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Academic Support by Significant Others and Educational Resilience in Mexican-Origin Ninth Grade Students From Intact Families

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This study used dominance analysis to examine the relative importance of ninth grade, Mexican-origin adolescents' perceptions of academic support from significant others (i.e., mothers, fathers, teachers, and friends) in relation to aspects of academic success. Self-report and school record data were collected from 216 Mexican-origin adolescents living in intact families. The results revealed that teachers' academic support was the most salient predictor of academic satisfaction and grade point average for both female and male students. Academic support from the opposite-sex parent explained the most variation in academic motivation. Academic support from friends was least important in explaining academic outcomes. Implications for schools and educators are presented.

Keywords: *academic support; adolescent; significant others; academic success; Mexican origin*

Despite the high educational aspirations many Mexican-origin parents hold for their offspring, the school drop-out risk for Mexican-origin adolescents in the United States is higher than for their peers in other racial or ethnic groups (Kaufman, Kwon, Klein, & Chapman 2000; Pew Hispanic

Center, 2005). Educational risk for Mexican-origin students often results from acculturation or institutional barriers as school systems seek to adapt policies and procedures established for youth of other racial or ethnic backgrounds (Martinez, DeGarmo, & Eddy, 2004). Ninth grade can be a critical period of risk in the academic lives of Mexican American youth as they navigate the transition into high school (Pursley, 2002). Resilience perspectives suggest that by identifying possible interventions in the ecological context, youth may thrive despite such risk.

One area of possible intervention involves strengthening academic support in various ecological contexts (e.g., home, school, peer group) to protect against the educational risk of Mexican-origin, ninth grade youth (Hess, 2000). Yet little is known about which sources of academic support are most important in explaining specific aspects of educational resilience in Mexican-origin youth. On the basis of these ideas, in the present study, we used dominance analyses to test (a) the relative importance of each source of perceived academic support (i.e., mothers, fathers, teachers, and friends) in youth reports of academic motivation, youth reports of satisfaction with academics, and teachers' reports of grades and (b) which source of perceived academic support was the most important in explaining variation in each indicator of academic success.

Theoretical Perspectives on Resilience

Resilience describes positive outcomes in the face of risk (Luthar, Cicchetti, & Becker, 2000). One approach to understanding resilience perspectives is to investigate how a group that is vulnerable to risk shows adaptation in a particular domain (e.g., educational system; Luthar et al., 2000; Olsson, Bond, Burns, Vella-Brodrick, & Sawyer, 2003). Previous research has shown that Mexican-origin, ninth grade students in the United States are *vulnerable to educational risks* compared with the overall population of ninth grade students in United States schools (Pursley, 2002). However, some Mexican-origin, ninth grade students show *educational resilience*, or the ability to overcome the heightened educational risk and show adaptation in the educational context (Hess, 2000; Wayman, 2002). One approach to understanding educational resilience is to identify *protective processes* (i.e., resources) in the students' ecological systems that are associated with increased prospects for educational resilience (i.e., success; Hess, 2000). The relationship between protective processes and resilience often involves examining (a) protective processes as moderators of the relationship

between risk and resilience or (b) the direct role of protective processes in promoting resilience in a group identified as vulnerable to risk in a specific domain (e.g., educational context; Luthar et al., 2000). In the present study, we used the latter approach by examining a group with increased vulnerability to educational risk (i.e., Mexican-origin, ninth grade students) to identify how perceived academic support from mothers, fathers, teachers, and friends is related to aspects of academic success that are associated with educational resilience.

Educational Risks for Mexican-Origin, Ninth Grade Students

The transition to 9th grade is associated with decreased grades, decreased attendance, and increased stressors such as disruptions in friendships, increased teacher expectations, and changes in relationships with parents, to name just a few (Catterall, 1998; Isakson & Jarvis, 1999). The departure of youth, especially Latino youth, from schools in Los Angeles is particularly notable between the 9th and 10th grades (Losen & Wald, 2005). As a group, Mexican-origin adolescents are at increased vulnerability to educational risk during their 1st year in high school. Mexican-origin students often encounter many additional challenges, such as educational systems developed for other ethnic groups, negative stereotypes, discrimination, identity issues, and/or poverty (Crosnoe & Lopez-Gonzalez, 2005; Gillock & Reyes, 1999; Roberts, Roberts, & Chen, 1997; Samaniego & Gonzalez, 1999). Academic underachievement (Kaufman et al., 2000; Pew Hispanic Center, 2005) and increased drop-out risk (Hess, 2000) are more common among Mexican-origin adolescents who "disengage" from or become less focused on the educational process (Donato & Onis, 1994). Crosnoe and Lopez-Gonzales (2005) proposed that early success in secondary-level education sets the stage for further educational resilience in Mexican-origin youth through increased empowerment.

