HISPANIC ETHNIC IDENTITY AND ACADEMIC ACHIEVEMENT FOR AT-RISK HIGH SCHOOL STUDENTS: THE MEDIATIONAL ROLE OF SELF-EFFICACY AND SOCIAL SUPPORT

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A dissertation submitted to the

Graduate School-New Brunswick

Rutgers, The State University of New Jersey

In partial fulfillment of the requirements

For the degree of

Doctor of Philosophy

Graduate Program in Psychology

Written under the direction of

Maurice J. Elias, Ph.D.

And approved by

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New Brunswick, New Jersey

October, 2016

ABSTRACT OF THE DISSERTATION

Hispanic ethnic identity and academic achievement for at-risk high school students: The mediational role of self-efficacy and social support

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Adolescence is a period of identity exploration and development. In particular, ethnic identity forms an important aspect of identity for ethnic minority youth. Prior research has found that ethnic identity is related to positive psychosocial and academic outcomes among these populations. This study sought to expand the definition of ethnic identity for Hispanic youth to include other related aspects of identity, specifically acculturation, immigration status, and language use. Further, it was hypothesized that Hispanic Ethnic Identity would positively predict academic achievement. In addition, self-efficacy and social support were examined as potential mediators of this relationship. Data were collected in a majority Hispanic high school in a low-income neighborhood in New Jersey (82.61% Hispanic by school-report, 90.98% receiving free or reduced lunch). The sample consisted of 540 self-identified Hispanic students (Mean age = 17.15, 48.70% female, 61.11% born in the U.S.). Structural equation modeling was employed to a) test the newly defined Hispanic Ethnic Identity construct and b) test a model of the hypothesized relationships between Hispanic Ethnic Identity, academic achievement (as measured by end-of-year GPA), general self-efficacy, and perceived social support from teachers. Results revealed that contrary to the hypothesized model, there was a significant, but negative, direct relationship between Hispanic Ethnic Identity and GPA.

However, there was also a positive mediation effect of Hispanic Ethnic Identity to academic achievement via self-efficacy. Differences were revealed by gender. Exploratory analyses were also conducted to test the model in Mexican-origin and Dominican-origin adolescents. Overall, results revealed that Hispanic Ethnic Identity impacted academic achievement via dual distinct pathways, with a negative direct effect and positive indirect effect on GPA. Implications and future directions are discussed.

ACKNOWLEDGMENTS

I would first like to thank my advisor, Dr. Maurice Elias, for his continued support on this project as well as many others over the past four years. I would also like to thank my other committee members, Drs. Teresa Leyro, Anne Gregory, and Brenna Bry, for their extremely thoughtful and helpful input in the conceptualization of my dissertation project. Additionally, many thanks to the SEL lab, particularly my lab mates, Gwyne White, Danielle Hatchimonji, and Arielle Linsky, for their constant encouragement and feedback; as well as to all of our research assistants for their hard work in helping to collect, organize, and enter this data.

Finally, I want to thank my family and friends for all of their love and support especially during those times when life (and grad school) gets a little hectic. And, in particular, thank you to my husband, Sam, who despite not being in the field of psychology, has been my most reliable copy editor for the past ten years.

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Introduction

The need to belong is conceptualized as a fundamental human motivation that drives people to strive to make social attachments (Baumeister & Leary, 1995). Belongingness underlies individuals' desire to find others who are like them. The process of forming social bonds and finding like-minded groups contributes to the development of an individual identity. Individuals explore and define their identity as they try to understand where they fit into the larger society (Baumeister & Leary, 1995). As individuals develop a sense of identity they look for reinforcements in their environment that allow them to continue to feel like they belong. This need to belong helps to explain why social support or lack thereof can impact an individual's ability to thrive and be successful (Becker & Luthar, 2002). Social support helps individuals to feel a sense of belonging, to feel integrated into their community, and to positively identify with their environment.

Further, achieving a sense of belonging may also contribute to one's sense of ability to succeed (Goodenow, 1993; Uwah, McMahon, & Furlow, 2008). If an individual has an achieved sense of self and an understanding of where she fits in the larger societal context, this might influence her perception of the world and confidence in the ability to navigate it successfully. For example, if an adolescent with an achieved ethnic identity is confronted with a negative stereotype based on her ethnicity, she is more readily able to cope with this experience because she has previously taken the time to explore and become attached to this part of her identity (Umaña-Taylor & Updegraff, 2007). Thus, this prior affirmation of identity allows her to not internalize discriminatory experiences as part of her self-concept.

Adolescence is recognized as a critical period of identity development, where youth are working towards gaining a better sense of who they are and where they fit in the larger society (Erikson, 1968). Exploration occurs across multiple domains of an adolescent's identity and includes changing and solidifying perceptions of morality, gender and sexuality, and ethnicity and culture. The developmental pathways of youth who have difficulty making the transition from childhood to adolescence are crucial to understand as they experience high risk for academic and psychosocial difficulties, including forms of psychopathology and school drop-out (Ellis, Marsh, & Craven, 2009). These pathways are particularly important for those thought to be most at-risk for difficult transitions: ethnic minority youth and those of lower socioeconomic status (SES) (Battin-Pearson et al., 2000; Cauce, Stewart, Rodriguez, Cochran, & Ginzler, 2003; U.S. Department of Education National Center for Education Statistics, 2013).

Ethnic minority youth, particularly Hispanic and Black children and adolescents, are at increased risk for academic failure and drop out at higher rates than their White peers (F. Campbell, Pungello, Ramey, Miller, & Burchinal, 2001; J. R. Campbell, Hambo, & Mazzeo, 1999; Heckman & LaFontaine, 2010). Furthermore, poverty is another risk factor that disproportionately impacts ethnic minority youth (U.S. Census Bureau, 2011). Students from lower SES backgrounds usually attend schools in lower SES neighborhoods that often are plagued by fewer resources and higher teacher and student mobility; these, in turn, are also negatively associated with achievement and an increased risk for early high school dropout (Battin-Pearson et al., 2000; U.S. Department of Education National Center for Education Statistics, 2013). In addition, there is evidence that teacher expectations are significantly lower for Hispanic and Black students

in comparison to their White or Asian counterparts (McKown & Weinstein, 2008). Further, these differences in expectations appear to significantly account for differences in academic performance, thereby contributing to the achievement gap (McKown & Weinstein, 2008).

Focusing on Hispanic youth is becoming increasingly more important with the increase in the Hispanic population in the United States. It is estimated that 1 in 10 students in the U.S. have Mexican-born parents and 1 in 7 have grandparents or great-grandparents who were born in Mexico (Passel, 2011). Overall, Hispanic youth are at greater risk of dropping out of high school, with rates of 14%, compared to both their Black (7%) and White (5%) counterparts (Aud, Hussar, Kena, Johnson, & Roth, 2012). Additionally, Mexican American students are more likely to repeat grades and drop out of high school compared to peers of all other ethnic groups, including other Latino ethnic subgroups (Jensen & Sawyer, 2013). Of note, children with undocumented parents are at even greater risk for academic failure (Bean, Brown, Leach, Bachmeier, & Tafoya-Estrada, 2013). Hence, the Hispanic adolescent population is worthy of particular inquiry.

Certainly, it is important to note, that many individuals are able to thrive and succeed despite these risk factors. The current project explores ethnic identity as a potential resiliency factor for academic achievement for at-risk Hispanic high school students from a low-income community. Ethnic identity was chosen as the resiliency factor of interest as it is thought to be particularly salient for Hispanic youth (e.g., Phinney, 1992; Roberts et al., 1999) and may serve a particularly important role in combating the internalization of racism and discrimination which has been found to

impact academic outcomes (Alfaro, Umaña-Taylor, Gonzales-Backen, Bámaca, & Zeiders, 2009; Eccles, Wong, & Peck, 2006; Miller & MacIntosh, 1999; Sellers, Copeland-Linder, Martin, & Lewis, 2006; Umaña-Taylor, Wong, Gonzales, & Dumka, 2012). The following sections review the literature on the ethnic identity development process, as well as prior research that has explored the relationship between ethnic identity and psychosocial adjustment, and academic achievement. This will be followed by an examination of related ethnic identity factors, specifically acculturation. Finally, social support and self-efficacy will be reviewed in the relation to achievement in ethnic minority students.

Ethnic Identity Development

The identity development process has been suggested as the major developmental task of adolescence (Erikson, 1968) and is conceptualized as a duel process of exploration and commitment to achieve a well-formed identity (Marcia, 1966). Ethnic identity is one aspect of an individual's sense of self that is being crystalized during adolescence (Phinney, 1989). Ethnic identity is particularly important for ethnic minority youth as it is thought to help buffer against the negative impact of discrimination and stereotypes on psychological functioning and academic achievement (e.g., Romero & Roberts, 2003; Sellers et al., 2006). Ethnic identity development is important for individuals to develop a sense of themselves, a sense of others, and to understand attitudes that other people have about race and ethnic minority groups (Poston, 1990). It develops through socialization processes (Thompson, 1994), beginning with interactions with family and continuing as children enter school and begin to be influenced more significantly by peers, other adults, and the media. During adolescence, many youth come

to understand the significance of race and ethnicity in their lives in the society at large, through continued socialization with family and peers (Seaton, Yip, Morgan-Lopez, & Sellers, 2012). For many ethnic minority youth, experiences with racism and discrimination force them to directly examine their ethnic minority status and how this fits into their identity (Sellers et al., 2006).

Ethnic identity has been previously operationalized as being comprised of a number of factors including how individuals choose to self-categorize or label their ethnic background, the degree to which one explores their ethnic background, the level of commitment or attachment one feels towards their ethnic group, and the degree of importance that background serves in one's life (Phinney & Ong, 2007; Sellers, Smith, Shelton, Rowley, & Chavous, 1998). Although ethnic identity has been defined in a number of ways, this project focused on the definition put forth by Jean Phinney. Influenced by the ideas of Erikson and Marcia, Phinney (1989) interviewed adolescents to assess their ethnic identity in terms of the level of exploration and commitment to their ethnic background. She then classified them into three categories: 1) unexamined ethnic identity (like Marcia's diffused/foreclosed identities), 2) ethnic identity search or exploration (like Marcia's moratorium phase), and 3) achieved ethnic identity. In support of the earlier identity frameworks of Erikson and Marcia, results of this study found that ethnic minority adolescents in the achieved ethnic identity group had better overall adjustment (Phinney, 1989). A widely used measure of ethnic identity, the Multi Ethnic Identity Measure (MEIM) was developed by Phinney (1992) to capture ethnic identity across three continuous dimensions, affirmation and belonging, ethnic identity achievement, as well as a factor that captured an individual's relationship to others

outside of his or her group. Subsequent confirmatory factor analyses determined that the MEIM was best captured with two factors: 1) exploration and 2) commitment (Phinney & Ong, 2007; Roberts et al., 1999), which is more consistent with Marcia's general model of identity development.

Ethnic identity, defined as the degree of exploration and commitment to one's ethnic background, may be particularly salient for adolescents from racial minority groups compared to their racial majority peers. There is evidence of differences in salience of ethnic identity by racial ethnic group (Bracey, Bámaca, & Umaña-Taylor, 2004; Roberts et al., 1999), with White students often being found to score significantly lower than all other ethnic minority groups on the MEIM (e.g., Phinney, 1992; Roberts et al., 1999). Ethnic identity is thought to be a more central part of ethnic minorities' self-concept, as their minority status is more explicitly relevant in the larger societal context.

Ethnic Identity and Psychosocial Adjustment

Early theories about the relationship between ethnic group membership and psychological well-being suggested that being a member of an ethnic minority group would have a negative impact on self-esteem and adjustment (see Shelton et al., 2005 for review). These early researchers assumed that being an ethnic minority group member was directly linked to poor mental health outcomes. Further, it was believed that as a member of an ethnic minority group one is more susceptible to increased stress, including discrimination, which leads to worse psychological outcomes. Much of this research was focused on the label of minority status, and did not account for variation in degree of identification with one's ethnic group.

With changes in the social culture around racism, many researchers began to frame ethnic identity in more positive terms. Phinney (1989) suggested that ethnic identity might serve as a buffer against the potential negative impact of racism and stereotypes against one's ethnic group. In support of this, and in contrast to the theory that being a minority would lead to poorer psychological adjustment, are many studies that have found African-Americans score higher on measures of self-esteem than Whites (e.g., Crocker & Major, 1989). Given this finding is at odds with previous theories, it is possible that a factor such as positive ethnic identity explains this relationship. In fact, a number of studies have found a significant positive relationship with ethnic identity and psychosocial outcomes, such as self-esteem, self-efficacy, positive social functioning, and global self-worth (Arroyo & Zigler, 1995; Bracey et al., 2004; Phinney, 1992; Rivas-Drake, Seaton, et al., 2014; Rivas-Drake, Syed, et al., 2014; Smith, Walker, Fields, Brookins, & Seay, 1999; Street, Harris-Britt, & Walker-Barnes, 2009; Umaña-Taylor, 2004). Ethnic identity has also been found to be negatively associated with negative adjustment measures, including both externalizing and internalizing problems, specifically depression, as well as health risk behaviors and attitudes (Rivas-Drake, Syed, et al., 2014; Street et al., 2009). These findings provide support for the potential buffering role of ethnic identity on ethnic minority youth outcomes.

Further, there is additional evidence that ethnic identity might serve a resiliency function. Costigan and colleagues (2010) found a significant interaction effect of ethnic identity (measured by the total MEIM score) and GPA on self-esteem and depression after controlling for gender. Students with above average ethnic identity scores had stable levels of self-esteem and depression across achievement levels, while students with

average or below average levels of ethnic identity demonstrated the negative impact of lower achievement on self-esteem and depression. In other words, as student risk increased (lower GPA) students with a lower self-reported ethnic identity were more likely to also report lower self-esteem and higher depression scores, on average. A more achieved ethnic identity may serve as a promotive factor, while a less achieved identity may actually be a risk factor for individuals.

Ethnic Identity and Academic Achievement

Ethnic identity may be a significant resiliency factor specifically in the context of the educational system for ethnic minority students. There are many stereotypes surrounding the difficulty Hispanic and African American students experience with academic achievement. For example, some have postulated that ethnic minority students do not attempt to succeed academically to avoid "acting White" (Witherspoon, Speight, & Thomas, 1997). There is evidence that Hispanic students and African American students who have higher GPAs are less popular than their peers with lower GPAs (Fryer & Torelli, 2010). For example, Fryer and Torelli found that there was little difference in social status for Hispanic students with GPAs of 1.0 through 2.5 but that there was a decline in the popularity of Hispanic students after this point. Further, Hispanic students with a GPA of 4.0 were the least popular of all Hispanic students, and reported having on average three less friends than their white counterparts. Interestingly, these results have been found to only hold in more integrated school contexts, while schools with a majority of ethnic minority students do not demonstrate this negative effect of achievement on popularity (Fryer & Torelli, 2010). Additionally, the possible detrimental effect that stereotypes can have on ethnic minority youth's ability to succeed academically has been

tested in experimental "stereotype threat" paradigms (Steele, 1997). These experimental manipulations prime members of a group who are regularly stereotyped for negative academic performance (e.g., women and ethnic minorities) to think about this stereotype prior to taking a math test. Results indicate that those who were primed performed worse in comparison to members of the same group without this stereotype reminder before test-taking (Steele, 1997).

