Published in final edited form as:

Fam Relat. 2006 July 1; 55(3): 267–278. doi:10.1111/j.1741-3729.2006.00401.x.

A Culturally Informed Model of Academic Well-Being for Latino Youth: The Importance of Discriminatory Experiences and Social Support*

David S. DeGarmo and

Oregon Social Learning Center, 160 E Avenue, Eugene, OR 97401

Charles R. Martinez Jr

Oregon Social Learning Center, 160 E Avenue, Eugene, OR 97401

Abstract

This study tested a culturally informed model of academic well-being for 278 Latino youth. We examined detrimental effects of discriminatory experiences and protective effects of social support on self-reported academic outcomes. Models specified main and buffering effects of social support and compared contributions of support provided by parents, school, and peers. Data indicated that discrimination was associated with lower academic well-being, social support buffered effects of discrimination on academic well-being, and parental support was most predictive of greater academic well-being. Combined sources of social support were more important than any one source alone. Implications for culturally specified research, preventive interventions, and practitioners are discussed.

Keywords

academic well-being; discrimination; Latino youth; social support; stress process

Academic disparities are well documented for Latino youth and particularly worrisome are rates of school dropout (Gándara, Larson, Rumberger, & Mehan, 1998; Pulido, 1995; Steinberg, Blinde, & Chan, 1984; Steinberg, Dornbusch, & Brown, 1992; Velez, 1989). Correlates of school dropout are poor academic performance and substance use, but reasons for dropout are not clear. Early explanatory perspectives have focused on personal or cultural deficiency (e.g., Spanish language retention). Over the last decade, a body of research has emerged that examines structural barriers such as discriminatory behaviors and institutional practices (Marcías, 1993; Stanton-Salazar, 2001) and the role of acculturative strains and internalized minority status (Rogler, Cortes, & Malgady, 1991; Vega, Khoury, Zimmerman, Gil, & Warheit, 1995). However, among the expansive empirical studies on individual differences and environmental risk factors for academic outcomes such as Grade Point Average (GPA), school dropout, or school satisfaction, there remain very few empirical or quantitative studies on minority adolescents' perceptions of discriminatory experiences (Wong, Eccles, & Sameroff, 2003). This unique stressor may be a principally important and understudied phenomenon for Latino youth.

*Support for the research project and data collection was provided by a grant from the Lane Workforce Partnership, Lane County, Oregon. Support was also provided in part by grants MH46690, Prevention and Behavioral Medicine Research Branch NIMH; HD42115, Demographic and Behavioral Sciences Branch, NICHD; and DA17592, Division of Epidemiology, Services and Prevention Branch, NIDA.

In this study, we advance a model of minority stress and academic adjustment that tests main and buffering effects of social support (Barrera, 1986) and perceived discrimination for Latino youth. The model attends to the relative contribution of support from parents, peers, and schools. Informed by the extant literature, we focus on a within-culture test of a stress and social support process pertinent to youth academic outcomes. Regarding culture, the Latino population of the United States is considerably heterogeneous. However, because many different peoples who come under this term share Spanish as a common heritage language, all groups have shared the status of racial/ethnic minority, with its accompanying prejudice. The majority of national origin subgroups in North America are Chicano or Mexican American, Cubans, and Puerto Ricans (Velez, 1989). Although we do not assume uniform history or culture when using Latino, our study and analyses focus on shared cultural values (Sabogal, Marín, & Otero-Sabogal, 1987).

Effects of Discrimination on Academic Well-Being

Studies of academic development and adjustment support the notion that acculturative strains and discriminatory experiences can be unique cultural stressors for Latinos. For example, the prevalence of stressors in the Achievement for Latinos through Academic Success ALAS; (Larson & Rumberger, 1995) was alarming. ALAS seventh graders reported a vast number of events, including family illness or death, family breakup, parent lost job, threatened by gang, breakup with boy-/girlfriend, and trouble at school. Over one half of the sample experienced two to five events per year, and one-third experienced six to nine events. ALAS students also reported a clinically significant number of depressive symptoms such as exhaustion, headaches, trouble sleeping, loss of appetite, and feeling unhappy, nervous, sad, or worried. Therefore, informed by the ALAS studies, we first posited that psychosocial implications of acculturative strains and the potential additional impact of internalized minority status and discrimination are culturally relevant factors contributing to academic problems. Within the scope of our current data, our main hypothesis is that discriminatory and unwelcoming school experiences will have a detrimental impact on academic adjustment for Latino youth.

We define discrimination as the unequal treatment of persons based on ideological definitions of race (Williams, 1999) involving harmful actions toward others because of membership in a racial/ethnic group (Fishbein, 2002). We contend that discrimination is a product of racist ideology of inferiority that is used to justify unequal treatment (discrimination) of members of groups defined as inferior. Such beliefs can be enacted both by individuals in their attitudes and behaviors and by societal institutions in terms of their policies and practices (Bonilla-Silva, 1997) and have a wide range of health and academic implications. For example, studies have demonstrated that day-to-day experiences of perceived discrimination predicts psychological distress, major depression, and generalized anxiety (Kessler, Mickelson, & Williams, 1999; Williams). With regard to academic adjustment, Wong et al. (2003) recently showed that discriminatory experiences for African American youth predicted a decline in grades, perceived academic ability, increases in psychological distress, and increases in the proportion of one's friends not interested in school. For Latinos, Vega et al. (1995) showed that acculturative strain, language conflicts, and perceived discrimination predicted behavior problems reported by parents and teachers in a large urban sample of Latino youth.