Indicators of Academic Success

Recent studies of academic success involving Mexican-origin, ninth grade students (Fuligni, Witkow, & Garcia, 2005) and Latino high school seniors (Sánchez, Colón, & Esparza, 2005) focused on academic motivation and grades. A strength of the present study is the inclusion of multiple

indicators of academic success. Furthermore, we examined (a) subjective elements of student experiences (i.e., academic motivation and academic satisfaction) and (b) teachers' reports of students' grades (gleaned from school records). By examining various indicators of academic success, the most important sources of perceived academic support can be identified in relation to each aspect of academic success.

One important aspect of academic success is *academic motivation*. A range of conceptualizations examines components of academic motivation, such as intrinsic and extrinsic motivation (Ryan & Deci, 2000) or focusing on how youth combine expectations for success with valuing a particular task or domain (Wigfield & Eccles, 2000). In contrast, in the present study, we used the global concept of academic motivation as adolescents' reports of their cognitive investment (e.g., valuing school or attempting to meet academic responsibilities) and engagement (e.g., exerting effort in educational pursuits) in their educational experiences (Hufton, Elliot, & Illushin, 2002). Academic motivation is highly correlated with other forms of academic success (Dubow, Arnett, Smith, & Ippolito, 2001; Schoon, Parsons, & Sacker, 2004; Wayman, 2002).

A second aspect of academic success is *academic satisfaction*, or the subjective intrinsic gratification students experience through their educational pursuits (Ryan, 2001), which serves as an indicator of school adjustment (Baker, Dilly, Aupperlee, & Patil, 2003). Although limited research is available on academic satisfaction, research involving high school students in Australia has shown that academic satisfaction is positively related to academic achievement and negatively related to disengagement and dropping out of school (Ainley, Foreman, & Sheret, 1991). Using a sample of high school students in the southeastern United States, 22.8% of students reported low levels of academic satisfaction, and girls reported greater academic satisfaction than boys (Huebner, Drane, & Valois, 2000). Ryan (2001) found that urban seventh grade students' (19% were Hispanic) reports of academic satisfaction were positively related to expectations for future academic success; no significant differences emerged on the basis of race or ethnicity. Additional research is needed to provide insights into factors related to the academic satisfaction of Mexican-origin, ninth grade students.

A third aspect of academic success is students' *grade point average*, which provides a more objective measure of students' academic achievement. Previous research has shown that grade point average prior to college is an important factor in explaining academic achievement in college (Jansen & Bruinsma, 2005). Martinez et al. (2004) found that Latino youth with higher grade point averages were less likely to drop out of school.

Given the importance of grade point average as a classic indicator of academic achievement, additional research is needed to investigate how Mexican-origin students' perceptions of factors in the ecological environment relate to grade point average during the 1st year of high school.

Academic Support by Significant Others

Ecological resilience perspectives suggest that Mexican-origin, ninth grade students who perceive protective processes provided by significant others in the family, school, or community show greater adaptation in the educational context (Bryan, 2005; Howard & Johnson, 2000; Reis, Colbert, & Hebert, 2005; Schoon et al., 2004; Stanton-Salazar, 2001). A promising protective process is adolescents' perceptions of *academic support*, which is defined as caring, encouraging, guiding, assisting, or inspiring youth toward current and future educational endeavors (Sands & Plunkett, 2005). Previous research has shown that academic support from significant others (e.g., mothers, fathers, teachers, peers) is related to indicators of academic success in Latino youth (Alfaro, Umaña-Taylor, & Bámaca, 2006; Gonzales & Padilla, 1997; Plunkett & Bámaca-Gómez, 2003; Stanton-Salazar, 2001). Constructivist perspectives on resilience propose that Mexican-origin, ninth grade students must recognize and value academic support from significant others for such support to translate into academic success.

Considerable research supports a positive relationship between academic support from family members and positive academic outcomes (e.g., grades) in Latino youth (Anguiano-Viramontez, 2004; Behnke, Piercy, & Diversi, 2004; Fuligni, 2001; Martinez et al., 2004; Morales, 2000; Rodríguez, 2002). Halgunseth, Ispa, and Rudy (2006) proposed that parenting in Latino families often involves socialization toward the interdependence of family members, as illustrated through key concepts such as (a) familism (*familismo*), or focusing on family as a primary source of connection and support; (b) respect (*respecto*), or emphasizing harmonious relationships involving mutual admiration; and (c) teaching responsibility, the value of interpersonal relationships, and morality (*educación*). Thus, adolescents in Mexican-origin families may place high value on perceived parental academic support. However, because youth may perceive fathers' and mothers' parenting differently (Peterson & Hann, 1999), additional research is needed to specify the relative contribution of mothers' academic support versus fathers' academic support in relation to academic success for Mexican-origin, ninth grade students.

