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RESEARCH ARTICLE

Suicide Risk and Resiliency Factors Among Hispanic Teens in New Mexico: Schools Can Make a Difference

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ABSTRACT

BACKGROUND: Youth suicide is a serious public health problem in the United States. School environments, and the attention of school adults, are promising but minimally studied avenues for promoting mental health among students.

METHODS: The 2013 New Mexico Youth Risk and Resiliency Survey data were analyzed to identify ways in which the school environment influences suicide attempts in a sample of Hispanic students. Factors examined were: relationships with school adults, speaking a language other than English at home, being born outside the United States and not having enough to eat. Odds ratios were used to measure relationships.

RESULTS: Factors influencing suicide attempt were similar for boys and girls. The odds of suicide attempt declined by approximately one third as measures of positive relationships with school adults increased. Post-high school education plans also were protective. Being born outside the United States and not having enough to eat increased the odds of past-year suicide attempt. Speaking a language other than English at home was a weak risk factor for suicide attempt only among Hispanic girls.

CONCLUSIONS: Teachers and other school adults can decrease suicide risk for Hispanic teens by forming supportive relationships with students. Special consideration should be given to providing free breakfast in schools.

Keywords: suicide; Hispanic; Youth Risk Behavior Survey; resilience; protective factors; New Mexico.

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Teachers and other school staff are in a unique position to intervene or provide assistance to students experiencing suicidal ideation.[1] Studies, such as the National Longitudinal Study of Adolescent Health, indicate that a sense of school connectedness is protective with respect to suicide attempts.[2-4] Support by school adults seems to more effectively protect against suicide than peer support alone.[5] Although connectedness to adults in the school environment might have a smaller effect than connectedness with family,[6,7] it is potentially easier to enact suicide interventions in school than in private homes. School-based suicide intervention programs such as Signs of Suicide (SOS) and Saving and Empowering Young Lives in Europe (SEYLE) appear promising, but the overall effectiveness of such programs is not yet well-established.[8-11]

In New Mexico, the 2015 suicide death rate among 13- to 19-year-olds (15.5/100,000) was over 90% higher than the national rate for this group (8.1/100,000).[12] A suicide attempt is a powerful predictor of later suicide death among adolescents.[13,14] Youth suicide *attempt* rates in the United States can be tracked using the Youth Risk Behavior Survey (YRBS).[15] In 2015, the overall youth suicide attempt rate reported in the YRBS was 8.6%, while the rate

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among Hispanic youth was 11.6%.[16] In New Mexico, Hispanic people make up approximately half of the population.[17]

Studies examining behavioral and cultural factors associated with suicide attempts[18-22] by Hispanic youth provide conflicting results. Being born outside the United States appears protective against suicide attempt for both sexes.[23] However, this effect has been shown to decrease over time,[24] and does not hold for Mexican immigrants who came to the United States before age 13 years.[25] Additionally, immigration stress has been shown to be a suicide risk factor for Latina youth.[21]

The relationship between language spoken at home and suicide risk is unclear. One study found speaking English at home to be a suicide attempt risk factor for Hispanics,[26] while another found speaking a language *other* than English at home to be a risk factor.[27] Acculturation gap—differences in level of acculturation between parents and their children[28]—has been posited to affect adolescent behavior.[29-31] Studies have pointed to acculturation gap as a risk factor for Latino adolescent behavioral problems including suicide and self-harm behavior, particularly among girls.[21,26,33,34]

Food insecurity is associated with suicidal ideation in adolescents,[35] independent of a family's economic status.[36] New Mexico has the second highest rate of child hunger in the United States.[37] Nationally, Hispanics are more likely than their Anglo counterparts to experience food insecurity.[32]

Teachers or other school staff may be aware of students' home environments and the social and cultural circumstances in which they live, including language spoken at home and access to food. Being cognizant of these circumstances may allow for effective suicide intervention. Whereas this approach is not currently the focus of existing *school-based* suicide prevention programs, a pilot study partnering academic researchers with community leaders in low income Latino neighborhoods demonstrated the potential benefits of culturally aware training and intervention for suicide prevention.[38]