The Vega et al. (1995) study also implicated the role of social support processes in the prediction of behavioral adjustment since youth and families undergoing acculturative transitions may experience extreme disruption in strong supportive networks during immigration. It is not uncommon for recently immigrated youth to have inadequate social and personal resources in a host country. At the other end of the spectrum, highly acculturated youth may be more susceptible to negative ethnic prejudices and stereotypes, and thus are more likely to internalize minority status, which will affect their perceptions and behaviors.

However, there are very few empirical studies on these hypothesized processes (Rogler et al., 1991; Vega et al.).

Culturally Informed Models of Social Support and Familism

Ecological theories of social support for immigrants and minorities have been developed in sociology, human ecology, and economics (Rumbaut & Portes, 2001; Stanton-Salazar, 2001; Valenzuela & Dornbusch, 1994). The most notable influence has been Coleman's (1988) theoretical framework focusing on social capital focusing: the interplay of interpersonal relationships within the family and the connections of these relationships with larger social networks and social structural resources (Fuligni & Yoshikawa, 2003). Portes (1998) recently defined social capital as "the ability of actors to secure benefits by virtue of membership in social networks or other social structures" (p. 6). Similarly, Stanton-Salazar defined social capital as "a set of properties within socially patterned associations among people that, when activated, enable them to accomplish their goals or to empower themselves in some meaningful way" (p. 265). In this study, we define social support as a source of social capital that is garnered from quality social ties to adolescents' social networks.

Developmental studies have identified three major sources of support for youngsters: family, formal institutions (e.g., school staff, school policies, school resources), and informal support from peers and other adults (Cauce, Mason, Gonzales, Hiraga, & Liu, 1996; Mullis, Hill, & Readdick, 1999). Studies have shown main effects of social support on adjustment (Compas, 1987; Dubow, Tisak, Causey, Hryshko, & Reid, 1991), as well as "buffering effects," in which social support significantly inter-acts with life stressors to mitigate the negative impact of stress on adjustment (Gutman, Sameroff, & Eccles, 2002; Sandler, Wolchik, Braver, & Fogas, 1991; Wertlieb, Weigel, & Feldstein, 1987; Wills, Blechman, & McNamara, 1993). That is, in the face of stressful conditions, individuals with high levels of social support are buffered from the effects of stress; however, those individuals with low levels of support are not protected from the negative impact of stress. A "main effects" model states that social support benefits individuals irrespective of, or noncontingent on, levels of stress (Barrera, 1986).

Another relevant conceptual model for minority youth in social support research focuses on the relative contributions from different sources of support, called "provider models" (Cauce et al., 1996). For example, in a large study of academic outcomes for African American adolescents, Gutman et al. (2002) found that effects varied depending on outcome and varied by provider (e.g., teachers, parents, or peers). For attendance, main effects were found for parent involvement and buffering effects of risk factors were found for consistent discipline. Contrary to prior research, Gutman et al. also found that teacher support was negatively related to math achievement and peer support obtained a buffering effect. In contrast, Cauce, Hannan, and Sargeant (1992) reported buffering effects for school and family support providers but not for peers. Equivocal findings are likely because of differing specificity of social support. For example, Gutman et al.'s peer measure included help with schoolwork.

Based on a provider perspective for Latino youth, we expected the family to be the most important source of support for adolescents. Social capital theory locates the family as the most proximal source of such support, whereas intact and extended units have an advantage over smaller households (Portes, 1998). Family solidarity can operate to pool social and economic resources necessary to escape dys-functional neighborhoods or limit damage caused by external racism and deviant peer association (Rumbaut & Portes, 2001). Therefore, we expected family support would be a major factor countervailing the marginalization of discriminatory experiences for Latino youth.

Many Latinos are strongly rooted in family connectedness; they live in close proximity to one another, share in child rearing, and are more likely than most ethnic groups to maintain their

native language and preserve customs through family or community rituals (Dilworth-Anderson & Marshal, 1996; Vega, 1990). The family and the value orientation of familism, *familismo*, are major sources of identity, self-worth, and social support. Familism can include structural, attitudinal, and behavioral characteristics bounding social relationships (Valenzuela & Dornbusch, 1994). Latinos maintain frequent interaction with kin as a reciprocal aid system and are also more likely than non-Latinos to use support from relatives than from friends (Vega & Kolody, 1985). Immigrant families, in particular, exhibit high levels of obligation between children and adults, high expectations of children, and high levels of trustworthiness—all elements especially important for social capital (Fuligni & Yoshikawa, 2003).

For example, a sample of 452 Mexican-, Central-, and Cuban Americans showed that high levels of perceived family support was invariable over time, despite increases in acculturation (Sabogal et al., 1987); further, the perception that family support was available did not diminish over time. In another large comparative study of Anglo American and Mexican American adolescents, Valenzuela and Dornbusch (1994) demonstrated an interaction effect between parental education and familism; that is, familism had a strong effect in promoting academic success for families with higher parental education.

Similarly, in a study of former and current substance users, Coombs, Paulson, and Richardson (1991) compared the relative influence of peers and parents for Latino and Anglo adolescents. Regardless of drug-use behavior, adolescents reported stronger affiliations, greater influence, and greater respect for parents than peers (Coombs et al., 1991). Cultural patterns of parental support were most important as a resource against continued use of controlled substances. Furthermore, studies indicated that distinguishing parental support from peer support was important for adolescent outcomes, with parenting support being particularly relevant for academic adjustment (Cauce, Felner, & Primavera, 1982; Cauce, Reid, Landesman, & Gonzales, 1990; Steinberg et al., 1992). Therefore, we hypothesized that from a provider perspective, parental support will be the most influential source relative to academic well-being in within-group models of Latino youth.