Adolescents' perceptions of academic support from significant others outside the family are also a potential source of educational resilience for Mexican-origin youth (Stanton-Salazar, 2001). A supportive adult within the school system (e.g., a teacher) is an important predictor of educational resilience (Rak & Patterson, 1996; Ungar, 2004; Werner & Smith, 1992). Luthar et al. (2000) noted that academic support from teachers may be especially important to the academic success of youth in families in which parents are unfamiliar with the educational system in the United States or are less able to provide support because of language constraints. A recent study of midwestern Latino 9th and 10th grade students found that adolescents' perceptions of teacher support showed significant positive relationships with girls' and boys' academic motivation (Alfaro et al., 2006). Furthermore, Martinez et al. (2004) found that teacher support was positively associated with grade point average for Latino youth.

Friends are another category of significant others in the ecosystem that may be seen as providing academic support for Mexican-origin adolescents. Much of the research on peers' role in academic achievement focuses on negative factors (Pabon, Rodriguez, & Gurin, 1992). In contrast, studies using resilience perspectives examine positive peer influence that may serve as protective processes that encourage educational resilience in Mexican-origin youth (Dubow et al., 2001; Ryan, 2001). Using self-report data, Ryan (2001) found that students' peer contexts were potential sources of academic resilience. Hence, academic support from friends may translate into Mexican-origin adolescents' academic success.

Consistent with resilience perspectives, in the present study, we examined four sources of academic support as protective processes that may be associated with increased educational resilience. The recent application of dominance analysis to "disentangle" the effects of fathers and mothers on youth outcomes (Stolz, Barber, & Olsen, 2005) provides an approach for disentangling the relative importance of adolescents' perceptions of academic support from mothers, fathers, teachers, and friends. Specifically, dominance analyses can elucidate the relative importance of each perceived source of academic support in relation to each indicator of educational resilience.

Gender Differences

Mexican-origin adolescents' perceptions of academic support from mothers, fathers, teachers, and friends may vary among male and female students. Rodriquez and Morrobel (2004) identified differences in the perceived supportiveness of the family units of immigrant Latino adolescents.

For example, immigrant Latinas demonstrated "a higher threshold and stringent criteria for identifying supportive individuals" (p. 68). Gillock and Reyes (1999) found that Mexican-origin boys had lower academic expectations than girls, possibly because of the differing experiences boys and girls have at school with their teachers and peers. The evidence of possible gender differences in perceptions of support and self-identified academic motivation emphasizes the importance of evaluating the perspectives of male and female adolescents separately.

Foreign-Born Versus Native-Born Youth

Studies have found conflicting findings when examining the academic achievement of native-born versus foreign-born youth. For example, Latino youth born outside the United States had higher drop-out rates than youth born in the United States (National Center for Education Statistics, 2000). Similarly, Zsembik and Llanes (1996) found that foreign born, Mexican-origin youth had higher high school completion rates than second-generation youth. Explanations for these findings with Mexican-origin youth include a lack of English proficiency, a lack of familiarity with the school system, and adjustment to a new culture (Landale, Oropesa, & Llanes, 1998). Yet evidence exists for a "downward assimilation" model whereby later generations fare worse than foreign-born youth. Specifically, research shows that second-generation Latino and Mexican-origin youth have less academic motivation and success than the first generation, possibly because of decreased social support and motivation by parents as well as increased awareness of discrimination, minority status, and low socioeconomic status by the youth (Portes & Rumbaut, 2001; Suárez-Orozco & Suárez-Orozco, 1995). Given the conflicting findings, nativity was examined as a potential control variable in this study.

Method

Procedures and Sample

This study was part of a larger study of culturally diverse high school students. The project investigators secured permission from administrators and teachers at one public high school in Los Angeles to solicit participation in the research project. The school was chosen because it had a large number of Latino students (61%), mostly of Mexican origin. Ninth grade students were selected because the drop-out rate increases dramatically in

ninth grade. According to the California Department of Education (http://dq.cde.ca.gov/dataquest), during the year of data collection (i.e., 2003) the drop-out rate for Latino youth tripled between eighth and ninth grades in California (from 0.9% to 2.9%) and Los Angeles County (from 1.3% to 3.9%). Of the student body at the host school for this study's data collection, none of the Latinos dropped out in eighth grade, but almost 7% dropped out in the ninth grade. Also, Latinos had the highest drop-out rate of any ethnic group in the high school.