In addition to the factors mentioned above, sex is strongly associated with suicide attempt risk.[4,39] Hispanic adolescent girls have a higher rate of suicide attempt than non-Hispanic adolescents or Hispanic boys.[40] The reasons for this are unclear. Studies have found that for girls, feelings of hopelessness,[41] smoking, and fighting[42] were associated with making a suicide plan or attempt. In boys, keeping to themselves[41] and fighting[42] were associated with suicide attempt. Latinos, but not Latinas, with higher school engagement have a greater likelihood of seeking assistance when suicidal.[33] Stress due to family member drug use is associated with suicidal thoughts in female, but not male Hispanic adolescents.[21] In another study on Latino boys, personal drug use, being the victim of abuse, and maternal alcohol use disorder were risk factors for suicidal ideation.[43]

The relationship between sex and risk and resilience factors such as school-based support, language spoken at home, nativity, and food insecurity is uncertain. Given the sharp sex differences in suicide attempt prevalence among Hispanic adolescents and the large Hispanic population in New Mexico, further research is warranted.

The purpose of this study was to examine suicide attempt in the context of risk and protective factors that could be addressed by school-based interventions. We hypothesized an ordinal relationship between the school-based protective factors described below and the odds of suicide attempt. We additionally hypothesized that the odds of suicide attempt would be higher among students born outside of the United States, those speaking a language other than English at home, and those not having enough to eat. We measured these relationships separately for male and female students, hypothesizing that the effect size of each factor would vary by sex.

METHODS

Participants

Study participants were students who identified themselves as Hispanic on the 2013 high school version of the New Mexico Youth Risk and Resiliency Survey (NM-YRRS) and who provided information about whether they had attempted suicide in the past year. The 2013 NM-YRRS sample included 19,080 students in 136 high schools. The overall response rate was 71.5%.

For this study, Hispanic ethnicity was defined based on 2 questions. Individuals answering ''Hispanic/Latino'' to the question ''Which of these groups best describes you (select only one response)?'' were identified as Hispanic, as were individuals who did not answer the ''best describes you'' question but said ''yes'' to ''Are you Hispanic or Latino?'' Of 9147 Hispanic students who completed the survey, 7645 (83.6%) responded to the question about suicide attempts. Four students did not answer the question about sex, leaving 7641 students in our study.

Instrumentation

The US Centers for Disease Control and Prevention (CDC) administers the YRBS biennially across the United States at participating public high schools. The YRBS measures behaviors that are associated with the most common causes of injury and death among US youth. Participating states may modify the national YRBS survey. New Mexico's version of the 2013 YRBS, the Youth Risk and *Resiliency* Survey (NM-YRRS),

included several questions measuring resilience that are not included in the standard survey.

The outcome variable, past-year suicide attempts, was based on the question ''During the past 12 months, how many times did you actually attempt suicide?'' (0 times; 1 time; 2 or 3 times; 4 or 5 times; 6 or more times). The variable was recoded as binary (0 attempts; 1 or more attempts).

School-based protective factors were measured by the statements: ''At my school there is a teacher or other adult who listens to me'' and ''At my school there is a teacher or other adult who cares.'' In addition, we considered the statement ''After high school I plan to go to college or some other school.'' For each of these statements, students were asked ''How true do you feel the following statements are for you?'' Responses were measured on a Likert scale that included ''not true at all,'' ''a little true,'' ''pretty much true,'' and ''very much true.''

Possible risk factors were measured using the following questions ''How often do you speak a language other than English at home?'' (never; less than half the time; about half the time; more than half of the time but not all of the time, all of the time), ''Were you born in the USA?'' (yes, no), and ''Do you have enough food to eat, sometimes not enough to eat or often not enough to eat?'' (enough food to eat; sometimes not enough to eat; often not enough to eat). Age and school grades were included as control variables. School grades were measured by the question, ''During the past 12 months, how would you describe your grades in school?'' (mostly A's; mostly B's; mostly C's; mostly D's; mostly F's). The question was reverse-coded such that increasing values represented better grades.

Procedure

Participation in the survey was anonymous and voluntary, and took place during class time. Detailed methods about the national YRBS administration have been published elsewhere.[15] In New Mexico, schools were randomly selected using PCSample[15] software, designed for two-stage cluster sampling, with sample size varying from year to year depending on estimated response rate and number of students currently enrolled in high school.

Data Analysis

With the exception of the question asking if students were born outside of the United States, all questions regarding protective and risk factors had 3 or more possible ordinal responses. Sex differences in the distribution of predictor variables were tested using chi-square analysis. The prevalence of suicide attempts was calculated for each level of the predictor variables. Logistic regression was used to test hypotheses based on the bivariate outcome variable (suicide attempt—0 vs 1 or more attempts) and for multivariate modeling.