Crean (2004) found evidence supporting a main effects model of perceived social support in predicting academic and social competence for a sample of 304 middle school Latino boys and girls. This study controlled for acute stressors and social conflict; social support also obtained an indirect effect through reported coping strategies. The current study attempts to expand such a model by examining main effects of social support and buffering effects of discriminatory experiences.

Informed by the extant literature, a theoretical model is presented in Figure 1 with specific hypotheses. First, we expected experiences of discrimination in the school environment to be an environmental stressor that will be detrimental to academic well-being for Latino youth (Hypothesis 1). Second, we expected that social support will have a main additive effect as a protective factor and will be associated with higher levels of academic adjustment (Hypothesis 2). Third, we also expected social support to interact as a buffer against high levels of discrimination (Hypothesis 3). More specifically, for Latino youth who were socially integrated and reported high levels of social support for discussing school problems, we expected little impact of discrimination on academic well-being. For Latino youth who were relatively more isolated and reported low levels of social support, we expected a strong negative impact of discrimination on academic well-being. Finally, we expected parental support to be more important as a source of support relative to teachers or peers (Hypothesis 4).

Methods

Participants

Analyses were conducted using 278 Latino youth from two separate samplings. The first sample was drawn from 6th through 12th grade students from four school districts in Lane County, Oregon ($n = 162$). The second sample was drawn from 7th and 12th grade students attending the Oregon State Latino Youth Summit (OSLYS; $n = 116$). Prior and current analyses of relevant outcomes and family characteristics have demonstrated statistical comparability between these samples (Martinez, DeGarmo, & Eddy, 2004); therefore, subsequent models examine the combined samples. Ethnic group classification was based on a “knowledgeable other” method (i.e., school records and teacher/staff report; Foster & Martinez, 1995). Whereas many youngsters have difficulty identifying their race/ethnicity on forced-choice questions, others may be uneasy about reporting such information because of personal, family, or community experiences of discrimination. For example, 31% of participants in the OSLYS sample, who were identified as Latino and attended a Latino Student Summit, refused to answer the question about race/ethnicity. Of course, relying on school records or parents may also lead to identification errors, but in this case, combined strategies appeared to be a more reliable method.

Although there was significant agreement between youth self-report and the knowledgeable other classification, some disagreement was also observed. For the Lane County sample, most participants (74%) self-identified as Latino. The remaining 26% self-identified as belonging to another racial/ethnic group (7%), as being multiracial (14%), or did not answer the question (5%). An additional 21% classified as non-Latino participants self-identified as belonging to other ethnic groups (including about 6% Latino). The remaining non-Latino youngsters either indicated that they were multiracial (7%) or did not answer the question. All youngsters in the OSLYS summit sample were classified as Latino. However, a relatively large group of youngsters (31%) did not report ethnicity and 7% identified as belonging to another racial/ethnic group; however, most participants (62%) self-identified as Hispanic/Latino. In the Lane County sample, surveys were administered to groups of students in classrooms. In the OSLYS sample, participants completed the survey in a large group during the youth summit *prior* to any participation in group discussions of school experiences.

Although students were not specifically asked to provide information on their country of origin, local demographics indicated that about 78% of the Latino families in Oregon trace their family roots to Mexico, with most of the remaining 22% tracing their roots to other countries in Central and South America (U.S. Census Bureau, 2000). Project personnel were present during data collection to answer questions. Surveys were available in English and Spanish, and no student names or identifying information was included. Only eight students (5%) in the state sample completed the survey in Spanish, while 15 students (9%) did so in the county sample.

Measures

Academic well-being was measured by four indicators and modeled as a latent variable in a structural equation model. *GPA* was the students’ report of grades “this past year” ranging from 1 (4.0, or all As) to 7 (below 1.49; Ds or below). *Homework frequency* was measured by an item asking how often the student did homework, ranging from 1 (always) to 5 (never).

Dissatisfied performance was the students’ evaluation of their own academic performance asked by an item ranging from 1 (very satisfied; I’m doing as well as I am capable) to 4 (very dissatisfied; I could be doing a lot better). *Dropout likelihood* was an item asking how likely it was the student will leave school (drop out) before graduating, from 1 (very likely) to 4 (very unlikely). Widaman (1993) recommended principal axis factor (PAF) analysis of indicators of latent variables. The PAF extracted a single solution (eigenvalue = 2.01), explaining over 50%

of the variance in items. Cronbach's alpha for these four items was .66. Discriminatory experiences were modeled as a latent variable and were measured by two indicators: discrimination and unwelcoming experiences. Two items measured *discrimination experiences*: "Has any other student treated you differently in school because you are Latino (e.g., called you names, hit you, or made fun of you in school)?," and "Have you ever witnessed another person being treated differently at school because they were Latino?" The final indicator was coded 1 (*the student neither witnessed or experienced discrimination*), 2 (*either witnessed or experienced discrimination*), or 3 (*both witnessed and experienced discrimination*). Two items measured *unwelcoming experiences*: "Have you had any experiences this past year that helped you feel welcome or comfortable at your school?," and "Have you had any experiences this past year that made you feel unwelcome or uncomfortable at your school?" The final indicator was coded 1 (*a welcoming experience occurred and no unwelcoming experience occurred*), 2 (*no welcoming or unwelcoming experience occurred*), 3 (*a welcoming experience and an unwelcoming experience*), or 4 (*no welcoming experience and an unwelcoming experience*). The two indicators were correlated ($r = .28, p < .001$).

Social support was measured with three indicators: support from school, parents, and friends or peers. Youth were presented a checklist of support relationships and topics relevant to the lives of students. The instructions read, "For each of the topics listed below, who would you feel comfortable talking with?" Support relationships included parents, friends, teachers, and school counselors. Ten topics were listed: difficulties with schoolwork, problems with teachers, problems with friends at school, questions about drugs, questions about boy-friend or girlfriend, questions about sex, questions about gangs, problems at home, college/career opportunities, and work opportunities. Scores in each support relationship type were summed across each topic. The school support indicator was the average of teacher and school counselor sums. Cronbach's alpha was .63 for the three social support items.