A required ninth grade course was selected to ensure a cross-representation of youth from the school. Teachers distributed parent consent forms (in English and Spanish) to the youth to take home. The research team came to the school approximately 1 week later to collect the signed consent forms and to distribute the adolescent assent forms and questionnaires. Approximately 78% of the students returned signed consent and assent forms and participated in the data collection. The self-report surveys were in English. To ensure comprehension, participants were encouraged to ask for help with any words or phrases they did not understand. Also, most of the undergraduate and graduate research assistants were fluent in both English and Spanish. The research assistants walked around the classrooms to increase access by participants who had questions, clarifying words or phrases and answering questions from the participants.

The demographics of the youth who participated in the study closely resembled the demographics of the overall school. For example, 64% of students at the school were Latino, compared with 65% of the participants. Of the Latino participants, 59% were of Mexican origin.

A subsample of 216 adolescents of Mexican-origin youth living in two-parent intact families was used to reduce variation on the basis of country of origin (Umaña-Taylor & Fine, 2001) and/or family structure. Participants were ninth grade students and ranged in age from 13 to 16 years (3.2% were 13 years old, 72.3% were 14 years old, 21.3% were 15 years old, and 3.3% were 16 years old; the mean age was 14.3 years). Approximately 43% of participants were male, and 57% were female. Over half of the participants (65.3%) were born in the United States, with the remainder born in Mexico. Regarding parents, 95.8% of the mothers and 99.0% of the fathers were reported to have been born in Mexico; the remaining parents were reported as having been born in the United States.

Measurement

Measurement involved self-report questionnaires and teachers' reports of grades. The mean, standard deviation, range, and internal consistency

Table 1
Ranges, Means, Standard Deviations, and Scale Reliabilities for Female and Male Subsamples

		Female Adolescents			Male Adolescents		
Variable	Range	Mean	*SD*	α[a]	Mean	*SD*	α[a]
Mothers' academic support	1 through 4	3.58	0.57	.92	3.64	0.43	.91
Fathers' academic support	1 through 4	3.47	0.65	.92	3.52	0.57	.92
Teachers' academic support	1 through 4	3.28	0.65	.89	3.20	0.60	.86
Friends' academic support	1 through 4	2.98	0.68	.89	2.58	0.69	.87
Adolescents' academic motivation	1 through 4	3.15	0.51	.75	3.02	0.56	.82
Adolescents' academic satisfaction	1 through 10	7.76	2.23	—	7.83	1.96	—
Adolescents' grade point average	0 through 4	2.29	0.93	.79	2.19	0.94	.79

Note: All variables are from adolescent self-reports except grade point average (from school records).
a. Cronbach's α values using the present data.

reliability (Cronbach's α) for each measure using the present data are provided in Table 1.

Indicators of academic success. Adolescents' reports of academic motivation were measured using a 5-item scale (Plunkett & Bámaca-Gómez, 2003). Items on the scale were (a) "I try hard in school," (b) "Grades are very important to me," (c) "I usually finish my homework on time," (d) "Education is so important that it's worth it to put up with things about school that I don't like," and (e) "In general, I like school." Participants were asked to respond to each item using a 4-point Likert-type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Mean scores were established by averaging the responses to each item.

Adolescents' reports of satisfaction with academics were measured with a single item that asked participants to rate how satisfied they were with their level of "academic accomplishments (e.g., grades in school)." Response choices ranged from 1 (*not satisfied*) to 10 (*extremely satisfied*).

Teachers' reports of grades were assessed from report cards at the end of the term in which students completed the self-report questionnaire for this study. The school data specialist provided the grades for each of the students' six classes. The grades were averaged to provide a grade point average for each participant using a 5-point scale ranging from 0 (*F*) to 4 (*A*).

Academic support from significant others. The six-item Significant Other Academic Support Scale (Sands & Plunkett, 2005) was used to measure the perceived academic support of significant others (i.e., mothers, fathers, teachers, and teenage friends). Sample items include (a) "This person has helped me do well in school" and (b) "This person cares about my education." Participants were asked to respond to each item four times: once each for mothers, fathers, teachers, and teenage friends. Response choices ranged from 1 (*strongly disagree*) to 4 (*strongly agree*). Mean scores were calculated on the basis of the responses to the six items to create scores for each source of academic support.