Multivariate models were constructed as follows: initial models included all hypothesized protective and risk variables, plus grades in school and age as control variables. The initial model was evaluated for significance using p-values for each variable and the log likelihood ratio for the entire model. The log likelihood ratio was used to evaluate the fit of each model. At each step, the single variable with the highest p-value was removed and the log likelihood ratio re-evaluated to determine whether the model fit had improved. In addition, parameter estimates for each remaining variable were examined. If a parameter estimate changed direction (odds ratio [OR] <1 vs >1) or the log likelihood ratio declined significantly, the variable most recently removed was replaced. If 2 variables had approximately equal non-significant values, each was individually removed, and the model's log likelihood ratio examined. Whichever model had the higher log likelihood ratio was then used for the next step. The model was considered ''final'' when all remaining variables were either significant or could not be removed without significantly decreasing the log likelihood ratio.

All analyses were stratified by sex. Unweighted data were analyzed using Stata™ (College Station, TX) version 14.1.[44] A Type I error rate of .05 was used to determine significance.

RESULTS

The percentage of Hispanic high school students who reported one or more past-year suicide attempts was significantly higher for girls (11.5%) than for boys (7.9%; $p = .0001$; Table 1). The percentage of students reporting each level of protective and risk factor is presented in Table 1. Girls reported higher levels of all school-related protective factors than boys. Hispanic girls were significantly less likely than boys to select ''not true at all'' when asked whether they had a teacher or other adult at school who listens, and also for teachers who believe they will be a success, and more likely to indicate plans to attend college or other school after high school. Only one risk factor was distributed differently among female and male students. When asked how often a language other than English was spoken at home, boys were more likely to say ''never'' than girls.

Nearly all school-related protective variables were associated with suicide attempt in a dose-response pattern. For example, suicide attempt rates declined consistently among both girls and boys with each increasing level of agreement with the statement: ''At my school, there is a teacher or other adult who listens to me when I have something to say'' (Table 2). ORs were similar between male and female students.

Table 1. **Prevalence of Suicide Attempt, and Factors Hypothesized to Be Related to Suicide Attempt Resilience and Risk, by Sex, 2013 NM-YRRS**

	Prevalence of effect levels among girls (N = 4054) (%)	Prevalence of effect levels among boys (N = 3587) (%)	p-Value
Attempted suicide one or more times in past 12 months			
No	88.50	92.10	.0001
Yes	11.50	7.90	
	100.00	100.00	
Teacher/school adult listens			
Not true at all	9.70	12.00	.005
A little true	21.30	19.30	
Pretty much true	32.50	32.80	
Very much true	36.50	36.00	
	100.00	100.00	
Teacher/adult believes success			
Not true at all	6.20	10.20	.0001
A little true	16.10	16.50	
Pretty much true	30.20	30.20	
Very much true	47.40	43.20	
	100.00	100.00	
College, other school after high school			
Not true at all	3.60	7.60	.0001
A little true	6.00	10.50	
Pretty much true	13.30	19.20	
Very much true	77.10	62.80	
	100.00	100.00	
Speak language other than English at home			
Never	34.70	38.80	.0001
Less than half the time	26.80	23.10	
About half the time	12.60	11.70	
More than half the time	9.70	8.40	
All the time	16.20	18.00	
	100.00	100.00	
Born **outside** United States			
No	88.90	88.00	.22
Yes	11.10	12.00	
	100.00	100.00	
Food			
Enough food to eat	87.00	87.00	.22
Sometimes not enough to eat	10.80	10.40	
Often not enough to eat	2.20	2.60	
	100.00	100.00	

NM-YRRS, New Mexico Youth Risk and Resiliency Survey.

Controlling for age and grades in the bivariate analyses changed ORs very slightly and so are not reported.

The observed relationship between potential risk factors and the odds of suicide was also generally as hypothesized (Table 2). Girls born outside the United States had nearly twice the odds of past-year suicide attempt as those born in the United States (OR = 1.94, 95% confidence interval [CI] 1.48, 2.52). The effect was similar for male students (OR = 2.26, 95% CI = 1.65, 3.10). The effect of not having enough to eat was greater for boys than girls, but for both sexes the odds of a past-year suicide attempt for those reporting ''sometimes not enough to eat'' was more than twice those who reported having ''enough food to eat.'' Approximately one third of female (33.3%) and male (36.8%) students who reported ''often'' not having enough food to eat reported a suicide attempt in the preceding 12 months.