Finally, there were three relevant control variables used as markers for socioeconomic status (SES) and acculturation: *parent education*, *nativity*, and *language proficiency*. *Parent education* was the mean of mother and father education measured in categories ranging from 1 (*little formal education*) to 10 (*more than 4 years of college*). *Nativity* was a dichotomous measure indicating whether the student was U.S. born. *Language proficiency* was a dichotomous variable indicating that the student had no difficulty with three separate items asking about reading, writing, and speaking English. No data were collected about youngsters' exact ages or gender; therefore, we were not able to control for these variables in the analysis.

Analytic Strategy

Hypotheses were tested using latent variable path modeling in structural equation modeling (SEM) using Full Information Maximum Likelihood (FIML) estimation in the AMOS program (Arbuckle, 1997). Advantages of using FIML for data were the statistical efficiency of the procedure and the ability to deal with missing data in the surveys. In contrast to listwise deletion covariance matrices, FIML uses all the information of the observed data including information about the mean and variance of missing portions of a variable based on the observed portions of other variables in the covariance matrix. FIML has greater statistical efficiency when computing standard errors from the available data compared to mean imputation, listwise, or pairwise deletion methods (Wothke, 2000). Because SEM cannot readily estimate interactions among latent variables for testing buffering hypotheses, SEM path models were run using a set of stepwise regression path models. Following methods for testing continuous-level interactions outlined by Aiken and West (1991), we entered first-order main effects (e.g., independent effects of discriminatory experiences and social support), followed by second-order interaction terms computed as centered cross products (e.g., discriminatory experiences times social support).

Results

Prior to running path models, principal components factor analyses were conducted on indicators simultaneously. Each set of latent variable indicators formed separate factors and were significantly correlated within each theoretical construct, providing evidence of discriminant and internal validity. Next, we evaluated the SEM model testing the hypothesis that higher levels of discrimination would be associated with lower academic well-being, and testing the hypothesis that higher levels of social support would be associated with better academic well-being. Results are presented in Figure 2 in the form of standardized beta coefficients.

The data supported main effects hypotheses. Controlling for parents' education, nativity, and English proficiency, discrimination was significantly associated with lower levels of academic well-being ($\beta = -.46, p < .01$). Independent of discrimination, social support was associated with higher levels of academic well-being ($\beta = .28, p < .01$). The bivariate correlation between discrimination and social support was moderately strong and significant ($r = -.39, p < .01$). None of the control variables significantly predicted academic well-being. The model in Figure 2 demonstrated adequate fit, $\chi^2(43) = 85.34, p = .00$; comparative fit index (CFI) = .99; and explained 38% of the variance in academic well-being. The model fit was considered acceptable because the CFI, .99, was high and close to 1.0, and the chi-square ratio ($\chi^2/df = 1.98$) was less than 2.0 (Byrne, 1989). In general, the p value for the chi-square minimization coefficient should be greater than .05, meaning that the comparison of the covariance structure specified in the theoretical model against the observed covariance structure would not be statistically different. However, the current model was acceptable based on the criteria presented above. In addition, the latent variable indicators showed good factor loadings ranging from roughly .50 to .80, with the exception of drop-out likelihood, which loaded at $-.27$ on the academic well-being factor. This particular variable was retained for theoretical and cultural relevance. Subsequent model trimming showed that eliminating dropout likelihood produced a model fit of $\chi^2(33) = 54.20, p = .01$, and eliminating peer support produced a model fit of $\chi^2(25) = 29.90, p = .23$. Trimming these variables produced better fitting models; however, the statistical significance of all paths and substantive interpretation did not change.

We next conducted a series of models testing social support as a buffer against the impact of discrimination. We expected that the association of discrimination and academic well-being would be weaker for Latino youth with high levels of support, and the effect of discrimination would be stronger for youth with little or no support. Because SEM cannot readily estimate continuous-level statistical interactions with latent variables, buffering models were tested using alternative methods. First, using a computed construct score for the latent factors presented in Figure 1, we examined the buffering effect of perceived support specifying path models to test continuous-level interactions. First-order main effects were entered in Step 1 (Model 1), followed by centered cross products of each support provider and discrimination in Step 2 (Model 2). In the same fashion, we examined the relative importance of support providers in testing buffering effects, expecting that parents would be relatively more predictive for Latino youth relative to peers or teachers. As an alternative method for testing interactions, we plotted the relationship of discriminatory experiences on academic well-being across discrete levels of social support and then explored these relationships using multiple group comparisons in SEM analyses for a group high on social support and a group low on social support.

Results of the continuous-level interaction tests of the buffering model are presented in Table 1. Standardized beta coefficients and their standard errors are presented for the stepwise regression models for perceived support from separate and combined providers. Buffering models (Hypothesis 3) were supported. At the top in the first column (Model 1), the main

effects of construct scores for discrimination ($\beta = -19, p < .01$) and social support ($\beta = .25, p < .001$) were both significant predictors of academic well-being. Note that the betas are consistent with the beta paths in Figure 1 but are disattenuated because they are not estimated with latent factors partially controlling for measurement error. In Model 2, the interaction term was significant.