Results

Multivariate Analyses of Variance

Before running the dominance analyses, one-way multivariate analyses of variance were conducted to determine whether separate models should be conducted for gender or generation status. No significant differences were found between foreign-born youth and native-born youth on the combined set of academic support measures, $F(4, 211) = 1.30$, $p = .273$, $\eta^2 = .02$, or the combined set of academic outcomes, $F(3, 176) = 0.51$, $p = .676$, $\eta^2 = .01$. Given the lack of significant differences, models were not conducted separately for foreign-born youth and native-born youth. The results revealed that the combined set of academic support measures were significantly different by youth gender, $F(4, 211) = 5.88$, $p = .0002$, $\eta^2 = .10$. However, female and male adolescents did not significantly differ on the combined set of academic outcomes, $F(3, 176) = 1.27$, $p = .287$, $\eta^2 = .02$. Given the significant gender differences on the sets of independent variables, all analyses were conducted separately for male and female adolescents.

Pearson Correlation Coefficients

Pearson correlations indicated that the academic variables were all positively and significantly related: academic motivation and satisfaction with academics ($r = .43$, $p < .001$), academic motivation and grades ($r = .48$, $p < .001$), and satisfaction with academics and grades ($r = .35$, $p < .001$). Next, correlations were conducted to determine the bivariate relationship between each source of perceived academic support and each indicator of educational resilience for female and male adolescents (see Table 2). For both female and male students, academic support from mothers and fathers

Table 2
Zero-Order Correlation Coefficients Between Sources of Academic Support and Mexican American Adolescents' Academic Success

	Academic Motivation		Academic Satisfaction		Grade Point Average	
Source of Academic Support	Girls (n = 124)	Boys (n = 92)	Girls (n = 112)	Boys (n = 88)	Girls (n = 108)	Boys (n = 86)
Mothers	.39***	.42***	.17*	.21*	.08	.17
Fathers	.48***	.21*	.22*	.24*	.08	.10
Teachers	.30***	.28***	.32***	.33***	.28**	.30***
Friends	.15*	.22*	.07	.27**	–.07	.11

*p < .05. **p < .01. ***p < .001.

was significantly and positively associated with adolescent reports of academic motivation and satisfaction with academics. Teacher support was significantly and positively associated with all three indicators of educational resilience (i.e., academic motivation, satisfaction with academics, and grades) for both female and male adolescents. For girls, friend support was positively and significantly associated only with academic motivation. For boys, friend support was positively and significantly associated with academic motivation and academic satisfaction.

Dominance Analyses

Scholars and statisticians often note the limitations of multiple regression analyses in accurately predicting the relative importance of each predictor variable when there are high intercorrelations between the predictors (Azen & Budescu, 2003; Pedhazur, 1997). When multicollinearity exists, multiple regression analyses (including stepwise and hierarchical procedures) can underestimate the importance of some predictors or even reverse the direction of β coefficients (Azen & Budescu, 2003; Johnson, 2000). Additionally, the strength of some predictors can be overestimated. Dominance analysis was developed by Budescu (1993) to overcome these limitations for researchers who are interested in estimating the relative contribution each independent variable makes to variation (i.e., R^2) in a dependent variable. Hence, dominance analysis considers both the unique contribution of a predictor variable and the variable's contribution when combined with other predictor variables in all possible regression subsets (Johnson, 2000). Dominance analysis focuses on the relative weight (or relative importance) of each predictor

Table 3
Dominance Analysis Examining Contributions of Sources of Support on Mexican American Female Adolescents' Academic Motivation

		Source of Additional Contribution			
Subset Model (x)	R^2	Mother	Father	Teacher	Friend
Null and $k = 0$ average	.155	.229	.090	.023	
Mother	.155		.079	.024	.000
Father	.229	.005		.018	.002
Teacher	.090	.089	.157		.006
Friend	.023	.132	.208	.073	
$k = 1$ average		.075	.148	.038	.003
Mother, father	.234			.015	.003
Mother, teacher	.179		.070		.001
Mother, friend	.155		.082	.025	
Father, teacher	.247	.002			.004
Father, friend	.231	.006		.020	
Teacher, friend	.096	.084	.155		
$k = 2$ average		.031	.102	.020	.003
Mother, father, teacher	.249				.004
Mother, father, friend	.237			.016	
Mother, teacher, friend	.180		.073		
Father, teacher, friend	.251	.002			
$k = 3$ average		.002	.073	.016	.004
Mother, father, teacher, friend	.253				
Overall average		.066	.138	.041	.008

variable to the overall model rather than the statistical significance of the β coefficients in traditional multiple regression analyses.