However, despite early theories of minority status being related to academic failure and evidence from the stereotype threat literature, there is a strong research base supporting the idea that having a strong ethnic identity helps ethnic minority students to overcome and reject negative stereotypes about their racial/ethnic group (e.g., Chavous et al., 2003; Crocker & Major, 1989; Oyserman, Gant, & Ager, 1995; Sellers et al., 2006). In contrast to early theories of ethnic minorities internalizing negative beliefs about their achievement capabilities, Witherspoon et al. (1997) found that the majority of ethnic minority students in their study reported feeling supported by both their peers and their families in their academic pursuits. The researchers also found that having an "achieved" racial/ethnic identity was associated with having a positive sense of one's ability to achieve academically. Similar to the literature examining the protective role of ethnicity on psychological adjustment, there is also evidence for ethnic identity as a resiliency factor for school success (Chavous et al., 2003; Miller & MacIntosh, 1999; Oyserman, Harrison, & Bybee, 2001). Together, this may suggest that while ethnic minority status may be associated with negative outcomes, having a greater sense of ethnic identity is protective for youth.

For example, Miller and MacIntosh (1999) found in a sample of African American high school students, that high levels of ethnic identity had a buffering effect on academic achievement in the presence of adolescent reported high levels of daily hassles. In addition, a strong and positive connection to one's ethnic group has been found to moderate the relationship between experiencing discrimination and school achievement and academic self-concepts (Wong, Eccles, & Sameroff, 2003). Chavous et al. (2003) found that African American youth who did not feel a strong connection to their African American background, viewed African Americans negatively, and believed that society viewed African Americans negatively as well, were more likely to have dropped out of school by 12th grade and had lower rates of college attainment. In other words, students who perceived African Americans as being devalued, but did not have a strong sense of identity or positive beliefs about African Americans, on average did worse academically. In contrast, youth who highly identified with being African American, had strong group pride, but who believed that society viewed African Americans negatively, were less likely to have dropped out of high school by 12th grade and had the highest rates of post-high school educational attainment. This suggests that having a strong sense of ethnic identity can be protective against negative outcomes in the presence of recognizing that racism exists in society.

Expanding the Concept of Ethnic Identity for Hispanic Youth

In examining the relationship between ethnic identity and academic achievement in Hispanic youth, it is important to consider the role of acculturation for children from immigrant families. Acculturation is defined as the process through which youth from immigrant cultures assimilate and incorporate attitudes and behaviors of the dominant

culture. This is opposed to the process of enculturation, which is the maintenance of the culture of origin (Cano et al., 2012). Prior research examining the relationship between acculturation and achievement has found mixed results (García-Vázquez, 1995; Hurtado & Gauvain, 1997; López, Ehly, & García-Vásquez, 2002; Telles & Ortiz, 2013). While some studies show that acculturation is associated with higher GPA and more positive academic aspirations for Hispanic youth (e.g., Hurtado & Gauvain, 1997), other studies have indicated that Hispanic youth who are less acculturated have more positive outcomes (e.g., Telles & Ortiz, 2013). These mixed results may be a reflection of the variation in how acculturation is measured. Some studies examine acculturation as a unidimensional measure of either being acculturated or not, rather than as a bidimensional model where individuals can have separate degrees of affiliation with their country of origin and the U.S. culture (Ryder, Alden, & Paulhus, 2000). In a bidimensional model individuals could have a strong affinity to one more than the other, a similar affinity to both U.S. Culture and their culture of origin, or not feel a strong affinity to either (Schwartz, Zamboanga, & Jarvis, 2007). Using a bidimensional model of acculturation, Lopez and colleagues (2002) found that Mexican American high school students who displayed a more integrated status, or those who had adopted practices from the mainstream culture while maintaining aspects of their heritage, performed the best academically.

Although acculturation and ethnic identity are often examined as independent constructs in the literature, for Hispanic students (as well as, more broadly, students from immigrant families), the acculturation and ethnic identity processes are intertwined (Phinney, Horenczyk, Liebkind, & Vedder, 2001). For adolescents from immigrant

families, ethnic identity and acculturation are thought to interact and influence each other over the course of development (Phinney, Horenczyk, et al., 2001). There is evidence that a combination of strong ethnic identity and a strong national identity is predictive of more positive outcomes, including school adjustment, for immigrant youth (Phinney, Horenczyk, et al., 2001). Mexican American high school students who report a bicultural identification, rather than identifying primarily with either Mexican or U.S. culture, have been found to have higher self-esteem, greater psychological well-being, and report being more comfortable navigating diverse social settings (Domanico, Crawford, & Wolfe, 1994). Further, Cano et al. (2012) found that acculturation was promotive of ethnic identity in a sample of Hispanic middle school students. In turn, ethnic identity was predictive of educational expectations through its positive association with conscientiousness (note, however, that this study did not test for actual educational attainment).

Furthermore, for Hispanic students from immigrant families, it is also critical to consider generational status in these relationships. Later generations are often more acculturated or assimilated into the mainstream U.S. culture (Valentine, 2001). However, there is evidence that later generations of students often do worse academically than earlier generations (known as, the immigrant paradox) (Telles & Ortiz, 2013). Relatedly, Spanish language use is another important factor that should be incorporated into the understanding of identity. In fact, Phinney and colleagues (2001) found that ethnic language proficiency was positively related to ethnic identity (as measured by total MEIM) in a sample of Mexican origin adolescents.

While prior literature has discussed the related nature of ethnic identity, acculturation, immigration, and language use, no studies have focused on how these factors combine to impact achievement. In a recent critique of the ethnic identity literature, Acevedo-Polakovich, Chavez-Korell, and Umaña-Taylor (2014) suggest the importance of examining ethnic identity along with other related cultural factors for Hispanic populations, including adaptation and acculturation. Interestingly, an earlier review by Rivera-Santiago (1996) also suggested the importance of broadening our approach toward understanding Latino ethnic identity to include acculturation, biculturalism, and generational processes. However, very few, if any, studies have done this. In addition, many studies either focus on Mexican American youth or group all Hispanic subgroups together. However, this is ultimately problematic as Hispanic individuals are a heterogeneous group (Umaña-Taylor & Fine, 2001). As such, the present study sought to incorporate these suggestions into the theory and data analysis process to broaden the scope of what defines ethnic identity for Hispanic youth, without the assumption that the model would hold across all subgroups.

Possible Mediators of Ethnic Identity and Academic Achievement

Very few studies have examined mediators of the relationship between ethnic identity and achievement. In one study, Schwartz et al. (2007) found that self-esteem mediated the relationship between ethnic identity and academic grades in a sample of Hispanic middle school students; this study also found that greater U.S. orientation had a negative indirect relationship to grades through high acculturative stress and low self-esteem. In another study, concientiousness was found to mediate the relationship between ethnic identity and educational expectations of youth (Cano et al., 2012);

however, they did not look at actual achievement in this study. Academic motivation has also been suggested as a possible mediator (Fuligni, Witkow, & Garcia, 2005), but has not been tested directly as a mediators. Many studies instead look at ethnic identity and acculturation as moderators. While does provides an interesting conceptualization of these constructs, it does not advance the understanding of mechanisms that link cultural processes to academic achievement. Therefore, a goal of the present study was to examine two potential mediators of ethnic identity and achievement:, self-efficacy and social support.

Self-Efficacy. Self-efficacy is defined as the degree to which an individual feels as if they can achieve in challenging situations (Bandura, 1977). General self-efficacy is not situation specific, but rather is thought to cut across contexts (Scholz, Doña, Sud, & Schwarzer, 2002), and therefore may be considered part of an individual's larger self-concept or identity. Schwarzer and Warner (2013) suggest that as individuals experience successes and failures across multiple domains, they develop a more global perception of their ability to succeed. It is thought to be a stable sense of how an individual believes they can master stressful or difficult situations across domains. The original measure of general self-efficacy was developed in Germany (Schwarzer & Jerusalem, 1995), and has since been used widely internationally, translated into 32 other languages, and been found to be reliable across various nationalities (Scholz et al., 2002). A meta-analysis across five countries (U.S., Poland, Costa Rica, Germany, and Turkey) found that general self-efficacy was positively related to a number of adaptive outcomes, such as school grades, quality of life, and school/job satisfaction (Luszczynska, Gutiérrez-Doña, & Schwarzer, 2005).

General self-efficacy may be particularly important to consider for at-risk ethnic minority youth. Indeed, individuals who report feeling they can achieve across diverse situations are more likely to also report a greater degree of resilience, as defined as the ability to cope with adversity and unfamiliar events (Sagone & Caroli, 2013). For youth in low-SES and failing schools, high self-efficacy may be what helps some to succeed despite the challenging circumstances. Further, general self-efficacy has been found to be related to both intrinsic and extrinsic academic motivation (McGeown et al., 2014). In turn, motivation is related to academic outcomes, including grades and attendance (McGeown et al., 2014). In total, there is evidence to suggest that self-efficacy may have an important role to play in the academic success of at-risk, minority youth.

Social Support and Academic Achievement. Social support is also related to positive academic outcomes. Social support promotes student engagement, and can help students feel extra motivation, and that they have the ability to succeed (Klem & Connell, 2004; Lee, Smith, Perry, & Smylie, 1999; McCollum & Yoder, 2011). Social support has also been found to relate to educational outcomes. In a sample of Mexican American high school students, positive support from teachers was associated with higher GPA (López et al., 2002). In addition, social support has been found to buffer the relationship between SES and academic achievement (Malecki & Demaray, 2006). Social support has also been found to buffer against discriminatory experiences for Latino students' academic outcomes (DeGarmo & Martinez, 2006). However, not all students report feeling supported. Students who lack a supportive environment may have lower educational aspirations and be at greater risk of dropping out of school (Becker & Luthar,

2002). A lack of supportive environment may be particularly detrimental to adolescents already at-risk due to individual background level factors.

The Current Study

The current project explored the relationship between ethnic identity, perceived social support, self-efficacy, and academic achievement. Ethnic identity has been previously defined as the degree of commitment, attachment, and exploration into one's ethnic background (Phinney, 1992; Roberts et al., 1999). However, this definition of ethnic identity is limiting particularly for Hispanic students, where other important cultural processes, such as acculturation, are also thought to contribute to their self-concept. In addition, there is overlap in how these constructs are measured; for example, measures of ethnic identity and acculturation both often ask respondents to indicate their level of participation in culturally-relevant activities. Similarly, language is considered another important marker of affinity with one's ethnic group and has been found to be positively related to ethnic identity (Phinney, Romero, et al., 2001). It is also critical to consider generational status as degree of ethnic identity, acculturation, and language use vary as individuals become more assimilated into the dominant U.S. culture (Cuellar, Nyberg, Maldonado, & Roberts, 1997; Valentine, 2001). Therefore, as these cultural processes seem to be intertwined, Hispanic Ethnic Identity is proposed as a latent construct comprised of the following factors: a) searching and commitment to one's ethnic identity, b) acculturation orientation: assimilation (the degree of affinity with U.S. culture) and segregation (the degree of affinity with one's culture of origin), c) Spanish language use, and d) immigration generational status (i.e., U.S. Born, 1st Generation, 2nd Generation, or 3rd Generation). These factors are usually examined as independent

constructs of cultural identity; however, a more integrated model may more accurately reflect the ethnic identity of Hispanic youth.

The hypothesized model is displayed in Figure 1. The model predicts that Hispanic youth with a more achieved Hispanic Ethnic Identity will view their world as more supportive (i.e., higher perceived teacher social support) and believe that they can succeed in challenging situations (i.e., higher general self-efficacy). As completing school is often viewed as a significant outcome of a positive childhood, a child's perceptions of the world and his or her ability to navigate social situations is suggested as contributing to his or her ability to achieve in school (measured by GPA). This model may be particularly relevant for youth from at-risk communities who benefit from feeling that their ethnic identity gives them important grounding, that they have a general sense of their competence, and that they are supported by teachers in the school environment in order to be successful.

In sum, the following questions and hypotheses were explored in this study:

I. How do ethnic identity, acculturation, and immigration status interplay to form a sense of identity for Hispanic adolescents?

Prior literature suggests that the ethnic identity and acculturation processes are related to each other for Hispanic youth and all are likely to contribute to a sense of self. Further, these processes are inherently linked to immigration and language. It was therefore hypothesized that each of these factors will load onto a latent construct of Hispanic Ethnic Identity.

II. Does Hispanic Ethnic Identity predict academic achievement? Do self-efficacy and perceived social support from teachers mediate this relationship?

Based on prior research suggesting the positive relationship between an achieved ethnic identity and academic achievement and acculturation and academic achievement, it is predicted that Hispanic Ethnic Identity will be positively associated with student GPA. It is further hypothesized that this relationship will be mediated through self-efficacy and perceived social support from teachers.

III. Recognizing the heterogeneity of the Hispanic population and the tendency for the literature to overgeneralize the Hispanic label to all subgroups, the model will be tested separately by specific nationality (as N permits).

While it is expected that the overall model will hold across subgroups of the Hispanic population, prior work suggests that variations in experience within those groups may lead the overall model to over or underestimate the effects for specific subgroups (Umaña-Taylor & Fine, 2001). Therefore, the model was run separately by nationality, as allowed by sample size.

Methods

Procedure

This project used data collected during the 2013-2014 school year from a larger study conducted at an urban high school in Central New Jersey that evaluated a college preparatory program intervention. This study was approved by the Institutional Review Board at Rutgers, the State University of New Jersey. Students were administered surveys during their Language Arts classes with a goal of surveying as many students in the school as possible. Students were first asked to fill out a demographic questionnaire and then were provided a survey packet to complete. As the school has a high percentage of Spanish speaking students, surveys were provided in both English and Spanish so students had the option of which language they preferred to read the survey items. Surveys were administered in November 2013 and May 2014; the latter time point was used in the present analysis due to differences in survey items administered.

Participants

The high school had nearly 1400 students enrolled at the end of the 2013-2014 school year. Nine hundred and forty three students (67.50% of the total school population) completed the survey in May 2014. Of these, 693 students (79.49%) reported that they were Hispanic on the demographic questionnaire; this sample excluded biracial or multiracial students who indicated that they have Hispanic heritage. This exclusion was due to the inability to determine which aspect of their identity they would have been rating when completing the measure of ethnic identity. One hundred and nine students were excluded as they were missing demographic information of interest (e.g., immigration status or language spoken at home). Finally, 42 students were excluded as

they were missing more than 25% of the ethnic identity, self-efficacy, and social support predictor variables, and 26 students were excluded for not having complete acculturation data. This left a final sample of 540 to be used for data analysis.

Tables 1 and 2 display the demographics for the analysis sample. Thirty-four percent of the sample was in the 9th grade (*n* = 186), 22.59% was in the 10th grade (*n* = 122), 23.70% was in the 11th grade (*n* = 128), and 19.26% was in the 12th grade (*n* = 104). Approximately half of the sample was female (48.70%, *n* = 263). Approximately 39% percent of students were born outside of the United States (*n* = 210), with 14.63% born in Mexico (*n* = 79), 13.70% born in the Dominican Republic (*n* = 74), 7.41% born in Honduras (*n* = 40), and 3.15% being born in another country (*n* = 17), including Jamaica, Puerto Rico, and El Salvador. The majority of the sample (59.07%, *n* = 319) was classified as second-generation immigrants, with at least one parent born outside of the US. Less than 2% of the sample was third-generation immigrations, with grandparents born outside of the US (1.48%, *n* = 8), and less than 1% of students had all three generations born in the United States (0.56%, *n* = 3). About half of the students (55.56%, *n* =300) reported speaking both English and Spanish at home, 39.44% (*n* = 213) reported speaking only Spanish at home, 4.07% (n = 22) reported speaking only English at home, and less than 1 percent (*n* = 5) reported speaking English, Spanish, and French at home. The majority of the sample was receiving free or reduced lunch (90.37%), a marker of low socioeconomic status. About 85% of students in the analysis sample completed the demographic survey in English (*n* = 462), 14.07% completed the Spanish side of the demographic sheet (*n* = 76), and two students filled out both sides (0.37%).