We further tested the robustness of the interaction by plotting the data and running regression diagnostics. Plots indicated that the buffer effect occurred at the top third of the distribution and was weaker for a median split of the data. The beta for the discrimination effect was $-.30$ for the lower third, $-.46$ for the middle third, and $-.01$ for the top third of the sample. This meant that the highest levels of support, not just midrange levels, were needed for Latino youth in order for support to operate as a buffer counteracting negative effects of discrimination. Using factor scores, regression diagnostics were conducted using Cook's distance and standardized difference betas. Each of these tests provided criteria for the relative influence of one case in the sample compared to all others. Both the plots and the influence tests indicated that the buffer effect was not driven by outliers or poor distributional qualities of the interaction terms.

Regarding provider effects, parental support showed more predictive impact for Latino Youth in both the main effects and buffering models of support. Model 1 indicated that both school support ($\beta = .18, p < .01$) and parental support ($\beta = .31, p < .001$) showed significant main effects associated with higher levels of academic well-being; however, peers did not. The parent effect was stronger than the school effect. Furthermore, in Model 2, only the parent effect uniquely demonstrated a buffering effect for the multiplicative term ($\beta = .12, p < .05$). Because both the main effects and buffering effects were significant in Model 2, parental support was associated with academic well-being at the average level of discrimination. When centering, both main effects and conditional interaction effects may be interpreted. In the presence of a significant interaction, the first-order main effect is considered the average-level main effect or the effect when the conditional variable is at its mean or zero (Aiken & West, 1991).

It is also important to note that although parents were more influential, the total combined provider score of support also showed simultaneous average-level main effects and buffering effects. This meant that although school support and peer support resources were not as important relative to parents, the total support score was more important than any individual source of support for Latino youth. Influence diagnostics showed that no main or buffering effect was the result of outliers or influential cases in each of the respective provider models. Further examination of bivariate correlations among outcome indicators and social support indicators is presented in Table 2. The role of parental support was important across all academic outcomes. Together, evaluation of a provider model indicated the importance of support from the school environment, but support from parents was particularly salient for perceived academic adjustment. In summary, hypotheses were generally supported by these data. Various regression and path analyses showed that both main effects and buffering effects of support were operating for the Latino students. Parental support was stronger in impact compared to support from school or peers. Findings suggested the total score of social support for both samples was an important protective factor compared to any individual source alone.

Discussion

Minority adolescents are unequivocally at greatest risk for negative life outcomes in virtually every arena of child adjustment, including academics (Steinberg et al., 1992; Velez, 1989). Academic well-being is of particular relevance for Latino youth because of disproportionately high levels of school dropout (Gándara et al., 1998; Pulido, 1995). Much research has

documented academic disparities; yet, few studies have considered predictive mechanisms. Of these, the concepts of discrimination and internalized minority status are only recently garnering empirical attention. Beyond normative life stressors, minority students may regularly experience a range of low-level acculturative stress to acute levels of traumatic discriminatory or stigmatizing experiences, potentially making support a salient protective factor in culturally informed adjustment models. The current study shows that perceived discrimination is a significant contributor to academic problems. Discrimination was measured as experiences of prejudiced behaviors or observations of discrimination toward others in the school setting. We conceptualize this as a unique environmental stressor for minority youth.

Discrimination and Social Capital

Evaluation of provider effects in the current data shows that parental support is more salient for students in both main effects and buffering models, underscoring the importance of familism. At the same time, total support is more predictive of adjustment than any one source. In the face of acculturative stress and discrimination, a larger social capital model would suggest greater academic success. Vega et al. (1995) have implicated how such experiences and internalized minority status can be theoretical mechanisms associated with behavior problems. More recently, Stanton-Salazar (2001) showed that such experiences for Latino adolescents promote a lack of *confianza* (trust) that inhibits youth to engage in help-seeking behaviors among teachers and even seeking academic support from parents and peers. These findings along with the results of this study implicate the necessity of bolstering support not only through parents but also through community ties, school environments, and school personnel.

Social capital theorists also consider these as agents of “counterstratification” for minority youth (Rumbaut & Portes, 2001; Stanton-Salazar, 2001). Capturing the buffering concept, Stanton-Salazar stated that counterstratification initiatives across the domains of family, school, and community do not eliminate adolescents’ generalized estrangement but rather temper or moderate it enough for these youth to survive the trek through adolescence. These agents can provide developmental opportunities that enable adolescents to experience fellowship, moments of hope for the future, and a modicum of academic accomplishment by fostering adaptive social skills, attitudes, and specific problem-solving behaviors within adolescents’ social networks. As a buffer against discrimination, components of successful academic social integration include instilling trust, instilling specific goals and standards of excellence, engendering an appetite for extrinsic rewards, instilling a sense of status and identity, and applying pressures and sanctions for the purpose of enforcing normative standards.

Limitations

Several limitations should be noted in the current study. We did not have identifying information on how these processes might differ for boys and girls. Some literature suggests that boys acculturate more quickly than girls (Szapocznik & Kurtines, 1993) and that competing and conflicting values of familism and school success contribute to higher dropout rates among Latina girls (Velez, 1989). More standardized and empirically validated measures of the above processes are needed to replicate the current findings. Such measures could include official school records, as well as teacher reports of the school environment and youth adjustment.

The measures available in this community-derived study are relatively limited compared with more focused studies of acculturation. For example, the use of nativity alone (e.g., foreign born or not) is more limited than years of residence in the United States and can mask variability in exposure to the U.S. school system or differences in acculturation. For example, in Rumbaut and Portes’ (2001) large Children of Immigrants Longitudinal Study, they operationalized the

concept of a “1.5 generation” of youngsters, that is, youth who were foreign born but immigrated prior to the age 12. There are no doubt important individual differences in outcomes for adolescents who are recent immigrants versus several years of residence. In addition, language preference, language competency, and language use in different settings (e.g., with parents vs. peers) would provide greater specificity. Omitted variables such as ethnic identity (Sellers & Shelton, 2003; Wong et al., 2003) or broader cultural values, may also impinge on the stress process (Foster, Martinez, & Kulberg, 1996; Sabogal et al., 1987).