As an illustration in this study, the dominance analysis for the contributions of perceived academic support from mothers, fathers, teachers, and friends to academic motivation is presented in Table 3. The additional contribution of each source of support beyond each subset of sources of support is computed. The averages for each subset (i.e., $k = 1$, $k = 2$, $k = 3$) are averaged to estimate the relative importance (also called relative weights) for each variable. Azen and Budescu (2003) also established a method to determine whether one of the predictor variables completely dominates another variable. Specifically, if the additional contribution of one predictor variable is larger than another variable in each of the subset models, the first variable dominates the second. For instance, in the example in Table 3, the additional contribution of support by fathers is greater than support by

mothers, teachers, and friends in all subset models. Hence, support by fathers completely dominates the other forms of support.

If the additional contribution of one predictor variable is larger for some of the subset models, but not all, complete dominance cannot be established. For example, when comparing the additional contribution of mothers and teachers in Table 3, mixed results are found. Specifically, mothers add .005 to the R^2 value above paternal support, but teachers add .018 above paternal support. But when it comes to additional contributions to R^2 above support by friends, mothers add .132, while teachers add .073. Thus, complete dominance cannot be established between mothers and teachers.

In this study, dominance analyses were used to assess the relative importance (or relative weights; Johnson, 2000) of each source of support in relation to each academic outcome for each gender (Budescu, 1993). In addition, multiple regressions were conducted to examine the amount of variance in each academic outcome that was explained by the sources of academic support. Finally, the dominance analyses were examined to see if one source of support completely dominated the other sources of support for the male and female adolescents' academic outcomes.

As shown in Table 4 and Figure 1, adolescents' reports of sources of academic support accounted for a larger percentage of variance in their academic motivation than satisfaction with academics and grades. An examination of the relative weights indicates that for girls, fathers' support accounted for half of the variance in academic motivation, followed by support from mothers, teachers, and friends. Fathers' support completely dominated the other three sources of support for girls' academic motivation. For boys, mothers' support accounted for more than half of the variance in academic motivation, followed by support from teachers, friends, and fathers. Mothers' support completely dominated the other three sources of academic support for girls' motivation.

For girls' academic satisfaction, teachers' support accounted for most of the variance, followed by support from mothers, fathers, and friends. For grades, teachers' support accounted for most of the variance, followed by support from friends, mothers, and fathers. Teachers' support completely dominated the other sources of support for both academic satisfaction and grades.

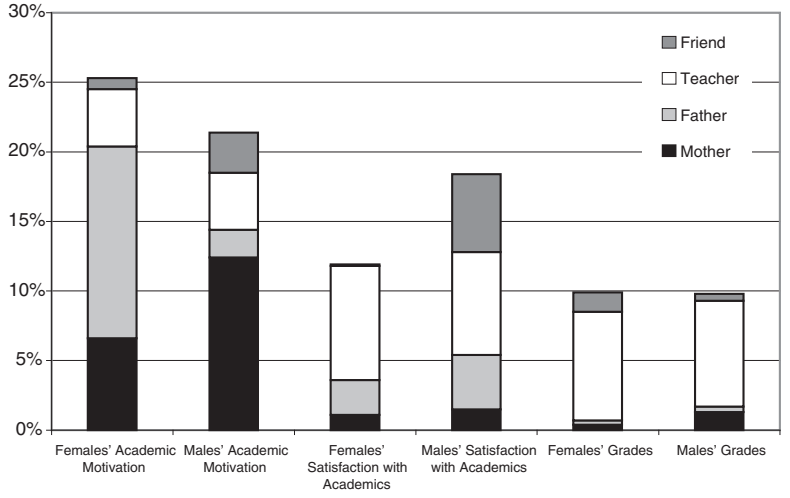
Similarly, for boys, teachers' support completely dominated other sources of support for academic satisfaction and grades. Teachers' support accounted for most of the variance in academic satisfaction, followed by friends, fathers, and mothers. For teachers' reports of grades, teachers' support accounted for most of the variance, followed by support from mothers, fathers, and friends.