A series of Independent Samples t-tests and Chi-Square analyses were performed in order to test for differences between the analysis sample and the full school population, as well as between the analysis sample and the full sample of students who completed the survey during the May administration. Compared to the sample of students who did not complete any of the survey (n = 857), the analysis sample was found to have a higher Grade Point Average (GPA) on average (t (1395) = 3.78, $p < .001$, mean difference = 0.17). The analysis sample had a greater percentage of students receiving free or reduced lunch (χ^2 (2) = 3.70, $p < .001$), and a lower percentage of students with a special education classification (χ^2 (1) = 4.04, $p = .045$). Consistent with the definition of the sample as Hispanic, a greater percentage of the analysis sample were classified as having Limited English Proficiency (χ^2 (1) = 17.20, $p < .001$) and were born outside of the US (χ^2 (1) = 18.38, $p < .001$). There was no difference in age (t (1395) = 3.78, $p = .554$) or grade level distribution (χ^2 (3) = 2.30, $p = .513$) between these two groups. Finally, there were also no sample differences by gender (χ^2 (1) = 0.24, p = .628).

Subsequently, comparisons were made to other students who completed the May survey but who were not included in the analyses due to not being Hispanic or missing pertinent data (n = 403). Again, on average, the analysis sample had a higher GPA than the exclusion sample (t (941) = 2.53, $p = .012$), although this difference may not be considered clinically meaningful (mean difference = 0.13). While the analysis sample was also significantly older than those who completed the survey but were excluded from analysis (t (941) = 3.65, $p < .001$), the real difference was not meaningful (mean difference = 0.31). Similarly, the distribution by grade level significantly differed between these two groups (χ^2 (3) = 14.51, $p = .002$). In addition, there were a

significantly greater percentage of students in the analysis sample receiving free or reduced lunch (χ^2 (2) = 26.00, $p < .001$). There were no differences by gender (χ^2 (1) = 0.003, $p = .956$) or by special education classification (χ^2 (1) = 0.003, $p = .956$). As might be expected based on the definition of the analysis sample as needing to have self-reported that they were Hispanic, a greater percentage of the analysis sample were classified as having Limited English Proficiency (χ^2 (1) = 13.60, $p < .001$) and were born outside of the US (χ^2 (1) = 17.78, $p < .001$).

Measures

Demographic Information. Access to school records was provided by the high school, with parental permission. These records included information about students' status in the school, such as what grade they were in, whether they were receiving free or reduced lunch, and their special education classification. The records also contained information about students' gender, race/ethnicity, birth country, and first language.

In addition to the school-reported demographics, students were asked to complete a cover sheet with demographic information (Appendix A). Students were asked to indicate on the survey their race/ethnicity, the race/ethnicity of their mother and father, what languages they speak at home, and whether their mother and father were born in the United States. If their parents were not born in the U.S., they were asked to indicate their parents' country of origin. If their parents were born in the U.S., they were asked if they had grandparents who were born outside of the U.S.

Ethnic Identity Search and Belonging (MEIM). Students' level of ethnic identity was assessed using the Multi Ethnic Identity Measure (MEIM; Phinney, 1992; Roberts et al., 1999). Originally designed with 14 items and three subscales (Phinney,

1992), Roberts and colleagues (1999) revised the MEIM to a 12-item measure following an exploratory factor analysis that indicated one of the three factors from the original measures was comprised of only two items. These two items were the only items worded in the negative so the researchers posited that these items may have been more confusing for participants and thus, these items were eliminated, which produced two subscales (see Appendix B). The first, Belonging, is 7 items and assesses the level of affirmation, belonging, and commitment to one's ethnic group(s) (e.g., "I feel a strong attachment to my own ethnic group identity"). The second subscale of the MEIM, Search, is comprised of 5 items that focus on the degree of exploration and searching for an identity in that ethnic group (e.g., "I am active in organizations or social groups that include mostly members of my ethnic group"). Items on the MEIM are measured on a forced choice 4-point Likert-type scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Agree*, and 4 = *Strongly Agree*), and are averaged to create an overall summary score of ethnic identity, as well as scores on the two subscales. A higher score indicates higher reported ethnic identity.

Prior research has found that the MEIM is reliable and valid across ethnic groups (Phinney, 1992; Ponterotto, Gretchen, Utsey, Stracuzzi, & Saya, 2003; Roberts et al., 1999; Yancey, Aneshensel, & Driscoll, 2001). For example, Roberts and colleagues (1999) examined the reliability and factor structure of the 12-item MEIM in a sample of 5,423 middle school students, which included individuals of European American, African American, Mexican American, Central American, Vietnamese American, Chinese American, Indian American, Pakistani American, Pacific Islander, and mixed ancestry. Results found that the MEIM was significantly and positively correlated with a measure of salience of ethnicity for European American, African American, and Mexican

American youth (*r* range .37 to .44, all $p < .001$); this study did not report correlations for the other ethnic groups. In addition, results revealed that the overall MEIM had a Cronbach's α of .85 across ethnic groups, and specifically looking at Mexican American and Central Americans the Cronbach's α was .81. Other studies have found a similar range of reliability, Cronbach's α = .69 - .91 (Avery, Tonidandel, Thomas, Johnson, & Mack, 2007; Spencer, Icard, Harachi, Catalano, & Oxford, 2000). The reliability for the MEIM in the present sample was α = .86 for the total score, α = .66 for the Search subscale and α = .89 for the Belonging subscale. Given the discrepancy in reliability between the subscales, the total score was used in all analyses.

Acculturation. Level of acculturation was assessed during the spring survey only, using the Acculturation, Habits, and Interests Multicultural Scale for Adolescents (Unger et al., 2002). This scale has 8 items that ask students to state their degree of affinity with the United States and the country that their family is from (see Appendix C). For example, students were asked to report whether "the people I fit in with best are from..." the *United States*, *The country my family is from*, *Both*, or *Neither*. Other items ask about music and food preferences, holidays, and where their best friends are from. Responses can be classified into four scales that indicate the orientation of the student to the American or family culture: 1) Assimilation (the total number of "United States" responses), 2) Separation (the number of "The country my family is from" responses), 3) Integration (the number of "Both" responses), and 4) Marginalization (the number of "Neither" responses). Scores range from 0 to 8 on each subscale. The original psychometrics study was performed in a diverse sample of sixth grade students in Los Angeles (*N* = 317; 53% Hispanic/Latino, 19.2% Asian/Pacific Islander, 14.2% Filipino,

8.5% White, 2.2% African American, 1.3% Other, 1.6% Missing). This study found that reliability ranges from .50 to .79 across the four response categories, and that this measure was correlated with other measures of acculturation (Unger et al., 2002). The reliability for the present sample was Cronbach's $\alpha = .77$. In accord with study Aim 1, the Assimilation subscale, the relative endorsement and adoption of the host culture, and the Separation subscale, the relative level of maintenance of one's native cultural heritage, were used in the modeling analyses.

Self-Efficacy. Students' self-efficacy was obtained from the General Self-Efficacy (GSE) scale (Schwarzer & Jerusalem, 1995). This scale consists of 10 items that assess the students' global beliefs in their competence to handle difficult or stressful tasks; this is different from specific self-efficacy for particular situations (see Appendix D). Example items include "I can always manage to solve difficult problems if I try hard enough" and "I can remain calm when facing difficulties because I can rely on my coping abilities." Students were asked to rate the degree they believed each statement to be true on a 4-point Likert scale: *Not at all true, Hardly true, Moderately true,* or *Exactly true*. Items are averaged to create a total self-efficacy score, with a higher score indicating a greater rating of self-efficacy.

The GSE was selected for this study as it has been found to found to have reliability across individuals from multiple ethnic groups and nationalities. Scholz et al. (2002) conducted a meta-analysis to examine the reliability and validity across 19,120 individuals from 25 different countries and found the Cronbach's α scores of different nationalities ranged from .75 - .92. It has also been shown to have both convergent and discriminant validity, as it has been found to be positively correlated with similar

constructs such as self-esteem and positive emotion, while negatively associated with depression and stress (Schwarzer & Warner, 2013). The Cronbach's α for the present sample was = .84.

Perceived Social Support from Teachers. Students were asked to answer questions about their perceptions of the support they receive from their teachers (e.g., "My teacher(s) treats me fairly"). The 4 teacher-specific items were adapted from the Teacher subscale of the Child and Adolescent Social Support Scale (CASSS; Malecki, Demaray, Elliott, & Nolten, 1999). Appendix E displays the items used from this scale. Items were on a 5-point Likert scale: *Never, Almost Never, Some of the Time, Most of the Time, and Almost Always*. A mean score was computed with a higher score indicating greater perceived social support.

This scale has been shown to have strong reliability in prior work, Cronbach's α = .88 - .92 (Malecki & Demaray, 2006; Malecki & Demary, 2002). The CASSS was also found to be positively correlated to another widely used measure of social support, the Social Support Scale for Children (Harter, 1985), with the teacher subscales on these measures correlated at r = .64 (Malecki & Demary, 2002), suggesting that they are measuring the same construct of perceived teacher social support. The Cronbach's α for the present sample was = .86.

School-Reported Grade Point Average. An unweighted Grade Point Average (GPA) for the year was obtained from the students' school records. The high school utilized the following scores to compute unweighted GPA: A+ = 4.3, A = 4.0, A- = 3.7, B+ = 3.3, B = 3.0, B- = 2.7, C+ = 2.3, C = 2.0, C- = D+ = 1.3, D = 1.0, and F=0.0. The unweighted GPA scores in the present sample ranged from 0.17 to 4.09.

Data Analytic Strategy

Preliminary analyses were conducted to understand the relationships among study variables. First, a series of t-tests were run to examine differences between males and females across the MEIM, acculturation, social support, and self-efficacy measures, as well as GPA. One Way Analysis of Variance was also used to test for difference across study variables by grade level. Subsequently, Pearson Product Moment Correlations were computed in order to understand the relationship between study predictor variables and GPA, and to test for any issues of multicollinearity. These correlations were also computed separately for males and females.

Before proceeding with the modeling analyses, preliminary analyses were also conducted to analyze missing data patterns in order to determine if data were systematically missing or missing at random. In addition, as structural equation modeling is sensitive to non-normality, each variable was examined for skewness and kurtosis to determine if transformations were necessary. All predictor variables were standardized before being entered into the modeling analyses.

In order to test the hypothesized model (Figure 1), structural equation modeling (SEM) was used. This approach was selected as it allows for the integration of confirmatory factor analysis to examine latent constructs as well as path analysis to look at the relative impact of one variable in explaining the variability in another. First, the measurement model for the latent factor of Hispanic Ethnic Identity was examined. This was followed by the examination of the structural model. Both direct and indirect effects are estimated in the structural model (Kline, 2011). The direct effect examines the impact of a particular variable X on a particular variable Y. The indirect effect, or

mediation effect, examines the impact of X on Y via another specified variable. The total indirect effect is the sum of all indirect effects of X on Y via all tested mediators. To test the statistical significance of the mediation paths, the Bias-Corrected Percentile Bootstrapping approach was utilized. Bootstrapping is a resampling technique that accounts for non-normality of data (Preacher & Hayes, 2008). The bootstrap estimates were calculated on 5000 bootstrap samples, generating 95% confidence intervals in each sample to determine the significance of the total indirect effect; if the lower and upper bounds of the confidence interval do not contain zero, then the mediation effect is found to be significant.

The proposed model was identified, as it was recursive, and furthermore met the requirements for the t-rule and Null B rule (Kline, 2011). Although not depicted in the figures depicting the analyses, disturbances were included on all endogenous variables. The following fit indices were examined to determine the goodness of fit of models: chi-square, TLI, and CFI and RMSEA following recommended standards (Kline, 2011). Good fitting models generally have non-significant chi-square values, TLI at or above .90, CFI at or above .95, and RMSEA at or below .06. Parameters were established as statistically significant with alpha < .05.

The non-experimental nature of these data cannot rule out other possible models of academic achievement, therefore an alternative model testing whether Hispanic Ethnic Identity mediates the relationship between social support and achievement was also tested. Perceived social support may facilitate the development of a more achieved sense of ethnic identity through encouraging exploration and a sense of belonging that may allow for greater affirmation and commitment. This in turn may predict academic

achievement. As the hypothesized model was not nested within the alternative model, a chi-square difference test cannot be used to test which model fit the data better (Kline, 2011). Instead, the Akaike Information Criterion (AIC) and Browne-Cudeck Criterion (BCC) were used to compare model fit, with a 10-unit decrease in AIC or BCC indicating a better fitting model.

All preliminary analyses were conducted using SPSS software (IBM Corporation, 2012) and the modeling analyses were conducted with AMOS software (Arbuckle, 2006).

Results

Preliminary Analyses

First, initial descriptive analyses were conducted. Table 3 displays the means, standard deviations, and skewness and kurtosis statistics for all continuous study variables. Following recommended guidelines by Kline (2011) for larger sample sizes, the absolute values of the skewness and kurtosis scores were examined and it was determined that all values were within the acceptable range (skewness statistic < 3 and kurtosis statistic < 10) and, thus, no further transformations were indicated. Next, the data were examined for outliers and each variable was standardized (i.e., converted to a z-score) to examine whether any data point was greater than or equal to plus or minus three standard deviations away from the mean score of each variable. The MEIM had four scores greater than three standard deviations below the mean (SD: -3.60 to -3.11; raw scores: 1.00, 1.08, 1.25). Self-efficacy had two scores greater than three standard deviations below the mean (SD: -4.90; raw score: 1.00). In addition, both acculturation measures had outliers that were greater than three standard deviations above the mean: acculturation assimilation (n = 10; SD: 3.20 or 3.77; raw score: 7 or 8) and acculturation separation (n = 5; SD: 3.24 or 3.81; raw score: 7 or 8). As the scores on these measures were in the range of expected scores, outliers were not deleted from the dataset. Neither social support nor GPA had scores classified as outliers.

Tests of significant differences across all study variables by gender and grade were conducted using Independent Samples t-Tests and One-Way Analysis of Variance, respectively (see Tables 4 and 5). In addition, Pearson Chi-Square Difference Tests were used to examine differences on Spanish language use at home and immigration status.

Significant differences were found between male and female students on the measure of self-efficacy (t (538) = 2.88, p = .004, d = .12), with males having higher self-efficacy scores on average. There were also significant differences on both acculturation measures: acculturation assimilation (t (517.20) = 3.98, p < .001, d = .59) and acculturation separation (t (517.20) = -2.30, p = .004, d = -.34). On average, male students tended to have higher Assimilation scores, while females tended to have higher scores on the Separation subscale. Further, male and female students also differed on GPA (t (538) = -3.27, p = .001, d = -.22), with females on average having higher end-of-year GPAs compared to males. There were no significant differences in MEIM (t (538) = -3.27, p = .637) or social support (t (538) = -3.27, p = .110) scores. There were also no significant differences between the percentage of males and females across immigration status groups (χ^2 (1) = .02, p = .901) or who reported speaking Spanish at home (χ^2 (3) = .91, p = .824). However, due to the number of significant differences by gender, this factor was either controlled for in later analyses or was used as a moderator in order to examine differences between male and female students in the model.