The relationship between suicide and language spoken at home was not distributed in the hypothesized dose-response pattern. While increasing levels of non-English spoken at home were, in general, associated with a small increase in the odds of suicide attempt for girls in this study, this was not true for boys. Among girls, suicide prevalence was highest among those who reported speaking a language other than English ''all the time,'' while among boys, suicide attempt prevalence varied little in relationship to language spoken at home.

The results of multivariate modeling are shown in Table 3. Among girls, the odds of a past-year suicide attempt were negatively associated with having a

Table 2. **Odds Ratios of Suicide Attempt for Ordinal Levels of Hypothesized Protective and Risk Factors, Stratified by Sex, Among New Mexico Hispanic Adolescents, 2013 NM-YRRS**

Hypothesized protective factors	% of girls attempting suicide	OR	95% CI	p-Value	% of boys attempting suicide	OR	95% CI	p-Value
Teacher/school adult listens		.69	.63, .76	<.001		.67	.59, .75	<.001
Not true at all	18.20				15.00			
A little true	16.90				10.10			
Pretty much true	10.30				6.20			
Very much true	7.80				5.20			
Teacher/adult believes success		.67	.61, .74	< .001		.67	.60, .76	<.001
Not true at all	20.50				16.20			
A little true	17.70				10.60			
Pretty much true	11.80				6.40			
Very much true	8.00				5.60			
College, other school after HS		.61	.55, .68	<.001		.62	.56, .70	<.001
Not true at all	22.10				17.10			
A little true	26.00				14.70			
Pretty much true	17.10				7.90			
Very much true	8.80				5.30			
Hypothesized risk factors								
Speak language other than English at home		1.14	1.07, 1.22	<.001		1.03	.95, 1.12	.46
Never	9.70				7.20			
Less than half the time	10.40				8.50			
About half the time	12.90				6.40			
More than half the time	12.50				8.80			
All the time	15.60				8.20			
Born outside United States		1.94	1.48, 2.52	<.001		2.26	1.65, 3.10	<.001
No	10.60				6.80			
Yes	18.60				14.10			
Food		2.42	2.03, 2.90	<.001		3.24	2.65, 4.00	<.001
Enough food to eat	9.60				5.60			
Sometimes not enough to eat	22.90				17.50			
Often not enough to eat	33.30				36.80			

95% CI, confidence interval; NM-YRRS, New Mexico Youth Risk and Resiliency Survey; OR, odds ratio.

teacher who believed in their success, having plans for college or other education after high school, and increasing average grades in school. All 3 risk factors—speaking a language other than English at home, being born outside the United States, and not having enough to eat—remained significant in the final model for girls. Among boys, the ultimate model included 3 protective factors: having a teacher who listened to them, plans for post-high school education, and good grades. Risk variables for suicide attempt in the final model for boys included being born outside the United States and not having enough to eat.

Table 3. **Multivariate Model for the Odds of Suicide Attempt in the Past Year Among New Mexico Hispanic Adolescents, 2013 NM-YRRS**

	Girls		Boys	
	OR	95% CI	OR	95% CI
Protective factors				
Teacher/school adult listens			.81	(.70, .94)
Teacher/school adult believes success	.84	(.74, .95)		
College, other school after HS	.74	(.65, .84)	.79	(.69, .92)
Grades (control variable)	.74	(.66, .83)	.74	(.64, .86)
Risk factors				
Speak language other than English at home	1.09	(1.01, 1.18)		
Born outside United States	1.55	(1.12, 2.13)	1.66	(1.15, 2.39)
Not enough to eat	2.11	(1.72, 2.58)	2.78	(2.22, 3.48)

95% CI, confidence interval; NM-YRRS, New Mexico Youth Risk and Resiliency Survey; OR, odds ratio.

DISCUSSION

Our study offers a sex-specific picture of suicide resilience and risk among Hispanic adolescents. Positive relationships with adults at school are strongly correlated with reduced odds of suicide attempt, and teachers and other adults need to know how these relationships impact students. School adults are also likely to be aware of the risk factors identified above. This knowledge can be used to promote school policies designed to address hunger and to provide special attention to students who struggle with English language competency or those with low grades. Whereas New Mexico has a unique cultural climate and challenges specific to the state, results

may be generalizable to other Hispanic adolescents in the United States.