Table 4
Summary of Dominance Analyses Establishing Relative Weights for Sources of Academic Support and Mexican American Adolescents' Academic Success

	Academic Motivation		Academic Satisfaction		Grade Point Average	
Source of Academic Support	Girls (n = 124)	Boys (n = 92)	Girls (n = 112)	Boys (n = 88)	Girls (n = 108)	Boys (n = 86)
Mothers	.066	.124[a]	.011	.015	.004	.013
Fathers	.138[a]	.020	.025	.039	.003	.004
Teachers	.041	.041	.082[a]	.074[a]	.078[a]	.076[a]
Friends	.008	.029	.001	.056	.014	.005
Total R^2	.253	.214	.119	.185	.098	.098
F	10.085***	5.095***	3.609**	4.697**	2.797*	2.212

a. Completely dominates other sources of academic support.
*p < .05. **p < .01. ***p < .001.

Figure 1
Relative Contributions of Sources of Academic Support and Mexican American Adolescents' Academic Success



Discussion

In this study, we examined the contribution of Mexican-origin, ninth grade students' perceptions of academic support from significant others (i.e., mothers, fathers, teachers, and friends) to explain variation in indicators of academic success and to determine the most important sources of academic support for each academic indicator using dominance analyses. Youth perceptions of the sources of academic support contributed significantly to positive change in each academic indicator (except boys' grade point average). Fathers' academic support was dominant in explaining variation in girls' academic motivation, whereas mothers' academic support was dominant in explaining variation in boys' academic motivation. Teachers' academic support was dominant in explaining academic satisfaction and grades for both female and male students. These findings provide substantial support for the expectation that adolescents' perceptions of academic support from significant others in the ecological context would explain variation in academic success.

Mothers' and Fathers' Academic Support and Indicators of Academic Success

In the bivariate analyses, adolescents' perceptions of both fathers' and mothers' academic support showed significant positive relationships with adolescent girls' and boys' academic motivation and academic satisfaction. Consistent with existing scholarship on Mexican-origin youth that emphasizes familism and nurturing parenting, the present research shows adolescent perceptions of parental support may foster academic motivation (Halgunseth, 2004). Thus, adolescents may experience academic support by their parents as representing the value parents place on educational pursuits by the young.

Although research with Mexican-origin families is criticized for placing undue emphasis on gender socialization (Halgunseth, 2004), the current results suggest that the gender of parents may be an important consideration with regard to academic support and academic motivation. Specifically, Mexican-origin, ninth grade students' perceptions of academic support by opposite-sex parents served as the most salient predictor of academic motivation. Thus, girls report greater academic motivation when they perceive their fathers as actively involved in assisting with homework or encouraging academic pursuits. One possibility is that these results reflect girls' perceptions of their fathers' academic support as showing leadership (consistent with patriarchy) and nurturing (consistent with familism) that emphasize

the importance of academic endeavors (Bulcroft, Carmody, & Bulcroft, 1996). In contrast, Mexican-origin mothers may provide conflicting messages to their daughters about the importance of academics when they encourage academic success but also require their daughters to put aside homework to perform household chores or take care of siblings (Smith, 2002). Stanton-Salazar (2001) found that daughters who perceived conflictual relationships with their mothers did not solicit support from their mothers.

Mexican-origin, ninth grade boys reported their mothers' academic support as the most important form of academic support in relation to academic motivation. Because mothers in Mexican-origin families tend to engage in substantial nurturing of children and are held in high esteem by their sons (Halgunseth, 2004), their academic support may be "revered" by their sons as emphasizing academic matters. Thus, Mexican-origin boys who see their mothers as investing time and effort to enhance their academic endeavors may experience higher academic motivation.

Academic support from fathers contributed additional variance (2.5% for girls, 3.9% for boys) to academic satisfaction beyond teacher support. It is possible that Mexican-origin youth look to fathers and mothers to provide different types of academic support. For example, perhaps mothers are more engaged in day-to-day academic support (e.g., monitoring homework), but fathers provide more accolades for success. Further research is needed to examine the unique ways Mexican-origin mothers and fathers provide academic support for their early adolescents.

Adolescents' perceptions of mothers' and fathers' academic support explained little unique variance above teachers' support in grades for female or male students. It appears that perceived academic support from Mexican-origin parents (a) is a better predictor of academic motivation than grades, (b) may not directly translate into grades, and (c) may be indirectly related to grades through adolescents' academic motivation. Additional research is needed to explore these possible indirect relationships.

Because adolescent perceptions of academic support by parents appear to be central to adolescents' academic motivation, schools may benefit from investing in programs that encourage greater collaboration with families in an effort to foster academic success through educating parents (via newsletters, workshops, etc.) about how to encourage academic progress in their youth. Although many Mexican-origin parents feel inadequate to help their students academically (Stanton-Salazar, 2001), teachers can involve parents in the academic process by (a) building relationships with families and (b) creating homework assignments that allow parents with little formal education to help their children (e.g., tracking grocery expenditures, tracing

family descent, interviewing parents about their childhoods). Also, activities that foster a sense of community among the families of Mexican-origin early adolescents may provide opportunities for educators to provide information on the benefits of completing high school and about the educational opportunities for postsecondary education.