Significant differences were also found across grade levels (see Table 5) on perceived social support from teachers (F (3, 536) = 4.61 p = .003), self-efficacy (F (3, 536) = 10.77 p < .001), and GPA (F (3, 536) = 4.69 p < .001). Examining Bonferonni post-hoc tests of differences, it was found that on average 10th graders (M = 3.42, SD = .94) reported significantly lower social support compared to 11th (M = 3.80, SD = .81; p = .006, d = -.37) or 12th graders (M = 3.79, SD = .74; p = .013, d = -.36). On the measure of self-efficacy, 9th graders (M = 2.93, SD = .51) had significantly lower scores than either 11th (M = 3.15, SD = .45; p = .001, d = -.22) or 12th (M = 3.21, SD = .46; p < .001,

d = -.28) graders; similarly, 10th graders (M = 2.96, SD = .51) had significantly lower self-efficacy scores than 11th (M = 3.15, SD = .45; p = .012, d = -.19) and 12th graders (M = 3.21, SD = .46; p = .001, d = -.25). In addition, students in the 9th grade (M = 2.21, SD = .88) had significantly lower GPAs than students in either 11th (M = 2.58, SD = .70; p < .001, d = -.37) or 12th grade (M = 2.48, SD = .60; p = .026, d = -.27). Students in 10th grade (M = 2.58, SD = .70) had significantly lower GPAs on average relative to students in 11th grade (M = 2.32, SD = .80; p = .048, d = -.26). On the other hand, there were no significant differences in the MEIM (t (538) = 0.98, p = .404), acculturation-assimilation (t (538) = 1.09, p = .353), or acculturation-separation (t (538) = 0.37, p = .777) scores. There were also no significant differences between the percentage of students in the immigration status groups (χ^2 (3) = 0.77, p = .857) or who reported speaking Spanish at home (χ^2 (9) = 6.60, p = .679) across the four grades. However, as there were significant differences by grade level this was entered as a control variable in all modeling analyses.

Correlations between all study variables are displayed in Table 6. As expected, the total MEIM score was positively associated with the acculturation separation (r = .13, p = .002) score and negatively correlated with the acculturation assimilation score (r = -.19, p < .001). The separation and assimilation acculturation scores were negatively correlated with each other (r = -.23, p < .001). Relatedly, immigration generational status was positively related to the assimilation acculturation score (r = -.23, p < .001), while negatively correlated with the separation score (r = -.23, p < .001). Reporting speaking Spanish at home was negatively associated with both the assimilation score (r = -.18, p < .001) and immigration status (r = -.16, p < .001), and positively associated with acculturation separation (r = .14, p = .002). In addition, the total MEIM score was

positively related to both perceived social support from teachers (r = .14, p = .001) and self-efficacy (r = -.19, p < .001). Interestingly, immigration status was negatively associated with self-efficacy (r = -.13, p = .003) and speaking Spanish at home was positively associated with perceived social support (r = .11, p = .014). Social support and self-efficacy were also positively associated with each other (r = .27, p < .001). Further, GPA was positively correlated with social support (r = .17, p < .001) and self-efficacy (r = .12, p = .004), while GPA was negatively correlated with the acculturation separation score (r = -.14, p = .001).

In addition, due to the significant differences by gender across study variables, separate correlations are also reported for male and female students (see Tables 7 and 8). Of note, social support was found to be negatively correlated with the Acculturation assimilation score only for female students (r = -.14, p = .028) and not for male students (r = .00, p = .995); this relationship was not initially found when looking at the overall sample (r = -.06, p = .141). On the other hand, the positive relationship found between social support and GPA in the overall sample was discovered to be only for males (r = .22, p < .001) and not for females (r = .10, p = .117) when the gender groups were examined separately.

In addition, separate correlations were run for younger grades (i.e., 9th grade and 10th grade; see Table 9) and older grades (i.e., 11th grade and 12th grade; see Table 10). Interestingly, a number of significant correlations only appeared for the younger grades. Specifically, the relationship between the MEIM and the acculturation measures was only significant for the younger grades (assimilation, r = -.24, p < .001; separation r = .15, p = .007). Relatedly, the correlation between the MEIM total score and social support (r =

.17, $p = .002$) and between the MEIM and self-efficacy ($r = .28$, $p < .001$) was only statistically significant for the younger grades. In addition, the negative relationship between GPA and the separation acculturation score ($r = -.19$, $p = .001$), as well as the positive relationships between GPA and self-efficacy ($r = .18$, $p = .002$) and GPA and social support ($r = .12$, $p < .039$) were also only present in the younger grades.

Measurement Model

The measurement model for the latent factor of Hispanic Ethnic Identity was evaluated using five observed factors: 1) the degree of searching and affirmation of ethnic identity as measured by the MEIM, 2) Spanish language spoken at home, 3) assimilation (U.S.) acculturation orientation, 4) separation (culture of origin) acculturation orientation, and 5) immigration generational status (coded: 1 = 1st generation or student born outside of the U.S., 2 = 2nd generation or at least one parent born outside of the U.S., 3 = 3rd generation or at least one grandparent born outside of the U.S., 4 = Student, parents, and grandparents all born in the U.S.). As is standard practice in SEM, it is assumed that the errors are uncorrelated (Ullman, 2006). Results are displayed in Figure 2. The model was identified with the MEIM factor being held fixed at 1. All other factors loaded onto the latent variable at $p < .001$. Following recommended standards (Kline, 2011), the model was found to be a good fit to the data with a non-significant chi-square and additional fit indices ($\chi^2 = 7.49$, $df = 5$, $p = .187$, TLI = .96, CFI = .98, and RMSEA = .03).

The direction of the observed relationships were as predicted in the hypothesized model. Higher Hispanic Ethnic Identity was positively related to the total MEIM score, the acculturation separation (culture of origin orientation) score, and speaking Spanish,

while being negatively related to the acculturation assimilation (U.S. orientation) score and the immigration status variable (indicating that higher Hispanic Ethnic Identity was associated with the student being a more recent immigrant). Examining the weight of the path coefficients and the squared multiple correlations (i.e., 1 - the error variance) determined the degree to which these observed factors were accounted for by the latent construct of Hispanic Ethnic Identity and their relative importance. The Acculturation scales had the highest factor loadings (U.S. orientation, β = -.51; Culture of origin orientation β = .50) and the greatest percentage of variance accounted for by the latent construct (U.S. orientation, 25.9% variance explained; Culture of origin orientation 24.3% variance explained). Immigration status was the next highest factor loading (β = -.47; 23.4% variance explained), followed by speaking Spanish at home (β = .31, 10.3% variance explained), and lastly the MEIM total score (β = .26, 6.9% variance explained).

Structural Analyses

Following the establishment of the measurement model, the hypothesized structural model was tested using structural equation modeling (see Figure 1). It was hypothesized that Hispanic Ethnic Identity would positively impact academic achievement, as measured by GPA. Further, this relationship was hypothesized to be mediated by both perceived social support from teachers and self-efficacy. Additionally, there was a hypothesized positive correlation between social support and self-efficacy. Although not included in the figure, the model controlled for both gender and grade level based on results from preliminary analyses, with covariance being estimated between the controls and the self-efficacy, social support, and GPA variables. Additionally, covariance was estimated between gender and the acculturation variables due to the

significant difference between males and females on acculturation in the preliminary analyses.

Figure 3 displays the modeling results. The model had a significant chi-square (χ^2 (38) = 69.69, p = .001), which did not indicate adequate model fit. However, as chi-square tests are highly susceptible to large sample bias, additional measures of model fit were examined. Following recommended standards, the model was found to be a good fit to the data with TLI = .92, CFI = .96, and RMSEA = .04. Examining the squared multiple correlations, it was estimated that 12% of the variance in GPA was explained by the predictors in the model. As expected, Hispanic Ethnic Identity significantly predicted general self-efficacy (B = .65, SE = .22, β = .20, p = .003). However, contrary to the resiliency hypothesis, the direct effect of Hispanic Ethnic Identity on GPA was negative (B = -.48, SE = .17, β = -.19, p = .005). Hispanic Ethnic Identity was not a significant predictor of perceived social support from teachers (B = .31, SE = .20, β = .10, p = .107). Further, social support (B = .11, SE = .03, β = .14, p = .001) and self-efficacy (B = .09, SE = .04, β = .11, p = .015) both had significant direct effects on GPA, and as expected were positively correlated with each other (r = .25, p < .001).

Subsequently, the Bias-Corrected Percentile Bootstrapping approach was used to test whether self-efficacy and social support mediated the relationship between Hispanic Ethnic Identity and GPA. The standardized indirect effect of Hispanic Ethnic Identity on GPA via self-efficacy and social support was significant (estimate = .04, SE = .02, .01 > 95% CI < .08, p = .013). This suggests that in addition to the negative direct effect of Hispanic Ethnic Identity has on GPA, it also has a significant and positive total indirect effect on GPA through its impact on self-efficacy and social support. In other words,

although the direct effect of Hispanic Ethnic Identity on GPA is negative, it also has a positive effect on GPA through its positive impact on self-efficacy and social support.

Model Comparisons

Examining Gender as a Moderator. As there were significant differences between males and females across a number of study variables, gender was tested as a moderator of the structural model (see Figure 4 and 5). Individual parameters were examined to see if there were changes in significance or directionality of relationships. Grade level continued to be a control variable in the following modeling analysis. This model had a significant chi-square (χ^2 (64) = 102.48, p = .002), which did not indicate adequate model fit. However, the model was found to be an acceptable fit to the data when examining other fit indices (TLI = .90, CFI = .94, RMSEA = .03). Examining the squared multiple correlations, it was estimated that for male students 17.0% of the variance in GPA was explained by the predictors in the model, but only 5.3% of the variance in GPA was explained for female students, hence clarifying the strength of relationships found in the overall model.

Figure 4 depicts the model for males in the sample. Similar to the initial model, Hispanic Ethnic Identity had a significant direct effect on self-efficacy (B = .84, SE = .35, β = .26, p = .016) and GPA (B = -.53, SE = .26, β = -.20, p = .044), but not on perceived social support from teachers (B = .16, SE = .30, β = .05, p = .581). Different from the original modeling analysis, general self-efficacy was not a significant predictor of GPA for male students (B = .06, SE = .05, β = .08, p = .229). However, perceived social support continued to be a significant predictor of GPA (B = .15, SE = .05, β = .20, p < .001). The standardized indirect effect of Hispanic Ethnic Identity on GPA via self-

efficacy and social support was not significant (estimate = .03, SE = .04, -.02 > 95% CI < .12, p = .257) indicating non-significant mediation.

For female students (see Figure 5), Hispanic Ethnic Identity was found to have a significant direct effect on perceived social support from teachers (B = .51, SE = .25, β = .19, p = .037). However, the relationship between Hispanic Ethnic Identity and general self-efficacy (B = .42, SE = .25, β = .14, p = .091), as well as between Hispanic Ethnic Identity and GPA did not reach significance (B = -.35, SE = .20, β = -.16, p = .078); although, there were tendencies towards significance. General self-efficacy had a significant effect on GPA (B = .10, SE = .05, β = .14, p = .035), while perceived social support (B = .07, SE = .05, β = .09, p = .190) did not. In contrast to males, there was a significant standardized indirect effect of Hispanic Ethnic Identity on GPA via self-efficacy and social support (estimate = .04, SE = .02, .002 > 95% CI < .10, p = .038), suggesting a significant mediation effect.

Overall, results revealed that there were differences in the model parameters by gender. This suggests that the relationship between Hispanic Ethnic Identity and academic achievement may differ for male and female students. Specifically, social support appears to be a more important predictor in the model for male students while self-efficacy is more important for female students.

Alternative Model – Hispanic Ethnic Identity as a Mediator between Social Support and GPA. As the data in this study were cross-sectional, other possible alternative models cannot be ruled out. One alternative is that ethnic identity actually mediates the relationship between social support and achievement. Perceived social support may facilitate the development of a more achieved sense of ethnic identity

through encouraging exploration and a sense of belonging that may allow for greater affirmation and commitment. This in turn may predict academic achievement. Conversely, students who do not feel supported by their environment may struggle in their identity development process as they have greater difficulty feeling like they belong, which may lead to lower achievement. Implicitly, students' perception of social support is connected to their ethnic identity, creating the meaningful link of both to achievement. To test this potential model, an SEM model was constructed with the reversed pathway from social support to Hispanic Ethnic Identity to GPA. All other paths were specified in accordance with the original hypothesized model, with grade and gender as controls.

Figure 6 displays the results of this alternative model. This model had a significant chi-square (χ^2 (38) = 69.28, p = .001). Of note, although the direct path between perceived social support and Hispanic Ethnic Identity was not significant, there was a tendency toward significance (B = .03, SE = .02, β = .11, p = .084). Moreover, the same was observed regarding the indirect effect of social support on GPA via Hispanic Ethnic Identity (estimate = -.02, SE = .01, -.05 > 95% CI < .001, p = .058), suggesting a possible mediation effect. However, the indirect effect of Hispanic Ethnic Identity on GPA via self-efficacy, continued to remain significant in this alternative model (estimate = 0.02, SE = .01, .002 > 95% CI < .05, p = .012). As this model was not nested within the original hypothesized model, the model fit statistics were compared to assess for superior model fit. In examining the AIC and BCC values, the differences between the alternative model (AIC = 173.28, BCC = 175.85) and the original hypothesized model (AIC = 173.69, BCC = 176.28) were slight, which did not strongly suggest that one model was a superior fit to the data over the other. Similarly, the TLI, CFI, and RMSEA

statistics (Original and Alternative: TLI = .92, CFI = .96, and RMSEA = .04) suggested an equivalent fit to the data.

This alternative pathway was also tested with gender as a moderator (see Figures 7 and 8). This model had a significant chi-square (χ^2 (64) = 100.84, p = .002). Interestingly, social support had a significant direct effect on Hispanic Ethnic Identity for female students (B = .08, SE = .04, β = .22, p = .019), but not for male students (B = .01, SE = .02, β = .03, p = .689). However, there was no significant mediation found for either male (estimate = -.01, SE = .02, -.07 > 95% CI < .03, p = .557) or female students (estimate = -.03, SE = .02, -.10 > 95% CI < .002, p = .061) for social support on GPA via Hispanic Ethnic Identity, although there was a tendency toward significance for females. In comparing the AIC and BCC scores between the original and alternative moderation models, differences did not suggest one model fits better than the other (Original Moderation Model: AIC = 282.48, BCC = 290.89 and Alternative Moderation Model: AIC = 280.84, BCC = 289.25). Further, differences in the model fit statistics were also inconclusive (Original Moderation Model: TLI = .90, CFI = .94, RMSEA = .03; Alternative Moderation Model: TLI = .91, CFI = .95, and RMSEA = .03). Overall, this inconclusive examination of model fit requires additional replication to determine the direction of the relationship between Hispanic Ethnic Identity and social support, and their subsequent impact on academic achievement.

Testing the Model in Subethnic Groups. Recognizing the heterogeneity of the Hispanic population and the tendency for the literature to overgeneralize the Hispanic label to all subgroups, the model was tested separately by specific nationality (as N permitted). Students' report of their parents' ethnic origin was examined and students

who reported that both parents were from a given ethnic background were coded as that background (i.e., if a student reported that both mother and father's families were from Mexico, the student was coded as of Mexican descent). However, if a student reported that his mother's family was from one country (e.g., Ecuador) while his father's family was from another (e.g., Honduras), the student was coded as multiethnic. There were 249 students who reported that both of their parents were from Mexico, 130 students from the Dominican Republic, 62 from Honduras, 10 from Puerto Rico, 2 from Ecuador, 11 from Other, and 76 who reported parents from different ethnic groups. As it is standard practice to use SEM with an N of at least 200 (Kline, 2011), the hypothesized model was run separately only for students of Mexican descent, as well as those with families from the Dominican Republic in an exploratory manner. Gender and grade level were entered as control variables; however, due to the smaller sample size, gender could not be used as a moderator.

Results of the model for students of Mexican descent are displayed in Figure 9. The model was found to be a good fit to the data (χ^2 (38) = 39.91, p = .385; TLI = .99, CFI = .99, RMSEA = .01) and the predictors in the model accounted for 15% of the variance in GPA. However, despite the better model fit, the majority of the results from the original analyses did not hold when looking at the Mexican subsample. Hispanic Ethnic Identity no longer had a significant direct effect on self-efficacy (B = .58, SE = .38, β = .16, p = .113) or on GPA (B = -.24, SE = .23, β = -.10, p = .308). Similarly, self-efficacy did not significantly impact GPA (B = .06, SE = .05, β = .08, p = .213). Only perceived social support was found to have a significant direct effect on GPA (B = .14,

SE = .05, β = .20, p = .002). As would be expected from the non-significant paths, there was no significant mediation (estimate = .03, SE = .03, -.02 > 95% CI < .11, p = .189).