Despite these limitations, this study nonetheless used culturally competent measures of social support for issues faced by adolescents in school, and we believe that these data provide new information on the role of social support in buffering perceived discriminatory experiences. In addition, recent research has shown that minorities are likely to *underestimate* and minimize discriminatory experiences in order to protect social state self-esteem and maintain the perception of control in performance domains (Ruggiero & Taylor, 1997). The data in this study were consistent with prior culturally informed stress models and have important implications for specifying interventions for preventive intervention research and practitioners.

Recommendations for Intervention

Recognizing the homogeneity within various Spanish-origin groups, practitioners must take into account important family- and community-level cultural factors such as language use and preference, systems of cultural beliefs and value orientations, conservative versus traditional community norms, and prevalence of acculturative stressors in the school system and community (Castro, Barrera, & Martinez, 2004). Although the scope of the current study does not address questions of community-level and more structural factors associated with academic success, it is evident that intervention efforts are becoming increasingly necessary with a growing Latino population. In the long run, individual and institutional discrimination promoting the stigma of inferiority adversely impact academic adjustment and ultimately restrict socioeconomic opportunities (Portes, 1998). For young people of color, over the past two decades, there have been catastrophic declines in the provision of adequate resources, institutional support, and opportunities that are fundamental for development into productive adulthood (Larson & Rumberger, 1995). Adequate resources and institutional support for teachers and counselors are needed for successfully acculturating families. School interventions require full community support, not only in funding but also in heightened public awareness.

Partnerships are needed between parents, schools, and practitioners, and a focus on the role of familism must be taken into account. As inferred in the current findings, *La Familia* is a powerful protective factor to be incorporated into intervention strategies promoting academic success. For example, recent strides have been made in the development of ecologically valid and culturally competent interventions involving Latino parents and youth to prevent the detrimental impact of acculturative strains on academic adjustment, behavior problems, and substance use (Bernal, Bonilla, & Bellido, 1995; Martinez & Eddy, 2005; Szapocznik & Williams, 2000; Szapocznik et al., 1989).

For example, Martinez and Eddy (2005) developed a culturally adapted parent-training program for monolingual Spanish-speaking families of middle-school-aged youngsters. *Nuestros Familias: Andando Entre Culturas* (Our Families: Moving Between Cultures) focuses on the influence of familism, providing parents with previously demonstrated tools of effective parenting (e.g., consistent and noncoercive discipline, contingent positive reinforcement, and skills for academic success), at the same time addressing the acculturative stress. Given a range of community, economic, and social conditions for ethnic minority families, it is essential to focus on the *proximal components* and *proximal agents* of resilience for Latino youngsters. These include not only parents but also teachers. Further specification

of integrated parent training and efficacious school-based interventions with teachers is a needed extension of existing culturally specified family programs (cf. Webster-Stratton, Reid, & Hammond, 2004).

References

- Aiken, LS.; West, SG. Multiple regression: Testing and interpreting interactions. Newbury Park, CA: Sage; 1991.
- Arbuckle, JL. AMOS user's guide version 3.6. Small-Waters: Chicago; 1997.
- Barrera MJ. Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology* 1986;14:413–445.
- Bernal G, Bonilla J, Bellido J. Ecological validity and cultural sensitivity for outcome research: Issues for the cultural adaptation and development of psychosocial treatments with Hispanics. *Journal of Abnormal Child Psychology* 1995;23(1):67–82. [PubMed: 7759675]
- Bonilla-Silva E. Rethinking racism: Toward a structural interpretation. *American Sociological Review* 1997;62:465–480.
- Byrne, BM. A primer for Lisrel: Basic applications and programming for confirmatory factor analytic models. New York: Springer; 1989.
- Castro FG, Barrera M Jr, Martinez CR Jr. The cultural adaptation of prevention interventions: Resolving tensions between fidelity and fit. *Prevention Science* 2004;5(1):41–45. [PubMed: 15058911]
- Cauce AM, Felner RD, Primavera J. Social support in high-risk adolescents: Structural components and adaptive impact. *American Journal of Community Psychology* 1982;10:417–428. [PubMed: 7137129]
- Cauce AM, Hannan K, Sargeant M. Life stress, social support, and locus of control during adolescence: Interactive effects. *American Journal of Community Psychology* 1992;20:787–798. [PubMed: 1302449]
- Cauce, AM.; Mason, C.; Gonzales, N.; Hiraga, Y.; Liu, G. Social support during adolescence: Methodological and theoretical considerations. In: Hurrelmann, K.; Hamilton, SF., editors. *Social problems and social contexts in adolescence: Perspectives across boundaries*. New York: Aldine De Gruyter; 1996. p. 131-151.
- Cauce, AM.; Reid, M.; Landesman, S.; Gonzales, N. Social support in children: Measurement, structure, and behavioral impact. In: Sarason, BR.; Sarason, IG.; Pierce, GR., editors. *Social support: An interactional view*. New York: Wiley; 1990. p. 64-94.
- Coleman JS. Social capital in the creation of human capital. *American Journal of Sociology* 1988;94:95–120.
- Compas BE. Coping with stress during childhood and adolescence. *Psychological Bulletin* 1987;101:393–403. [PubMed: 3602247]
- Coombs RH, Paulson MJ, Richardson MA. Peer vs. parental influence in substance use among Hispanic and Anglo children and adolescents. *Journal of Youth and Adolescence* 1991;20(1):73–88.
- Crean HF. Social support, conflict, major life stressors, and adaptive coping strategies in Latino middle school students: An integrative model. *Journal of Adolescent Research* 2004;19:647–676.
- Dilworth-Anderson, P.; Marshall, S. Social support in its cultural context. In: Pierce, GR.; Sarason, BR.; Sarason, IG., editors. *Hand-book of social support and the family*. New York: Plenum Press; 1996. p. 67-79.
- Dubow EF, Tisak J, Causey D, Hryshko A, Reid G. A two-year longitudinal study of stressful life events, social support, and social problem-solving skills: Contributions to children's behavioral and academic adjustment. *Child Development* 1991;62:583–599. [PubMed: 1914627]
- Fishbein, HD. *Peer prejudice and discrimination: The origins of prejudice*. Vol. 2nd. Mahwah, NJ: Lawrence Erlbaum Associates; 2002.
- Foster SL, Martinez CM Jr. Ethnicity: Conceptual and methodological issues in child clinical research. *Journal of Clinical Child Psychology* 1995;24:214–226.
- Foster, SL.; Martinez, CM., Jr; Kulberg, AM. Race, ethnicity, and children's peer relations. In: Ollendick, TH.; Prinz, RJ., editors. *Advances in clinical child psychology*. New York: Plenum Press; 1996. p. 133-172.

