respectful school climate that promotes healthy behavior by reducing risk taking norms while also fostering better mental health.

Discussion

This research demonstrates that high school students who have teachers who are seen as supportive and sensitive to their needs are more likely to experience favorable climates of respect and to feel a sense of social belonging in their school. In addition, consistent with social control theory (Hirschi 1969) and a developmental-contextual model of social perspective coordination (LaRusso and Selman 2003; LaRusso and Selman under review, Selman 2003), we show for the first time that climates of respect in high schools are related to fewer friendships with risky peers and stronger perceptions of healthy school norms that work to reduce individual risk taking in the form of drug use. Furthermore, climates of respect in combination with stronger social belonging are related to less experience of depressive symptoms. Hence, the results support the claim that high schools that promote respect in relations between students and adults are more likely to engender healthy norms of behavior and better mental health than schools that focus on control of behavior without regard for student needs and perspectives.

The findings also indicate that not all aspects of students' perceptions and experiences of school have the same relations with risk behavior norms and health outcomes. When schools were seen as having respectful climates, adolescents were more likely to report lower rates of school drug use and less likely to report depressive symptoms, such as hopelessness and suicidal ideation. Adolescents who reported greater social belonging were also less likely to experience mental health problems but were no more likely to report lower rates of school drug use, suggesting that promoting a sense of social belonging would not be particularly effective in reducing unhealthy school drug use norms while building respectful climate would. This finding supports the social developmental-contextual hypothesis that adolescents thrive best in social climates in which they can experience reciprocity and respect congruent with their own developing social competence (LaRusso 2004; LaRusso and Selman 2003) rather than

only feel comfortable and close to others. However, schools that can encourage both respect and belonging will clearly create healthier environments for students than those that only succeed with one or the other.

The findings from this study also reinforce the idea that the way teachers, as well as other school authority figures, relate to students and respond to their problems can be a powerful factor in producing a favorable school climate for adolescents. Other researchers have pointed to the importance of teachers and counselors for promoting mutual respect in the classroom, particularly beginning in early adolescence (Patrick et al. 2002; Ryan and Patrick 2001; Welsh 2001). We argue that mutual respect is important for all adolescents because of their increasing awareness and valuing of reciprocity (LaRusso 2004; Selman 2003), which is a central feature of respect in relationships (Cook-Sather 2002; Frei and Shaver 2002; Jones 2002).

Consistent with other research (Gottfredson et al. 2005), we find that favorable school climates are seen as having clear norms of behavior and adults who have the skills to handle problems in the school. These characteristics are often attributed to the firm enforcement of discipline that is assumed to reduce disorder by making the rules clear and the punishments consistent. However, this study suggests that teachers who actively take student perspectives into account in their treatment of student behavior problems are more likely to create respectful climates and healthy norms of behavior in high schools. Indeed, tests of the SEM revealed that the relation between teacher regard for student perspectives and school drug-use norms was completely mediated by respectful climate.

However, the present research only examined drug use, which is a more prevalent behavioral health problem in high schools than violence and victimization (Romer and McIntosh 2005). It remains for future research to determine whether the cultivation of respect is sufficient to create favorable norms for reducing violence and other forms of delinquency. In addition, although respectful climate completely mediated the relation between teacher regard and school norms, it only accounted for half of the relationship between teacher support and norms. This finding suggests that teacher support either creates favorable norms through other aspects of school climate or that the experience of teacher support is sufficient to produce healthier school norms.

The importance of school norms for risk behavior is consistent with the results of the Monitoring the Future Project, a nationally representative study of health risk behavior. That study found that individual cigarette use, heavy drinking, and marijuana use are more likely when school-level norms reflect approval of substance use (Kumar et al. 2002). Hence, the present results extend this research by showing that respectful school climates and

teacher support can play a role in helping to produce favorable school norms.

Implications for School Policy and Practice

Some have suggested that there is a crisis of respect, particularly in urban high schools that are typically characterized by overcrowding and primarily low income, minority status populations (Hemmings 2003; Lawrence-Lightfoot 2000). This study supports this contention. Both black and Hispanic students reported less respect in their schools. There was also a trend for larger schools to be perceived as less respectful. However, there were no differences in respect, nor perceptions of teacher behavior or social belonging, related to urban versus rural location and neighborhood income, suggesting that U.S. schools, irrespective of location and community income levels, are capable of promoting positive high school climates.

The results of this study have clear implications for risk prevention efforts. Several studies have demonstrated a relationship between adolescent health risks and the social context of schools and a recent meta-analysis of school-based prevention of problem behaviors found that environmentally-focused interventions at the classroom and school levels were particularly successful in reducing risk behaviors (Wilson et al. 2001). Thus, it is critical to identify those aspects of the school environment that have the greatest potential for preventing health risk behavior and decreasing mental health problems in adolescence. This research suggests that one way that schools may help reduce adolescent health risks is to build climates of respect, which is done, at least in part, by providing the professional development of caring teachers and counselors who are responsive to students' problems and who emphasize reciprocity and the value of their students' perspectives and feelings.

Limitations

There are some limitations to this study that should be noted. Although this research was conducted with a nationally representative sample of adolescents in the United States, analyses are limited to the individual level. It should be noted, however, that the differences we observed in school climates and risk taking norms are consistent with other studies that used schools as the unit of analysis (e.g., Gottfredson et al. 2005). Hence, the results are likely to reflect valid variation in schools as well as individuals. Nevertheless, future research on the social context of schools and students' risk behavior should include a random sample of schools that would allow

analysis at both the individual (i.e., student) and setting (i.e., school) level. Additional studies that examine components of school climate and adolescent health risks at multiple points in time would also strengthen conclusions about causality. Lastly, further research should illuminate the barriers to building respectful school atmospheres. This study has identified teacher behaviors that help build respectful climates; however, it is also important to understand what obstructs respect in schools. We also need to better understand variations in perceived respect among adolescents from different backgrounds, including, for instance, why in this study female, black, and Hispanic students perceived significantly less respect in their schools. Studying the variations in how different adolescents experience and interpret respect in schools will be an important part of identifying barriers to its promotion.

Conclusions

We believe that the findings of this study make a significant contribution to our understanding of school climate's relationship to healthy adolescent development. While previous research has identified relationships between teachers and students and among students themselves as an important part of school climate, most of this research refers broadly to close, supportive relationships and does not differentiate features of healthy relationships for children from features of healthy relationships for adolescents. This study supports our hypothesis that respect is a key ingredient in school relationships that support healthy adolescent development. In addition, few studies have identified mechanisms for building positive school climates. This study points to specific teacher behaviors toward students that serve to promote a respectful school climate: providing support and help when students need it and valuing adolescents' perspectives, decision-making capabilities, and contributions to solving problems in school. Lastly, this study demonstrates that research on school climate as a context for promoting successful adolescent outcomes can benefit from strong theory. In this case, by combining social developmental-contextual theory with social control theory, a complex ecological model that examines specific proximal processes is produced (Bronfenbrenner and Morris 1998). In particular, this model suggests that specific types of interactions with teachers contribute to adolescents' experiences of respect in school and that respectful school climates reduce drug use by promoting healthier school norms. Like most proximal contexts that shape adolescent development, schools are complex settings. By better understanding the specific processes and practices that define and influence school climate and connect it with developmental outcomes, we

can be more precise in designing interventions, practices, and policies to create school settings that help prevent adolescent health risks.

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