Figure 10 depicts results from the model for students with families from the Dominican Republic. Although the model had a non-significant chi-square indicating good model fit (χ^2 (38) = 52.39, p = .060), the other indicators of model fit suggest that the model could be improved (TLI = .82, CFI = .90, RMSEA = .05); this inadequate model fit may be due to the smaller sample size for this group (n =130). The predictors in the model accounted for 19.2% of the variance in GPA. Interestingly, the results from the Dominican subsample differed from both the full sample as well as from the Mexican subsample. Hispanic Ethnic Identity was found to have a significant negative direct effect on GPA (B = -.80, SE = .33, β = -.37, p = .017). There was a trend towards a positive direct effect of Hispanic Ethnic Identity on general self-efficacy (B = .52, SE = .29, β = .23, p = .077). All other paths previously examined were not significant (p > .05).

Overall, the results from the Mexican and Dominican subsamples suggest the necessity of replication of these findings. It would be important to test this model in additional samples of youth with sufficient sample size in these and other Hispanic nationalities in order to understand how these constructs interact for different subethnic groups.

Discussion

This study was one of the first to explore the combined impact of ethnic identity, acculturation, Spanish language use, and immigration status on academic achievement for Hispanic youth. Results demonstrated that the construct of Hispanic Ethnic Identity could be successfully defined as encompassing these four factors. Higher Hispanic Ethnic Identity was thereby comprised of a greater total score on the Multi Ethnic Identity Measure (MEIM), being less acculturated (i.e., individuals reporting a greater affiliation with their culture of origin and a lower affiliation with U.S. culture), reporting speaking Spanish at home, and being a more recent immigrant. Contrary to the initial resiliency hypothesis, the direct pathway from Hispanic Ethnic Identity to academic achievement was found to be negative. However, while the direct effect of Hispanic Ethnic Identity on academic achievement was opposite of the prediction in the hypothesized model, the full modeling results found that the relationship between Hispanic Ethnic Identity and GPA was partially mediated through general self-efficacy and social support, specifically for female students. These findings suggest, on the surface, that while the direct impact of Hispanic Ethnic Identity on grades is negative, when mediated by general self-efficacy and social support, it may have the hypothesized resiliency impact.

In examining this mediation effect further, Hispanic Ethnic Identity had a positive direct effect on general self-efficacy, which in turn had a positive direct effect on GPA; in other words, Hispanic Ethnic Identity has a positive indirect effect on GPA through general self-efficacy. This is consistent with prior work that has found that self-efficacy significantly and positively mediates the relationship between ethnic identity and other

educational and psychological outcomes, such as future career expectations of Hispanic students (Gushue, 2006) and depressive symptoms (Swenson & Prelow, 2005). Further, the significant mediation suggests that Hispanic Ethnic Identity, or greater affiliation with one's culture of origin, may also have a positive influence on achievement through its positive impact on self-efficacy. These results, overall, demonstrate a more complicated picture of the role of ethnic identity in academic achievement for Hispanic youth. The construct of Hispanic Ethnic Identity appears to have a dual impact on achievement via distinct pathways.

Although prior work has found that negative stereotypes about ethnic minorities' academic abilities can negatively impact academic performance, particularly for boys (see Oyserman, Brickman, & Rhodes, 2007 for review), there is also significant body of literature suggesting the positive impact that ethnic identity can have on psychosocial outcomes, including academic achievement (e.g., Fuligni et al., 2005; Oyserman et al., 2007). Some of the discrepancy between prior literature and results in the present study (specifically the negative direct pathway) may be explained by the fact that prior studies have used individual measures of ethnic identity, such as the MEIM, rather than a composite construct, as in the present study. Indeed, the composite construct used in this study incorporates identity factors, namely acculturation, which evidence mixed findings about what the correct balance of acculturation (i.e., assimilating into the host culture) and enculturation (i.e, retaining allegiance with one's culture of origin) really is for academic success (Acevedo-Polakovich, Quirk, Cousineau, Saxena, & Gerhart, 2014). While some studies show that greater acculturation is associated with higher GPA and more positive academic aspirations for Hispanic youth (e.g., Hurtado & Gauvain, 1997),

other studies have indicated that Hispanic youth who are less acculturated have more positive outcomes (e.g., Telles & Ortiz, 2013). The more recent findings are consistent with the often cited "immigrant paradox," in which later generations of immigrants, who are thought to be more acculturated, have been found to have diminished expectations, motivation, and actual achievement compared to recent immigrants (Suárez-Orozco & Suárez-Orozco, 1995). It is thought that first-generation immigrants are more idealistic in pursuit of the promise of the "American Dream" and have not yet become disillusioned from the realities of ongoing racism and discrimination against ethnic minorities. Thus, newer immigrants may continue to display greater motivation and, therefore, have higher achievement.

However, the results from the current study in some ways are in contrast to the immigrant paradox, in that, in this study, a higher sense of Hispanic Ethnic Identity, or a greater likelihood of being a first generation immigrant and having a more significant affiliation with one's culture of origin across a number of dimensions, was directly associated with lower end-of-year GPA. Comparatively, being second generation and beyond, more assimilated to U.S. culture, and having lower affinity to one's culture of origin or ethnic group, was directly predictive of higher academic achievement. One possibility for this discrepancy in findings may be the specific context of this particular sample of Hispanic students; they were the majority population in a school where the majority of students struggle academically. Perhaps, being the majority in a context where the majority does not do well is disadvantageous. Other work has suggested that the beneficial impact of ethnic identity is lessened in contexts where ethnic minority students are the majority (Umaña-Taylor, 2004), as ethnic identity is more salient in

contexts where one is the minority (McGuire, McGuire, Child, & Fujioka, 1978). Furthermore, information from the present study was not available to report on the number of students who were undocumented or who had undocumented parents, but prior work has indicated that the undocumented population is at particular risk (Bean et al., 2013). However, it is important to note that simply examining the direct effect is not the complete picture of these results; a narrative of greater complexity is indicated by the findings of the current study.

Additionally, reviewing the overall modeling effects does not take gender differences into account. As prior work has found differences between male and female students on academic outcomes (Heckman & LaFontaine, 2010) and a number of psychosocial and cultural factors (Alfaro et al., 2009; Umaña-Taylor et al., 2012), this study examined the model separately by gender. Interestingly, the degree of variance explained in end-of-year GPA by the overall model was greater for male students than female students. Results also suggested that the pathway through which ethnic identity relates to academic achievement is different for male and female students. Specifically, social support appeared to be a significant direct predictor of GPA for male students, but not female students. On the other hand, the mediation pathway for Hispanic Ethnic Identity through self-efficacy was significant for female students, but not male students.

This is consistent with prior work by Oyserman and colleagues (2001) examining the differential impact of racial identity for male and female African-American students. This study used the tripartite theory of Racial Ethnic Identity (REI), which includes three dimensions of ethnic identity: 1) Connectedness, 2) Awareness of Racism, and 3) Embedded Achievement (Oyserman et al., 1995). Similar to Phinney's MEIM, the REI

connectedness dimension is characterized by a sense of belonging with one's ethnic group, taking pride in ethnic group history and traditions, and feeling that one's ethnic group is an important part of his or her identity. The second aspect of the three-part REI framework, awareness of racism, describes how individuals incorporate information about how out-group members view and potentially stereotype their ethnic group. Embedded achievement, the third dimension of REI, is defined as the integration of achievement and doing well academically into one's ethnic group values and norms (Oyserman et al., 1995). Oyserman et al. (2001) posited that differences in gender socialization would lead males and females to experience the relative importance of dimensions of racial identity in differential ways. Specifically, since typical socialization of girls does not emphasize individual achievement or agency, the researchers believed the "embedded achievement" dimension would buffer against the negative effects of racism awareness on academic efficacy for female students. On the other hand, as male-specific socialization practices focus less on relationships and connections with others, the researchers hypothesized that the "connectedness" dimension of REI would be protective for males. Results revealed this hypothesized pattern, although the effects were stronger for females than for males.

Similarly, the results from the current study suggest that female students benefit academically from greater self-efficacy, while males benefit from greater perceptions of social support. Thus, the differential gender effects on academic achievement seem to be related to gender socialization practices, whereby males and females benefit most when equipped with what they are typically "lacking." In addition, these results further demonstrated the importance of not only controlling for gender in modeling analysis, but

also examining how the models and pathways may vary by gender. Specifically, these findings have implications for the role of gender in the conceptualization of ethnic identity for both research analyses and intervention design.

Finally, acknowledging the heterogeneous nature of the Hispanic population (Umaña-Taylor & Fine, 2001), the current study also sought to examine whether the model differed by specific subpopulations. While the small sample size in specific subgroups limited the interpretability of these analyses, these exploratory models for Mexican-origin and Dominican-origin adolescents did reveal distinct patterns of results. This provides additional evidence against the appropriateness of grouping all Hispanic individuals into one category, as happens often in psychological and educational research.

Limitations

This study is not without limitations. Firstly, the preliminary analysis of sample characteristics found demographic differences between the sample of students included in the data analyses and those who were not included from the larger school population. Specifically, these different samples occurred because students did not complete the survey at all, were missing pertinent information, or they were not Hispanic. Some of these differences were consistent with sample selection (e.g., the data analysis sample had a greater percentage of students born outside of the U.S. or classified as Limited English Proficient), while other differences are less easily explained (e.g., students in the analysis sample had statistically higher average GPA). While the difference in GPA was not clinically meaningful (less than .18), these differences emphasize the importance of replicating the model in additional samples of students.

Relatedly, this study used a very specific sample of Hispanic students. These students were from a high school that was predominantly low SES (90.98% of the student body receiving free or reduced lunch) and had a nearly overwhelming majority percentage of Hispanic students in the school (82.61%). Results may differ for Hispanic adolescents who are in schools that are more ethnically diverse or where they are the minority population. Prior work by Umaña-Taylor (2004) exploring the relationship between ethnic identity and self-esteem found differential results between schools by ethnic composition, with Hispanic students in schools that are predominantly not Hispanic (i.e., 15%) reporting greater levels of ethnic identity than students in schools that are more evenly distributed (i.e., 45%) or where they are the majority group (i.e., 96%). All research is conducted within a context, and it is important for future work to acknowledge these different contextual factors and design studies that are able to explore the impact of context.

Furthermore, while this study acknowledges that the Hispanic classification encompasses individuals of various nationalities and specific cultural groups, the small sample size of the subethnic groups precluded the ability to truly examine the model by these different groups in the present sample. Therefore, future work is needed in this area. With sufficient sample size, research can explore how ethnic identity relates to academic and psychosocial factors for different cultural groups. Nevertheless, it is also important to remember that these subethnic groups do not exist in isolation from each other, and consequently, understanding the context of the school and surrounding neighborhood is critical for understanding how cultural elements and experiences are influencing students' ethnic identity development.

Lastly, the MEIM was selected for the present study as it is a standard measure used in the majority of ethnic identity research; however, there are other models and measures of ethnic identity that more directly incorporate a sense of academic self into the construct of ethnic identity. As noted earlier, the Racial Ethnic Identity (REI) model (Oyserman et al., 1995) addresses elements of identity more clearly linked to academic achievement than the MEIM (i.e., "embedded achievement") and might be better suited for studies with academics as an outcome. Atschul and colleagues (2006) suggest that since there are negative stereotypes surrounding African American and Latino youths' ability to achieve academically, that embedded achievement might be a necessary aspect of ethnic identity that serves as a defense against the negative beliefs of assumed failure based on one's ethnic/racial background. Individuals would need to believe that strong achievement and success are in-fact normal and expected characteristics of their in-group to battle the negative stereotypes and assumptions. Future work may consider using the REI measure in place or in addition to the MEIM to further expand the ethnic identity framework.

Implications and Future Directions

Despite these limitations, this study is an important step in a continued understanding of how ethnic identity relates to student achievement for Hispanic adolescents. That said, the opposing direct and indirect pathways, along with the differential findings by gender and subethnic groups, do not necessarily suggest one set of uniform implications. It is possible that for certain individual students, encouraging discussions related to ethnic identity and culture can have positive impacts. Having the opportunity to have discussions about race/ethnicity, racism, and discrimination are

certainly paramount for adolescents to explore and define their identity. However, results from the present study also suggest the possible direct unfavorable impact that a strong ethnic identity may have on student achievement.

The overall results from the current study also indicate the potential utility of school-based interventions promoting self-efficacy in students and fostering supportive relationships between school faculty and staff and students. School staff should facilitate environments that encourage students' growth in both the academic and personal domains. This may be particularly relevant for ethnic minority students who may perceive that their teachers do not understand them because of differences in background, both in terms of race/ethnicity and SES. However, it is also important to consider that the results of the current study revealed gender specific differences for these mediating factors. Specifically, that positive self-efficacy appeared to be a more significant factor for female students and positive perception of teacher support was more important for male students. Designing and implementing interventions that take into account these individual and group differences can be a challenge for researchers and educators. Nevertheless, these results are encouraging in finding potential areas for change and intervention to support at-risk youth in their academic success.

Additional research examining the model in other populations, particularly specific ethnic subgroups, will help elucidate the robustness of these findings. Relatedly, context is an important factor to consider when examining these cultural constructs. Prior work by Acevedo-Polakovich, Chavez-Korell, et al. (2014) suggests that there may be differences in the implications of Hispanic identity in particular neighborhood and school contexts. Additionally, there may be differences in the degree of ethnic identity that

students report depending on the demographic makeup and ratio of ethnic minorities in the neighborhood or school environment (Umaña-Taylor & Fine, 2004). For example, when Hispanic students are the minority population they report greater identity on average, as their identity is more salient within that environment. Therefore, future research exploring the relationship between ethnic identity and achievement should account for context as a moderating variable. Furthermore, while this study focused on Hispanic youth, understanding the relationship between ethnic identity and achievement is important in other racial and ethnic groups as well. Future work could explore how these factors interplay for other immigrant populations or for other racial groups in order to gain greater understanding of their relationship to academic achievement.

Finally, given that the identity development process is ongoing, subsequent evidence of its importance on psychosocial and academic outcomes may be best found by examining whether changes in identity scores over time predict subsequent positive psychosocial and academic outcomes. This suggests the necessity of longitudinal research in this area to build and broaden the existing knowledge. In addition, more studies examining possible mediators and moderators of this effect will support further understanding of the ways in which ethnic identity promotes positive outcomes, and whether there a subgroup specific effects. There has been a call in the literature for the study of the indirect effects of cultural variables, such as ethnic identity and acculturation, on educational outcomes, as the tendency for research studies to focus entirely on direct effects may not explain the full picture (Altschul, Oyserman, & Bybee, 2006). For example, to further expand this model, it would be valuable to include

perceptions of racism and discrimination to understand how stressors interact with identity to impact achievement.

Summary and Conclusion

Ethnic minority students from low-income neighborhoods are consistently cited as being at greater risk for academic failure compared to students who are White or from higher socioeconomic backgrounds. However, not all students with these risk factors are destined for this negative academic outcome. Understanding resiliency factors that help students to succeed academically, despite their being in an environment known for low performance, is critical to research and practice. In exploring how youth of Hispanic heritage develop a sense of self, it is important to consider how they view themselves within the context of their culture of origin as well within the U.S. culture. This study aimed to contribute to the literature by expanding the conceptualization of ethnic identity for Hispanic youth to include additional cultural processes that are thought to be important and related aspects of Hispanic identity. This model of Hispanic Ethnic Identity integrated acculturation processes in the development of a sense of ethnic selfhood, rather than as a distinct and separate developmental process. This project also incorporated generational status and language use into the conceptualization of ethnic identity. This study additionally tested two potential mediators of the relationship between ethnic identity and achievement: social support and self-efficacy. In reviewing the literature, there has been very little work actually testing the mechanisms of the relationship of ethnic identity and academic achievement. It is important to test mediational models to provide insight into possible mechanisms that can be targeted in educational interventions. This is particularly important for students identified as at-risk

for school failure. Identifying possible modifiable targets can support efforts to understand and lower the achievement gap and increase graduation rates of Hispanic students.