Connection With Teachers and Other School Adults

Our results suggest a dose-response effect between suicide and connection with teachers and other school adults. Previous research suggests that the association between suicide attempt and school engagement differs by sex,[3,4,45] but our study showed only slight variations in the effect of positive adult relationships on female and male students. In the multivariate model in our study, a school adult believing they would be successful was protective only for girls and a school adult listening was protective only for boys. As motivation to succeed in school may be protective in general, even for adolescents at high risk of suicide attempt,[46] it is important for teachers and school adults to remain engaged with all students and encourage them to succeed in school and after graduation.

Overall, students are more likely to seek help for suicidal ideation if they feel supported by adults at school and perceive that the person they disclose to will take them seriously.[47] Obtaining help may be particularly important for Hispanic students with risk factors such as those identified in our study. Poverty and race/ethnicity have been shown to influence whether students seek and receive help for mental health problems.[48,49] In practice, teachers rarely ask students if they are experiencing suicidal ideation or have made a plan to commit suicide, but when they have training to do so, students in danger are more likely to be referred to appropriate resources and receive help.[50] Training school staff to recognize and respond to suicidal ideation and provide appropriate intervention has the potential to save students' lives.

College Plans

Post-graduation plans for college or other education affected male and female students differently. Among boys, increasing certainty of post-graduation school plans was negatively associated with suicide attempt in a dose-response relationship. In contrast, the highest prevalence of suicide attempt (25%) was for girls who said: ''a little true'' to having college or other education plans after high school, suggesting uncertainty about the future is a risk factor for girls. For both sexes, future education plans were most protective for those who were ''very much'' sure about these plans. The relationship between post-graduation plans and suicide attempt is likely indirect. Students who receive social support for their post-secondary school goals are more engaged in career planning and more certain about future career goals.[51] Quality secondary school education, access to career planning, and advisement resources are important to Latino parents, as they improve children's chances of achieving lifetime success.[52] For Latinas, limited socioeconomic opportunities have been linked to pregnancy at a young age, which can derail or postpone career plans.[53] Having post-high school education plans, and adults with whom to discuss such goals, may help adolescents tolerate periods of suicidal ideation by focusing on the possibility of a positive outcome post-graduation.

Risk Factors

Being born outside the United States was a risk factor for both girls and boys, although the reason for this is unclear. Moving to the United States as a child may be a marker of limited socioeconomic opportunities and poorer health outcomes. Among Hispanic children whose families experience persistent poverty, immigrant children are more likely than their US-born Hispanic counterparts to experience poor health in early childhood.[30,31]

Speaking a language other than English at home was a less clear risk factor for suicide attempt than being born outside of the United States. Whether the increased risk of suicide attempt for students born in another country is related to acculturation gap, to socioeconomic status or food insecurity, or to other unidentified factors is unknown. Overall, more research is needed to understand the complex interaction of language, nativity, and risk of suicide attempt for Hispanic students.

Not having enough to eat had the largest effect on suicide risk for both sexes. Students who qualify for free school lunch may be an appropriate group to target for screening for depression and suicidal ideation. Experiencing poverty is known to be associated with increased risk of adolescent suicide attempt,[54] and food insecurity and poverty have been associated with psychological distress in Hispanic adults.[55] Free school breakfast programs have been implemented in a number of school districts and seem to work best when free breakfast is provided to all students, regardless of income level, with lunch free to those who demonstrate need.[56] School lunch programs have also been shown to improve English proficiency for grade school English as a Second Language students.[57] Adopting a district-wide, K-12 policy of free breakfast, and free lunch for students who qualify, can mitigate 2 of the 3 factors shown to increase suicide risk in our study.

Limitations

This study is based on self-reported, cross-sectional data. Students may elect to skip questions when completing the survey, so the sample size was limited by the response rate to questions about suicide attempt, race, and individual protective and risk factors. Also, the relationship observed between suicide and the studied protective and risk factors is associative and may be influenced by factors not measured by the survey.

The survey question used to determine student sex asked: ''What is your sex?'' with only ''male'' and ''female'' offered as possible answers. Lacking an option that allows students to indicate they are transgendered, gender fluid or unsure potentially omits from our study a population known to be at increased suicide risk of suicide attempt[58] and self-harm behaviors.[59]

The term ''Hispanic'' encompasses people of many different countries of origin and cultural backgrounds. There may be important within-group differences in risk and protective factors that are missed when considering all Hispanic students together.