- Fuligni, AJ.; Yoshikawa, H. Socioeconomic resources, parenting, and child development among immigrant families. In: Bornstein, MH.; Bradley, RH.; Von Eye, A., editors. Socioeconomic status, parenting, and child development. Mahwah, NJ: Erlbaum; 2003. p. 107-124.
- Gándara, P.; Larson, K.; Rumberger, R.; Mehan, H. Capturing Latino students in the academic pipeline. Berkeley, CA: Institute for the Study of Social Change; 1998.
- Gutman LM, Sameroff AJ, Eccles JS. The academic achievement of African American students during early adolescence: An examination of multiple risk, promotive, and protective factors. *American Journal of Community Psychology* 2002;30:367–399. [PubMed: 12054035]
- Kessler RC, Mickelson KD, Williams DR. The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *Journal of Health and Social Behavior* 1999;40:208–230. [PubMed: 10513145]
- Larson, K.; Rumberger, R. Santa Barbara, CA: U.S. Department of Education; 1995. ALAS: Achievement for Latinos through Academic Success: Dropout prevention and intervention project targeting middle school youth with learning disabilities and emotional/behavioral disorders at risk for dropping out of school.
- Marcías RF. Language and ethnic classification of language minorities: Chicano and Latino students in the 1990s. *Hispanic Journal of Behavioral Sciences* 1993;15:230–257.
- Martinez CR Jr, DeGarmo DS, Eddy JM. Promoting academic success among Latino youth. *Hispanic Journal of Behavioral Sciences* 2004;26(2):128–151.
- Martinez CR Jr, Eddy JM. Effects of culturally adapted parent management training on Latino youth behavioral health outcomes. *Journal of Consulting and Clinical Psychology* 2005;73:841–851. [PubMed: 16287384]
- Mullis RL, Hill EW, Readdick CA. Attachment and social support among adolescents. *The Journal of Genetic Psychology* 1999;160:500–502. [PubMed: 10584325]
- Portes A. Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology* 1998;24:1–24.
- Pulido JA. A high school program for “at risk” Latino youth *Mujeres Y Hombres Nobles* (Honorable Men and Women). *American Secondary Education* 1995;23(2):10–12.
- Rogler LH, Cortes DE, Malgady RG. Acculturation and mental health status among Hispanics: Convergence and new directions for research. *American Psychologist* 1991;46:585–597. [PubMed: 1952420]
- Ruggiero KM, Taylor DM. Why minority group members perceive or do not perceive the discrimination that confronts them: The role of self-esteem and perceived control. *Journal of Personality and Social Psychology* 1997;72:373–389. [PubMed: 9107006]
- Rumbaut, RG.; Portes, A. *Ethnicities: Children of immigrants in America*. New York: Sage; 2001.
- Sabogal F, Marín G, Otero-Sabogal R. Hispanic familism and acculturation: What changes and what doesn't? *Hispanic Journal of Behavioral Sciences* 1987;9:397–412.
- Sandler I, Wolchik S, Braver S, Fogas B. Stability and quality of life events and psychological symptomatology in children of divorce. *American Journal of Community Psychology* 1991;19:501–520. [PubMed: 1755433]
- Sellers RM, Shelton JN. The role of racial identity in perceived racial discrimination. *Journal of Personality and Social Psychology* 2003;84:1079–1092. [PubMed: 12757150]
- Stanton-Salazar, RD. *Manufacturing hope and despair: The school and kin support networks of U.S.-Mexican Youth*. New York: Teachers College Press; 2001.
- Steinberg L, Blinde PL, Chan KS. Dropping out among language minority youth. *Review of Educational Research* 1984;54(1):113–132.
- Steinberg L, Dornbusch SM, Brown BB. Ethnic differences in adolescent achievement: An ecological perspective. *American Psychologist* 1992;47:723–729. [PubMed: 1616171]
- Szapocznik J, Kurtines WM. Family psychology and cultural diversity: Opportunities for theory, research and application. *American Psychologist* 1993;48:400–407.
- Szapocznik J, Santisteban D, Rio AT, Perez-Vidal A, Santisteban D, Kurtines WM. Family effectiveness training: An intervention to prevent drug abuse and problem behaviors in Hispanic adolescents. *Hispanic Journal of Behavioral Sciences* 1989;11(1):4–27.