Table 1. Comparison of Sample Characteristics: Full School, Survey Completers, and Analysis Samples

	School (*N* = 1397)	Survey (*N* = 943)	Analysis (*N* = 540)
	N (%)	*N (%)*	*N (%)*
Grade			
9th	467 (33.43)	346 (36.69)	186 (34.44)
10th	335 (23.98)	240 (25.45)	122 (22.59)
11th	311 (22.26)	196 (20.78)	128 (23.70)
12th	284 (20.33)	161 (17.07)	104 (19.26)
Female	669 (47.89)	460 (49.10)	263 (48.70)
Receiving Free or Reduced Lunch (School-Reported)	1271 (90.98)	865 (91.73)	488 (90.37)
Receiving Special Education Accommodation (School-Reported)	262 (18.75)	158 (16.75)	87 (16.11)
Classified as Limited English Proficiency (School-Reported)	121 (8.66)	90 (9.54)	68 (12.59)
Race/Ethnicity (School-Reported)			
Hispanic	1154 (82.61)	796 (84.41)	540 (99.81)
Black/African-American	224 (16.03)	133 (14.11)	1 (0.19)
White	9 (0.64)	7 (0.74)	--
Other	10 (0.72)	7 (0.74)	--
Student Country of Birth (School-Reported)			
United States	948 (67.86)	629 (66.70)	330 (61.11)
Mexico	165 (11.81)	119 (12.62)	79 (14.63)
Dominican Republic	134 (9.59)	96 (10.18)	74 (13.70)
Honduras	80 (5.73)	54 (5.73)	40 (7.41)
Other Caribbean, Central and South America	53 (3.79)	35 (3.71)	17 (3.15)
Africa	11 (0.79)	8 (.85)	--
Other	6 (0.43)	1 (.11)	--
	M (SD)	***M (SD)***	***M (SD)***
Age	17.15 (1.33)	16.99 (1.30)	17.12 (1.32)
2013-2014 Grade Point Average (Unweighted GPA)	2.28 (0.81)	2.32 (0.80)	2.38 (0.78)

Table 2. Immigration Status, Country of Origin, and Languages Spoken at Home of Analysis Sample (N = 540)

	N (%)
Immigration Status	
First Generation: Child born outside of US	210 (38.89)
Second Generation: At least one parent born outside of US	319 (59.07)
Third Generation: Grandparents born outside of US	8 (1.48)
Fourth Generation +: Child, parents, and grandparents all born in US	3 (.56)
Mother's Family Country of Origin	
Mexico	272 (50.37)
Dominican Republic	140 (25.93)
Honduras	73 (13.52)
Puerto Rico	22 (4.07)
United States	1 (0.19)
Other	17 (3.14)
Multiple Selected	10 (1.85)
Not Reported	5 (0.93)
Father's Family Country of Origin	
Mexico	262 (48.52)
Dominican Republic	138 (25.56)
Honduras	79 (14.63)
Puerto Rico	14 (2.59)
United States	1 (0.19)
Other	28 (5.19)
Multiple Selected	12 (2.22)
Not Reported	6 (1.11)
Languages Spoken at Home	
English Only	22 (4.07)
Spanish Only	213 (39.44)
Bilingual: English and Spanish	300 (55.56)
Multilingual: English, Spanish, and French	5 (0.93)

Table 3. Descriptive Statistics of Continuous Predictor and Outcome Variables (*N* = 540)

Variable Name	*M*	*SD*	Range	Skewness	Kurtosis
Ethnic Identity (MEIM) - Total	2.85	0.51	1 – 4	-0.53	0.59
Acculturation – Assimilation (US)	1.42	1.74	0 – 8	1.44	1.81
Acculturation – Separation (Culture of Origin)	1.36	1.74	0 – 8	1.36	1.23
Self-Efficacy	3.05	0.50	1 – 4	-0.39	0.51
Social Support from Teacher	3.66	0.89	1 – 5	-0.42	-0.10
2013-2014 GPA (Unweighted)	2.38	0.78	0.17 – 4.09	-0.34	-0.32

Note. The school uses the following scores to compute unweighted GPA: A+ = 4.3, A = 4.0, A- = 3.7, B+ = 3.3, B = 3.0, B- = 2.7, C+ = 2.3, C = 2.0, C- = D+ = 1.3, D = 1.0, and F=0.0.

Table 4. Comparison of All Study Variables by Gender

Variable Name	Male *n* = 277	Female *n* = 263	*t*-value	*p*-value
	M (SD)	*M (SD)*		
Ethnic Identity (MEIM) - Total	2.85 (0.52)	2.83 (0.51)	0.47	.637
Acculturation – Assimilation (US)	1.70 (1.92)	1.12 (1.48)	3.98	< .001
Acculturation – Separation (Culture of Origin)	1.19 (1.63)	1.54 (1.83)	-2.30	.022
Self-Efficacy	3.11 (0.49)	2.98 (0.50)	2.88	.004
Social Support from Teacher	3.60 (0.95)	3.73 (0.83)	-1.61	.110
2013-2014 GPA (Unweighted)	2.27 (0.80)	2.49 (0.75)	-3.27	.001
	n (%)	*n (%)*	χ^2	*p*-value
Spanish Language at Home			0.02	.901
No	11 (3.97)	11 (4.18)		
Yes	266 (96.03)	252 (95.82)		
Immigration Status			.91	.824
First Generation (Child born outside of US)	112 (40.43)	98 (37.26)		
Second Generation	159 (57.40)	160 (60.84)		
Third Generation	4 (1.45)	4 (1.52)		
Fourth Generation +	2 (0.72)	1 (0.38)		

Table 5. Comparison of All Study Variables by Grade Level

Variable Name	9th Grade *n* = 186	10th Grade *n* = 122	11th Grade *n* = 128	12th Grade *n* = 104	*F*	*p*-value
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*		
Ethnic Identity (MEIM) - Total	2.84 (0.50)	2.79 (0.52)	2.90 (0.53)	2.84 (0.51)	0.98	.404
Acculturation – Assimilation (US)	1.59 (1.85)	1.43 (1.71)	1.25 (1.70)	1.32 (1.64)	1.09	.353
Acculturation – Separation (Culture of Origin)	1.35 (1.68)	1.39 (1.79)	1.47 (1.89)	1.23 (1.62)	0.37	.777
Self-Efficacy	2.93 (0.51)[a]	2.96 (0.51)[a]	3.15 (0.45)[a]	3.22 (0.46)[a]	10.77	< .001
Social Support from Teacher	3.65 (0.95)	3.43 (0.94)[b]	3.80 (0.81)[b]	3.79 (0.75)[b]	4.61	.003
2013-2014 GPA (unweighted)	2.21 (0.88)[c]	2.32 (0.80)[c]	2.58 (0.70)[c]	2.49 (0.78)[c]	6.65	< .001
	n (%)	*n (%)*	*n (%)*	*n (%)*	χ^2	*p*-value
Spanish Language at Home					.77	.857
No	7 (3.76)	6 (4.92)	6 (4.69)	3 (2.88)		
Yes	179 (96.24)	116 (95.08)	122 (95.31)	101 (97.12)		
Immigration Status					6.60	.679
First Generation (Child born outside of US)	74 (39.78)	44 (36.07)	53 (41.41)	39 (37.50)		
Second Generation	110 (59.14)	74 (60.65)	72 (56.25)	63 (60.58)		
Third Generation	1 (0.54)	2 (1.64)	3 (2.34)	2 (1.92)		
Fourth Generation +	1 (0.54)	2 (1.64)	0 (0.00)	0 (0.00)		

Note. [a] Bonferonni post-hoc comparisons found significant differences between 9th grade and 11th grade ($p = .001$), 9th grade and 12th grade ($p < .001$), 10th and 11th grade ($p = .012$), and 10th and 12th grade ($p = .001$).

[b] Bonferonni post-hoc comparisons found significant differences between 10th grade and 11th grade ($p = .006$) and between 10th grade and 12th grade ($p = .013$).

[c] Bonferonni post-hoc comparisons found significant differences between 9th grade and 11th grade ($p < .001$), 9th grade and 12th grade ($p = .026$), and 10th and 11th grade ($p = .048$).

Table 6. Correlations Among All Study Variables (Full Sample *N* = 540)

	1	2	3	4	5	6	7
1. Ethnic Identity	--						
2. Acculturation – Assimilation (US)	-.19***	--					
3. Acculturation – Separation (Culture of Origin)	.13**	-.23***	--				
4. Immigration Status	-.07^{+}	.22***	-.27***	--			
5. Spanish Language at Home	.07	-.18***	.14**	-.16***	--		
6. Social Support from Teachers	.14**	-.06	-.05	-.06	.11*	--	
7. Self-Efficacy	.22***	-.08	-.01	-.13**	.05	.27***	--
8. GPA (Unweighted)	-.03	.02	-.14**	.07	.07	.17***	.12**

Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$

Table 7. Correlations Among All Study Variables by Gender (Males Only *n* = 277)

	1	2	3	4	5	6	7
1. Ethnic Identity	--						
2. Acculturation – Assimilation (US)	-.19**	--					
3. Acculturation – Separation (Culture of Origin)	.16**	-.24***	--				
4. Immigration Status	-.01	.23***	-.26***	--			
5. Spanish Language at Home	-.01	-.13*	.14*	-.07	--		
6. Social Support from Teachers	.16**	.00	-.04	.01	.08	--	
7. Self-Efficacy	.22***	-.10	.06	-.13*	.07	.30***	--
8. GPA (Unweighted)	-.05	.06	-.17**	.08	.15*	.22***	.15*

Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$

Table 8. Correlations Among All Study Variables by Gender (Females Only, *n* = 263)

	1	2	3	4	5	6	7
1. Ethnic Identity	--						
2. Acculturation – Assimilation (US)	-.21***	--					
3. Acculturation – Separation (Culture of Origin)	.11^{+}	-.21***	--				
4. Immigration Status	-.14*	.23***	-.30***	--			
5. Spanish Language at Home	.15*	-.27***	.13*	-.25***	--		
6. Social Support from Teachers	.12+	-.14*	-.08	-.15*	.14*	--	
7. Self-Efficacy	.22***	-.12^{+}	-.04	-.12^{+}	.02	.27***	--
8. GPA (Unweighted)	-.01	.03	-.16*	.05	-.02	.10	.14*

Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$

Table 9. Correlations Among All Study Variables by Grade Level (9th and 10th Grades Only, *n* = 308)

	1	2	3	4	5	6	7
1. Ethnic Identity	--						
2. Acculturation – Assimilation (US)	-.24***	--					
3. Acculturation – Separation (Culture of Origin)	.15**	-.19**	--				
4. Immigration Status	-.05	.18**	-.25***	--			
5. Spanish Language at Home	.09	-.10^{+}	.14*	-.13*	--		
6. Social Support from Teachers	.17**	-.09	-.06	-.12*	.12*	--	
7. Self-Efficacy	.28***	-.08	.03	-.17**	.06	.31***	--
8. GPA (Unweighted)	-.01	.05	-.19**	.09	.11	.18**	.12*

Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$

Table 10. Correlations Among All Study Variables by Grade Level (11th and 12th Grades Only, *n* = 232)

	1	2	3	4	5	6	7
1. Ethnic Identity	--						
2. Acculturation – Assimilation (US)	-.11+	--					
3. Acculturation – Separation (Culture of Origin)	.10	-.29***	--				
4. Immigration Status	-.10	.28***	-.30***	--			
5. Spanish Language at Home	.04	-.30***	.13*	-.19**	--		
6. Social Support from Teachers	.08	.002	-.05	.04	.08	--	
7. Self-Efficacy	.12+	-.04	-.05	-.05	.04	.15*	--
8. GPA (Unweighted)	-.10	.01	-.08	.05	.01	.11	.03

Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$

Figure 1. Hypothesized Model

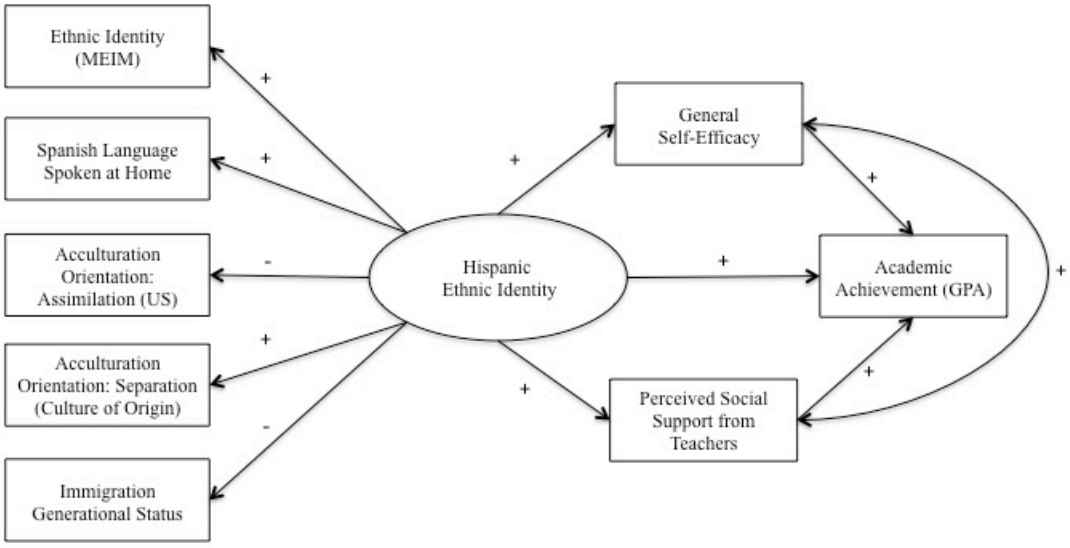
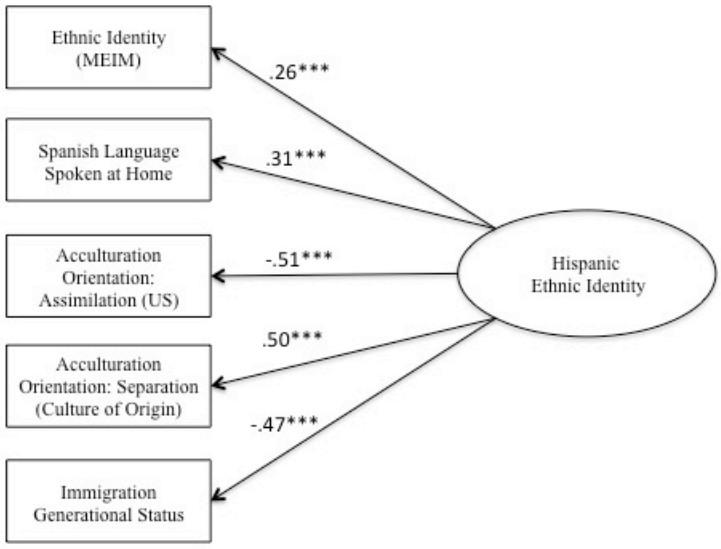
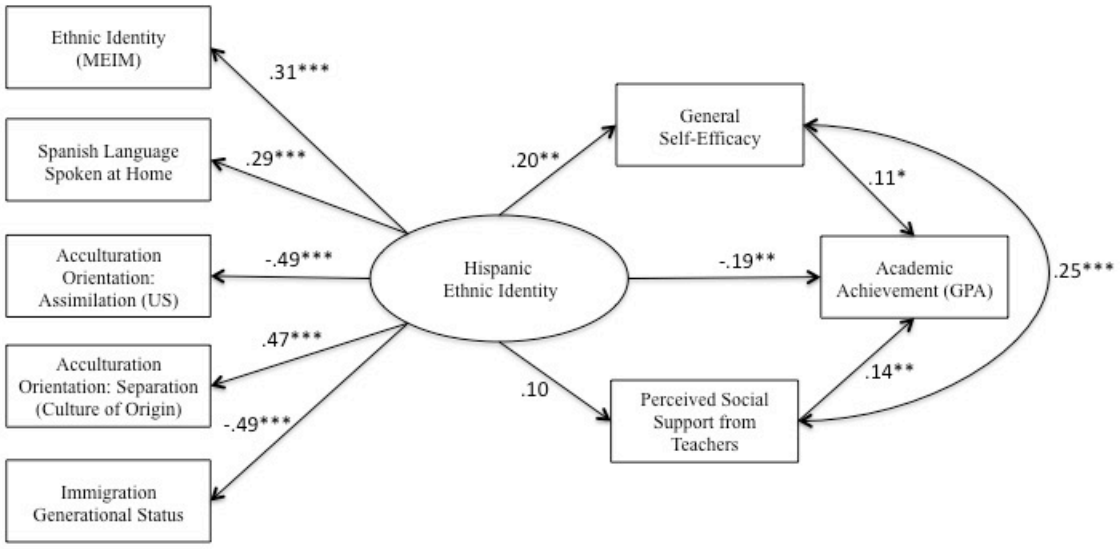