Teachers' Academic Support and Indicators of Academic Success

Mexican-origin, ninth grade students' perceptions of teachers' support were found to be the most important source of academic support in explaining variation in academic satisfaction and grade point average. Thus, a crucial protective process appears to be the subjective appraisal of teachers' academic support. The present results provide substantial support for Stanton-Salazar's (2001) position that emotional connections with "key teachers" are important to the process of educational resilience in Mexican American youth. Furthermore, the findings are consistent with a tendency among Latino families to defer to "authorities" for guidance in parts of the ecological system outside the family context (Halgunseth, 2004). Consistent with previous research, the present results show that academic support by teachers is important in promoting academic success in the forms of satisfaction and grade point average (Kao & Tienda, 1998; Prelow & Loukas, 2003).

The finding that adolescent girls' and boys' reports of teachers' academic support dominated the other forms of academic support in relation to teachers' reports of grades merits consideration. First, it is important to recognize that examining how perceptions of teachers' support relates to grades is offered for heuristic purposes, because it is equally possible that the two variables can influence each other. Specifically, when teachers view youth as making better grades, they may respond in more supportive ways. Conversely, as teachers encourage their students, they may make better grades. This same argument might hold true for academic satisfaction. Specifically, students who feel better about their academic accomplishments may see their teachers as providing greater encouragement and support than students who do worse in school. Additional research is needed to investigate the bidirectional nature of factors associated with teacher academic support and Mexican-origin students' academic outcomes.

These findings are consistent with an asset-focused approach to promote Mexican-origin adolescents' educational development (Rodriquez & Morrobel, 2004). Because Mexican-origin adolescents are a rapidly growing population

in school systems, teachers need an understanding of the cultural context and educational risks of Mexican-origin youth. Furthermore, teachers may benefit from continuing education sessions regarding how they can best provide academic support to Mexican-origin youth. Examples of content for such sessions might include learning the culture and/or language of students, creating an inclusive physical environment that includes aspects of Latino students' cultural heritage, using student-focused pedagogy (Fránquiz & del Carmen Salazar, 2004), enhancing school-family-community partnerships (Bryan, 2005), and maintaining positive relations with youth even after they leave their classes (Stanton-Salazar, 2001). Such approaches may help educators approach teaching in ways that include respect, building mutual trust, and nurturing advice, while valuing the backgrounds, culture, and life experiences of students (Fránquiz & del Carmen Salazar, 2004). In turn, as students perceive their teachers' desire to teach with sensitivity to the students' cultural origins, students may invest more in educational experiences and in turn experience greater academic success.

Friends' Academic Support and Indicators of Academic Success

Academic support from friends was significantly correlated to girls' and boys' academic motivation and boys' academic satisfaction. In the dominance analyses, friends accounted for 6% of the unique variance in boys' academic satisfaction and 1% of the unique variance in girls' academic motivation. Although support from teachers and parents was more important in predicting the academic outcomes in this study, the influence of specific friends who serve as significant others should not be discounted, especially for boys. Because we examined only Mexican-origin, ninth grade adolescents in two-parent, intact families, friends may play a more important role in the lives of adolescents from single-parent families or those families that experience marital dissolution. According to Stanton-Salazar (2001), friend support can provide a safety net for many youth during times of crisis or when their families and school are unable to meet their needs. Hence, further research should examine the contributions of parents, teachers, and friends in other family forms.

Because this was a preliminary study examining the relative importance of academic support from mothers, fathers, teachers, and friends, certain methodological limitations merit consideration. First, this was a cross-sectional study using data from ninth grade, Mexican-origin adolescents from intact families attending one school in Los Angeles. Hence, replication

of the study using different samples is recommended. In addition, further research would benefit by using a longitudinal design to examine ninth graders' perceptions of academic support from significant others as they move into the later years of high school. Also, future studies could include other sources of academic support (e.g., siblings, school counselors, extended families) and different indicators of academic success (e.g., standardized test scores). Given the number of analyses, it is possible that one of the multiple regression models could be significant purely by chance. The number of significant findings may also be due to same-informant bias, given that adolescent self-reports were used to measure sources of support, academic motivation, and academic satisfaction (grades were measured from teacher reports). However, the results appear consistent with previous findings that academic support from significant others is related to academic outcomes in Mexican-origin youth.

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