Some important adolescent groups may be missed by the survey, including students who have died by suicide, a group likely to include more boys.[12] In addition, students who are undocumented immigrants may have been reluctant to complete a survey that asked questions about whether they were born in the United States. Conclusions from the study cannot necessarily be extended to youth who are homeschooled or who have dropped out of school. Students absent on the day of the study and those who elected not to participate also would not have been included in the sample. Our results reflect only the survey participants, and may not represent New Mexican adolescents in general.

The school support question did not specifically ask which type of school adult students felt supported by. Whereas we know generally that support from school adults makes a difference for students, it is not possible to differentiate the effects of support from different types of staff. Also, students who do not feel that school adults listen to them or think they will be successful may have poor relationships with adults in their family as well. Previous research suggests tumultuous relationships with parents are a suicide risk factor Hispanic youth.[3,26] Factors such as exposure to illicit drugs or behavioral disorders may increase the risk of conflict between adolescents and adults in multiple settings.

IMPLICATIONS FOR SCHOOL HEALTH

Interventions focusing on positive relationships with adults and healthy nutrition can be integrated into daily activities at schools as a means of primary prevention of suicidal behaviors. These can be combined with effective school-based programs specifically focused on suicide prevention[8,9] to promote health in a place where adolescents spend much of their time. The results of our study lead to several suggestions specific to the school environment:

Training

How teachers communicate impacts students' academic success.[60,61] Teachers and other school staff trained in active listening and helping students feel successful can benefit students in both well-being and scholarly achievements. Policymakers also need to be aware that students who feel successful and have post-graduation plans for education are less likely to attempt suicide. The presence of Teachers' Aides in classrooms increases opportunities for listening and supporting students and can involve parents and community adults, expanding the cadre of adults who understand the role of educational success in student mental health.

Promoting college and other post-high school plans can be a focus of teachers, parents, other students, and other adults and may help reduce suicidal behaviors.[62] College cooperative programs show promise in engaging high school students and improving academic success.[63] School-based health center personnel can also promote mental health by awareness of the role of adult relationships, future plans, and suicidal behaviors.

Teachers and other school staff also need to be aware of the role of food insecurity and being born outside the United States as risk factors for suicide attempt. The effect size of both of these risk factors was attenuated for girls and boys who felt supported by teachers and who felt certain about their post-high school education plans. Awareness by teachers, parents, policy makers, and other school staff will promote buy-in for a school culture focused on students' belief in their current and future success as ways to reduce the impact of risk factors for suicide attempt.

Policy

Teachers are tasked with numerous responsibilities beyond their roles as didactic educators. It is not reasonable to ask teachers to engage in training and curricula changes focused on students feeling successful without suggesting a reduction of other responsibilities. Standardized testing, while useful in monitoring trends, takes substantial time and commitment by teachers and other school staff. Reducing the number of standardized tests and ensuring that tests are valid for the students being tested will give teachers more time to attend to students' well-being and also improve the value of the tests that are conducted.[64] Increasing the numbers of teachers' aides and other classroom volunteers can help by taking on tasks normally done by teachers, including helping students who struggle to find avenues for feeling successful. Policymakers will need to be involved to make such changes to the school environment.

Career Focus

To increase adolescents' confidence in their post-high school plans, students should be encouraged from middle school onward to think of high school as part of

a transition toward adulthood rather than as an end in itself. Annual career fairs could showcase opportunities in further education, careers, and the military. Events of this nature and exposure to recruiters are associated with improvements in students' preparation for post-high school education and career plans.[65-67] Career fairs may be more effective if conducted at times when families can participate. Guidance counselors are also essential to students' future plans, and can promote graduation rates and academic self-efficacy.[68,69]

Other Recommendations

Qualitative research is needed to identify specific ways in which positive relationships with school adults reduce suicidal behavior in adolescents. Focus groups involving youth from varied socioeconomic, cultural, and geographic backgrounds should help to determine ways teachers and other adults can promote student wellness and confidence in their future plans.

The results of this study strongly support efforts to reduce food insecurity among adolescents. New Mexico and other states have benefited from the US Department of Agriculture's School Breakfast Program. New Mexico public schools with high proportions of students eligible for free or reduced-price lunch offer free breakfast to all students in grades K-12. New Mexico's ''Homework Diner'' programs address both scholastic success and child hunger by bringing together parents, children, and teachers to work together on school assignments while enjoying a free dinner. The program has expanded to several other states, but formal evaluation of its effect on academic achievement is needed.

Human Subjects Approval Statement

This study was approved by the Human Research Review Committee of the Human Research Protections Office at the University of New Mexico Health Sciences Center, Study ID 05-261.

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