Figure 2. Measurement Model of Hispanic Ethnic Identity (*N* = 540)



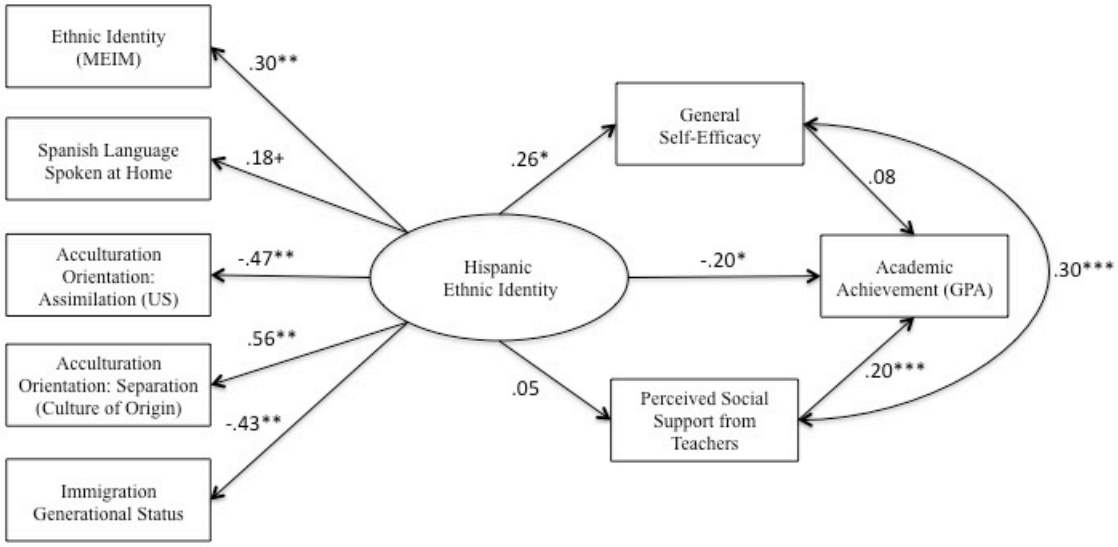
Note. $^{+}p < .10$, * $p < .05$, ** $p < .01$, $p < .001$. Model Fit Statistics: χ^2 (5) = 7.49, p = .187; TLI = .96; CFI = .98; RMSEA = .03.

Figure 3. Testing the Structural Model (*N* = 540)



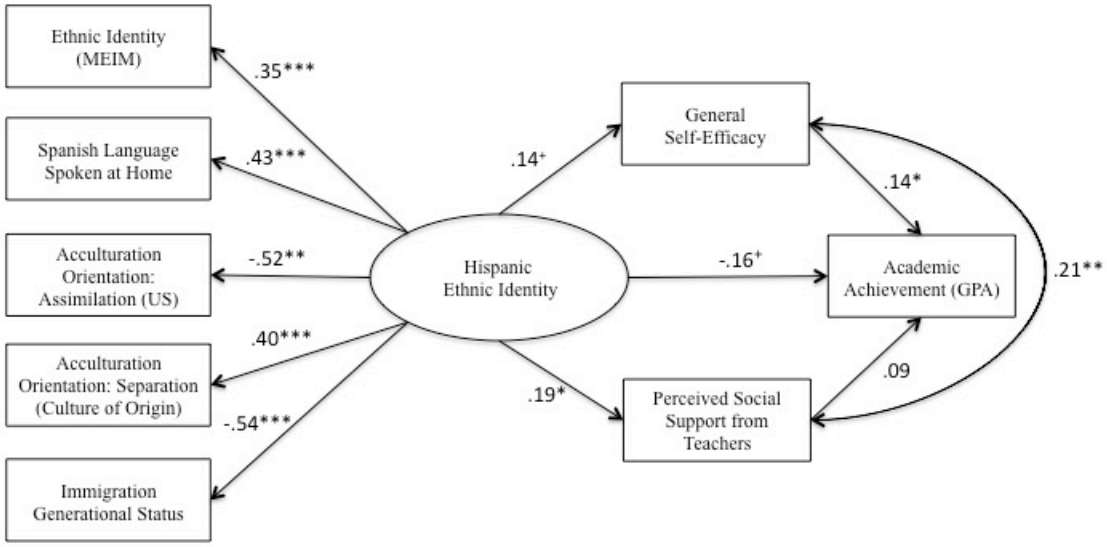
Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$. Gender and grade level were specified as control variables. Model Fit Statistics: χ^2 (38) 69.69, $p = .001$; TLI = .92, CFI = .96, and RMSEA = .04.

Figure 4. Testing Gender as a Moderator of the Structural Model (Males only, *n* = 277)



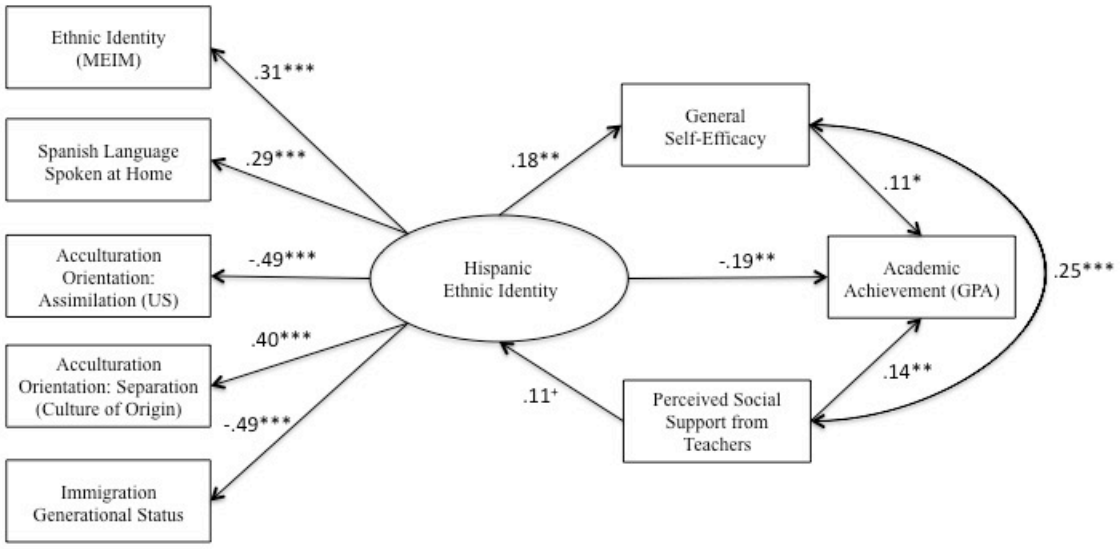
Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$. Grade level was specified as a control variable. Model Fit Statistics: χ^2 (64) = 102.48, p = .002; TLI = .90, CFI = .94, RMSEA = .03.

Figure 5. Testing Gender as a Moderator of the Structural Model (Females only, *n* = 263)



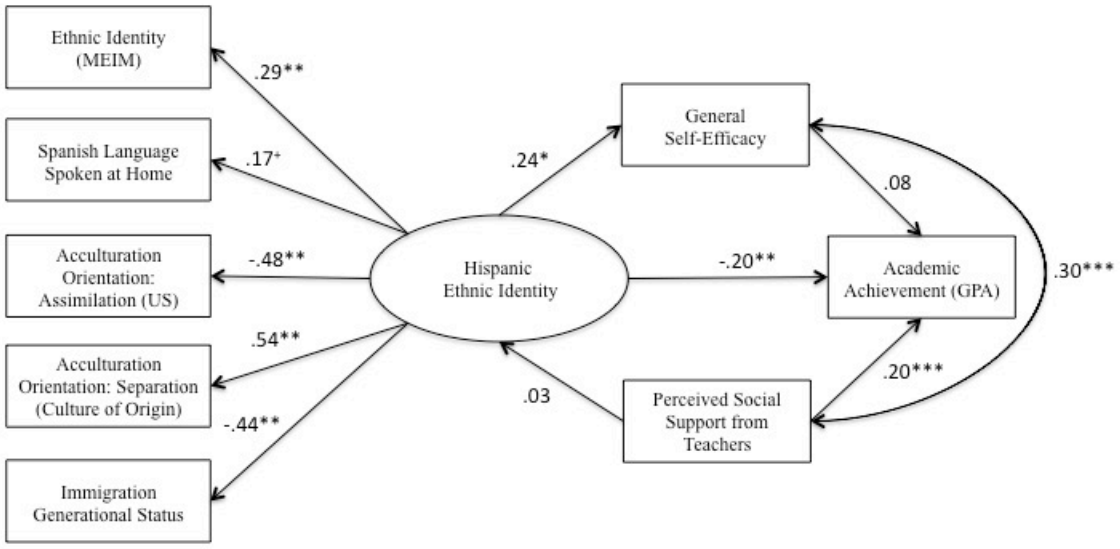
Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$. Grade level was specified as a control variable. Model Fit Statistics: χ^2 (64) = 102.48, p = .002; TLI = .90, CFI = .94, RMSEA = .03.

Figure 6. Alternative Model (*N* = 540)



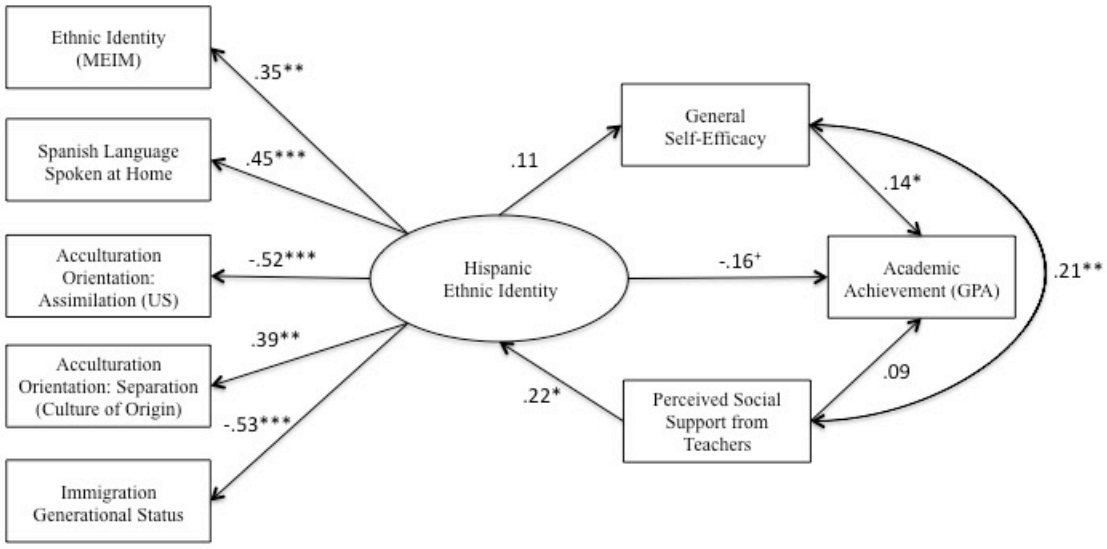
Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$. Gender and grade level were specified as control variables. Model Fit Statistics: χ^2 (38) = 69.28, p = .001; TLI = .92, CFI = .96, and RMSEA = .04

Figure 7. Alternative Model with Gender as a Moderator (Males only, *n* = 277)



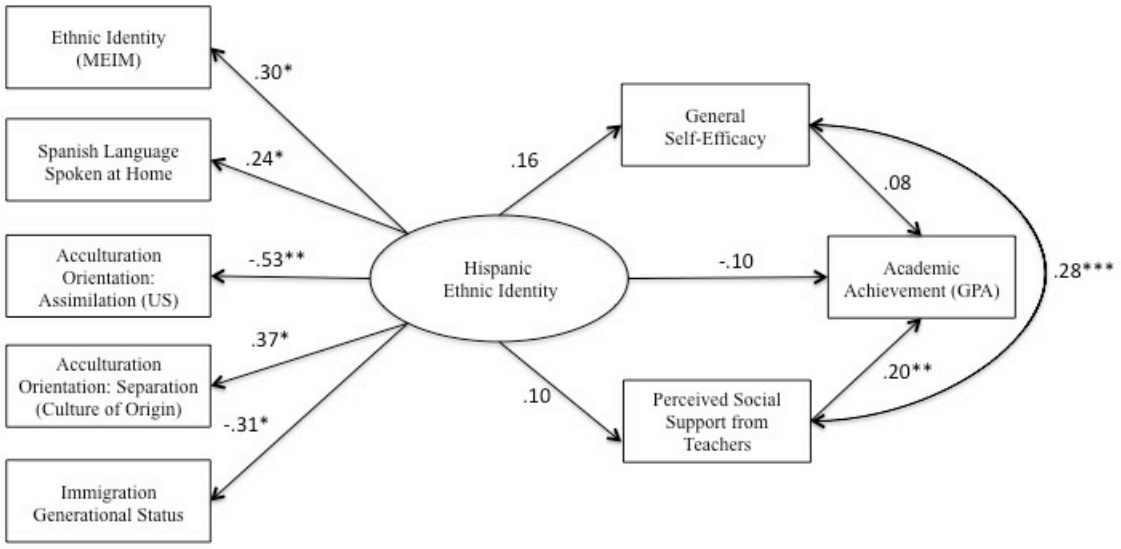
Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$. Grade level was specified as a control variable. Model Fit Statistics: χ^2 (64) = 100.84, $p = .002$, $p = .001$; TLI = .91, CFI = .95, and RMSEA = .03.