- Szapocznik J, Williams RA. Brief strategic family therapy: Twenty-five years of interplay among theory, research and practice in adolescent behavior problems and drug abuse. *Clinical Child & Family Psychology Review* 2000;3(2):117–134. [PubMed: 11227062]
- U.S. Census Bureau. Census 2000. Washington, DC: Author; 2000.
- Valenzuela A, Dornbusch SM. Familism and social capital in the academic achievement of Mexican origin and Anglo adolescents. *Social Science Quarterly* 1994;75(1):18–36.
- Vega WA. Hispanic families in the 1980's: A decade of research. *Journal of Marriage and the Family* 1990;52:1015–1024.
- Vega WA, Khoury EL, Zimmerman RS, Gil AG, Warheit GJ. Cultural conflicts and problem behaviors of Latino adolescents in home and school environments. *Journal of Community Psychology* 1995;23(2):167–179.
- Vega, WA.; Kolody, B. The meaning of social support and the mediation of stress across cultures. In: Vega, WA.; Miranda, MR., editors. *Stress and Hispanic mental health: Relating research to service delivery*. Rockville, MD: U.S. Department of Health and Human Services; 1985. p. 48-75.
- Velez W. High school attrition among Hispanic and non-Hispanic White youths. *Sociology of Education* 1989;62(2):119–133.
- Webster-Stratton C, Reid MJ, Hammond W. Treating children with early onset conduct problems: Intervention outcomes for parent, child, and teacher training. *Journal of Clinical Child and Adolescent Psychology* 2004;31(1):105–124. [PubMed: 15028546]
- Wertlieb D, Weigel C, Feldstein M. Stress, social support, and behavior symptoms in middle childhood. *Journal of Clinical Child Psychology* 1987;16:204–211.
- Widaman KF. Common factor analysis versus principal components analysis: Differential bias in representing model parameters? *Multivariate Behavioral Research* 1993;28:263–311.
- Williams, DR. Race, socioeconomic status, and health: The added effects of racism and discrimination. In: Adler, NE.; Marmot, M.; McEwen, BS.; Stewart, J., editors. *Socioeconomic status and health in industrial nations: Social, psychological, and biological pathways*. New York: The New York Academy of Sciences; 1999. p. 173-188.
- Wills, TA.; Blechman, EA.; McNamara, G. Family support, coping, and competence. In: Hetherington, EM.; Blechman, EA., editors. *Stress, coping, and resiliency in children and families*. Hillsdale, NJ: Erlbaum; 1993. p. 107-133.
- Wong CA, Eccles JS, Sameroff A. The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment. *Journal of Personality* 2003;71:1197–1232. [PubMed: 14633063]
- Wothke, W. Longitudinal and multi-group modeling with missing data. In: Little, TD.; Schnabel, KU.; Baumert, J., editors. *Modeling longitudinal and multiple group data: Practical issues, applied approaches and specific examples*. Mahwah, NJ: Erlbaum; 2000. p. 269-281.

Figure 1.

Theoretical Model of Discrimination and Social Support as Predictors of Academic Well-Being for Latino Youth. Hypothesis 1: Expected Negative Effect of Discrimination on Academic Well-being. Hypothesis 2: Expected Positive “Main Effects” Social Support Model. Hypothesis 3: Expected Moderating “Buffering Effects” Social Support Model. Hypothesis 4: Expected Differential “Provider Effects” Model.

Figure 2. Structural Equation Modeling Path Model Testing the Main Effects of Discrimination and Social Support on Academic Well-Being for Latino Youth, $\chi^2(43) = 85.34$, $p = .00$; Comparative Fit Index = .99, $\chi^2/df = 1.98$.

Table 1
Unstandardized, Standardized, and Significance Levels for Tests of Main and Buffering Effects of Support by Providers (Standard Errors in Parentheses; N = 273)

	Academic Well-Being					
	Model 1			Model 2		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
Models for all sources combined						
Discrimination	-.19	.06	-.19**	-.19		-.19**
All support	.25	.06	.25***	.27	.06	.27***
All Support $\times$ Discrimination				.14	.07	.15*
R^2			.11			.12
Models for school support only						
Discrimination	-.17	.06	-.17**	-.17	.06	-.17**
School support	.18	.06	.18**	.19	.06	.19**
School Support $\times$ Discrimination				.09	.07	.10
R^2			.08			.08
Models for parent support only						
Discrimination	-.18	.06	-.18**	-.17	.06	-.17**
Parental support	.31	.06	.31***	.32	.06	.32***
Parental Support $\times$ Discrimination				.12	.06	.13*
R^2			.08			.08
Model for peer support only						
Discrimination	-.19	.06	-.19**	-.17	.06	-.17**
Peer support	.06	.06	.06	.07	.06	.07
Peer Support $\times$ Discrimination						
R^2			.05			.05

Note. Models were estimated using full information estimates in structural equation path models controlling for nativity, language proficiency, and parents' education. Column for Model 1 is the main effects model of social support and discrimination on academic well-being. Column for Model 2 tests the "buffering" or interaction effects of social support and discrimination on academic well-being.

*
 $p < .05$.

**
 $p < .01$.

NIH-PA Author Manuscript

NIH-PA Author Manuscript

NIH-PA Author Manuscript

$p < .001$
***

Table 2

Bivariate Correlations of Support and Academic Well-Being Indicators for Latino Youth

Academic Well-Being Indicators	Youth Reported Source of Support (<i>n</i> = 278)		
	School	Parents	Peers
Grade point average	.21 ***	.29 ***	.07
Homework frequency	.09	.23 ***	-.05
Dropout likelihood	-.12	-.22 ***	-.15 *
Dissatisfied performance	-.22 ***	-.18 ***	.02

*
 $p < .05$.

**
 $p < .01$.

***
 $p < .001$.