Figure 8. Alternative Model with Gender as a Moderator (Females only, *n* = 263)



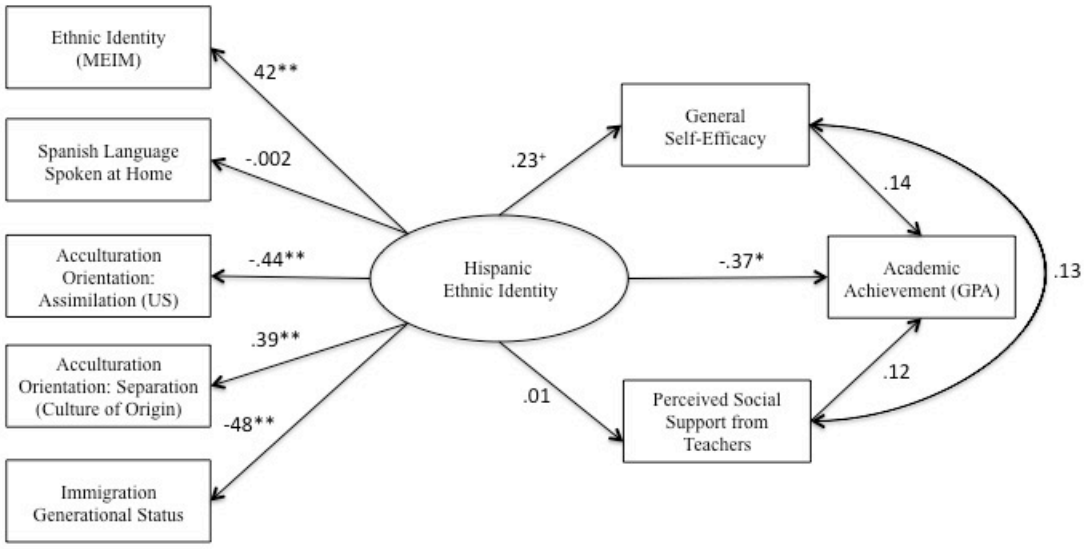
Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$. Grade level was specified as a control variable. Model Fit Statistics: χ^2 (64) = 100.84, $p = .002$, $p = .001$; TLI = .91, CFI = .95, and RMSEA = .03.

Figure 9. Testing the Structural Model in the Mexican Subsample (*n* = 249)



Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$. Grade level and gender were specified as control variables. Model Fit Statistics: χ^2 (38) = 39.91, p = .385, p = .001; TLI = .99, CFI = .99, RMSEA = .01.

Figure 10. Testing the Structural Model in the Dominican Subsample (*n* = 130)



Note. $^{+}$ $p < .10$, * $p < .05$, ** $p < .01$, $p < .001$. Grade level and gender were specified as control variables. Model Fit Statistics: χ^2 (38) = 52.39, $p = .060$, $p = .001$; TLI = .82, CFI = .90, RMSEA = .05.

References

Acevedo-Polakovich, I. D., Chavez-Korell, S., & Umaña-Taylor, A. J. (2014). U.S. Latinas/os' ethnic identity context, methodological approaches, and considerations across the life span. *The Counseling Psychologist, 42*(2), 154-169.

Acevedo-Polakovich, I. D., Quirk, K. M., Cousineau, J. R., Saxena, S. R., & Gerhart, J. I. (2014). Acting bicultural versus feeling bicultural: Cultural adaptation and school-related attitudes among U.S. Latina/o youth. *Journal of Hispanic Higher Education, 13*(1), 32-47.

Alfaro, E. C., Umaña-Taylor, A. J., Gonzales-Backen, M. A., Bámaca, M. Y., & Zeiders, K. H. (2009). Latino adolescents' academic success: The role of discrimination, academic motivation, and gender. *Journal of Adolescence, 32*(4), 941-962.

Altschul, I., Oyserman, D., & Bybee, D. (2006). Racial-ethnic identity in mid-adolescence: Content and change as predictors of academic achievement. *Child Development, 77*(5), 1155-1169.

Arbuckle, J. L. (2006). Amos (Version 7.0). Chicago: SPSS.

Arroyo, C. G., & Zigler, E. (1995). Racial identity, academic achievement, and the psychological well-being of economically disadvantaged adolescents. *Journal of Personality and Social Psychology, 69*(5), 903-914.

Aud, S., Hussar, W., Kena, G., Johnson, F., & Roth, E. (2012). *The Condition of Education 2012 (NCES 2012-045)*. Washington, D.C.: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

Avery, D. R., Tonidandel, S., Thomas, K. M., Johnson, C. D., & Mack, D. A. (2007). Assessing the Multigroup Ethnic Identity Measure for measurement equivalence across racial and ethnic groups. *Educational and Psychological Measurement, 67*(5), 877-888.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review of Educational Research, 84*, 191-215.

Battin-Pearson, S., Newcomb, M., Abbott, R., Hill, K., Catalano, R., & Hawkins, J. (2000). Predictors of early high school drop-out: A test of five theories. *Journal of Educational Psychology, 92*, 568-582.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin, 117*(3), 497.

Bean, F. D., Brown, S. K., Leach, M. A., Bachmeier, J. D., & Tafoya-Estrada, R. (2013). Unauthorized migration and its implications for Mexican American educational

incorportation. In B. Jensen & A. Sawyer (Eds.), *Regarding Educación* (pp. 43-65). New York, NY: Teachers College Press.

Becker, B. E., & Luthar, S. S. (2002). Social-emotional factors affecting achievement outcomes among disadvantaged students: Closing the achievement gap. *Educational Psychologist, 37*(4), 197-214.

Bracey, J. R., Bámaca, M. Y., & Umaña-Taylor, A. J. (2004). Examining ethnic identity and self-esteem among biracial and monoracial adolescents. *Journal of Youth and Adolescence, 33*(2), 123-132

Campbell, F., Pungello, E., Ramey, C., Miller, J., & Burchinal, M. (2001). The development of cognitive and academic abilities: Growth curves from an early childhood educational experiment. *Developmental Psychology, 2*, 231-247.

Campbell, J. R., Hambo, C. M., & Mazzeo, J. (1999). *NAEP 1999 trends in academic progress: Three decades of student performance*. Washington, DC: National Center for Education Statistics.

Cano, M. Á., Castillo, L. G., Davis, M. J., López-Arenas, A., Vaquero, J., Thompson, K. V., & Saldivar, I. M. (2012). Dynamics of acculturation, enculturation, and ethnic identity: Influence of psychocultural constructs on conscientiousness and expectations of higher education among Latinos. *International Journal for the Advancement of Counselling, 34*(3), 231-241.

Cauce, A. M., Stewart, A., Rodriguez, M. D., Cochran, B., & Ginzler, J. (2003). Overcoming the odds? Adolescent development in the context of urban poverty. In S. S. Luthar (Ed.), *Resilience and vulnerability: Adaptation in the context of childhood adversities*. New York, NY: Cambridge University Press.

Chavous, T. M., Bernat, D. H., Schmeelk-Cone, K., Caldwell, C. H., Kohn-Wood, L., & Zimmerman, M. A. (2003). Racial identity and academic attainment among African American adolescents. *Child Development, 74*(4), 1076-1090.

Costigan, C. L., Koryzma, C. M., Hua, J. M., & Chance, L. J. (2010). Ethnic identity, achievement, and psychological adjustment: Examining risk and resilience among youth from immigrant Chinese families in Canada. *Cultural diversity & ethnic minority psychology, 16*(2), 264-273.

Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review, 96*(4), 608-630.

Cuellar, I., Nyberg, B., Maldonado, R. E., & Roberts, R. E. (1997). Ethnic identity and acculturation in a young adult Mexican‐origin population. *Journal of Community Psychology, 25*(6), 535-549.

DeGarmo, D. S., & Martinez, C. R. (2006). A culturally informed model of academic well-being for Latino youth: The importance of discriminatory experiences and social support. *Family Relations, 55*(3), 267-278.

Domanico, Y. B. d., Crawford, I., & Wolfe, A. S. D. (1994). Ethnic identity and self-concept in Mexican-American adolescents: Is bicultural identity related to stress or better adjustment? *Child and Youth Care Forum, 23*(3), 197-206.

Eccles, J. S., Wong, C. A., & Peck, S. C. (2006). Ethnicity as a social context for the development of African-American adolescents. *Journal of School Psychology, 44*(5), 407-426.

Ellis, L. A., Marsh, H. W., & Craven, R. G. (2009). Addressing the challenges faced by early adolescents: A mixed method evaluation of the benefits of peer support. *American Journal of Community Psychology, 44*(1-2), 54-75.

Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: Norton.

Fryer, R. G., Jr, & Torelli, P. (2010). An empirical analysis of 'acting white'. *Journal of Public Economics, 94*(5), 380-396.

Fuligni, A. J., Witkow, M., & Garcia, C. (2005). Ethnic identity and the academic adjustment of adolescents From Mexican, Chinese, and European backgrounds. *Developmental Psychology, 41*(5), 799-811.

García-Vázquez, E. (1995). Acculturation and academics: Effects of acculturation on reading achievement among Mexican-American students. *Bilingual Research Journal, 19*(2), 305–315.

Goodenow, C. (1993). Classroom belonging among early adolescent students relationships to motivation and achievement. *The Journal of Early Adolescence, 13*(1), 21-43.

Gushue, G. V. (2006). The relationship of ethnic identity, career decision-making self-efficacy and outcome expectations among Latino/a high school students. *Journal of Vocational Behavior, 68*(1), 85-95.

Harter, S. (1985). *Manual for the Social Support Scale for Children*. Denver: University of Denver.

Heckman, J. J., & LaFontaine, P. A. (2010). The American high school graduation rate: Trends and levels. *Review of Economics and Statistics, 92*(2), 244-262

Hurtado, M. T., & Gauvain, M. (1997). Acculturation and planning for college among youth of Mexican descent. *Hispanic Journal of Behavioral Sciences, 19*(4), 506-516.

IBM Corporation. (2012). IBM SPSS Statistics (Version 21) [Mac]. Armonk, NY: IBM Corp.

Jensen, B., & Sawyer, A. (2013). Regarding educación: A vision for school improvement. In B. Jensen & A. Sawyer (Eds.), *Regarding Educación* (pp. 1-19). New York, NY: Teachers College Press.

Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health, 74*(7), 262-273.

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: The Guilford Press.

Lee, V. E., Smith, J. B., Perry, T. E., & Smylie, M. A. (1999). Social support, academic press, and student achievement: A view from the middle grades in Chicago. *Improving Chicago's Schools. A Report of the Chicago Annenberg Research Project*.

López, E. J., Ehly, S., & García-Vásquez, E. (2002). Acculturation, social support and academic achievement of Mexican and Mexican American high school students: An exploratory study. *Psychology in the Schools, 39*(3), 245-257.

Luszczynska, A., Gutiérrez‐Doña, B., & Schwarzer, R. (2005). General self‐efficacy in various domains of human functioning: Evidence from five countries. *International Journal of Psychology, 40*(2), 80-89.

Malecki, C. K., & Demaray, M. K. (2006). Social support as a buffer in the relationship between socioeconomic status and academic performance. *School Psychology Quarterly, 21*(4), 375-395.

Malecki, C. K., Demaray, M. K., Elliott, S. N., & Nolten, P. W. (1999). *The Child and Adolescent Social Support Scale*. DeKalb, IL: Northern Illinois University.

Malecki, C. K., & Demary, M. K. (2002). Measuring perceived social support: Development of the child and adolescent social support scale (CASSS). *Psychology in the Schools, 39*(1), 1-18.

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3*(5), 551-558.

McCollum, E. C., & Yoder, N., P. (2011). School culture, teacher regard, and academic aspirations among middle school students. *Middle Grades Research Journal, 6*(2), 65-74.

McGeown, S. P., Putwain, D., Geijer Simpson, E., Boffey, E., Markham, J., & Vince, A. (2014). Predictors of adolescents' academic motivation: Personality, self-efficacy and adolescents' characteristics. *Learning and Individual Differences, 32*, 278-286.

McGuire, W. J., McGuire, C. V., Child, P., & Fujioka, T. (1978). Salience of ethnicity in the spontaneous self-concept as a function of one's ethnic distinctiveness in the social environment. *Journal of Personality and Social Psychology, 36*(5), 511-520.

McKown, C., & Weinstein, R. S. (2008). Teacher expectations, classroom context, and the achievement gap. *Journal of School Psychology, 46*(3), 235-261.

Miller, D. B., & MacIntosh, R. (1999). Promoting resilience in urban African American adolescents: Racial socialization and identity as protective factors. *Social Work Research, 23*(3), 159-169.

Oyserman, D., Brickman, D., & Rhodes, M. (2007). Racial-ethnic identity: Content and consequences for African American, Latino and Latina youths. In A. J. Fuligni (Ed.), *Contesting stereotypes and creating identities: Social categories, social identities, and educational participation* (pp. 99-114). New York: Russell Sage.

Oyserman, D., Gant, L., & Ager, J. (1995). A socially contextualized model of African American identity: Possible selves and school persistence. *Journal of Personality and Social Psychology, 69*, 1216-1232.

Oyserman, D., Harrison, K., & Bybee, D. (2001). Can racial identity be promotive of academic efficacy? *International Journal of Behavioral Development, 25*(4), 379 -385.

Passel, J. S. (2011). Demography of immigrant youth: Past, present, and future. *The Future of Children, 21*(1), 19-41.

Phinney, J. S. (1989). Stages of ethnic identity development in minority group adolescents. *The Journal of Early Adolescence, 9*(1-2), 34-49.

Phinney, J. S. (1992). The Multigroup Ethnic Identity Measure. *Journal of Adolescent Research, 7*(2), 156 -176.

Phinney, J. S., Horenczyk, G., Liebkind, K., & Vedder, P. (2001). Ethnic identity, immigration, and well-being: An interactional perspective. *Journal of Social Issues, 57*(3), 493-510.

Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology, 54*(3), 271-281.

Phinney, J. S., Romero, I., Nava, M., & Huang, D. (2001). The role of language, parents, and peers in ethnic identity among adolescents in immigrant families. *Journal of Youth and Adolescence, 30*(2), 135-153.

Ponterotto, J. G., Gretchen, D., Utsey, S. O., Stracuzzi, T., & Saya, R. (2003). The Multigroup Ethnic Identity Measure (MEIM): Psychometric review and further validity testing. *Educational and Psychological Measurement, 63*(3), 502-515.

Poston, W. S. C. (1990). Biracial identity development: A needed addition. *Journal of Counseling & Development, 69*, 152-155.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*(3), 879-891.

Rivas-Drake, D., Seaton, E. K., Markstrom, C., Quintana, S., Syed, M., Lee, R. M., . . . Ethnic and Racial Identity in the 21st Century Study Group. (2014). Ethnic and racial identity in adolescence: Implications for psychosocial, academic, and health outcomes. *Child Development, 85*(1), 40-57.

Rivas-Drake, D., Syed, M., Umaña-Taylor, A., Markstrom, C., French, S., Schwartz, S. J., . . . Racial Identity in the 21st Century Study Group. (2014). Feeling good, happy, and proud: A meta-analysis of positive ethnic–racial affect and adjustment. *Child Development, 85*(1), 77-102.

Rivera-Santiago, A. (1996). Understanding Latino ethnic identity development: A review of relevant issues. *New England Journal of Public Policy, 11*(2), 4.

Roberts, R. E., Phinney, J. S., Masse, L. C., Chen, Y. R., Roberts, C. R., & Romero, A. (1999). The structure of ethnic identity of young adolescents from diverse ethnocultural groups. *The Journal of Early Adolescence, 19*(3), 301-322.

Romero, A. J., & Roberts, R. E. (2003). The impact of multiple dimensions of ethnic identity on discrimination and adolescents' self-esteem. *Journal of Applied Social Psychology, 33*(11), 2288-2305.

Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of Personality and Social Psychology, 79*(1), 49-65.

Sagone, E., & Caroli, M. E. D. (2013). Relationships between resilience, self-efficacy, and thinking styles in Italian middle adolescents. *Procedia - Social and Behavioral Sciences, 92*, 838-845.

Scholz, U., Doña, B. G., Sud, S., & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment, 18*(3), 242-251.

Schwartz, S. J., Zamboanga, B. L., & Jarvis, L. H. (2007). Ethnic identity and acculturation in Hispanic early adolescents: Mediated relationships to academic

grades, prosocial behaviors, and externalizing symptoms. *Cultural Diversity and Ethnic Minority Psychology, 13*(4), 364-373.

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy Scale. In J. Weinman, S. Wright & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-NELSON.

Schwarzer, R., & Warner, L. M. (2013). Perceived self-efficacy and its relationship to resilience. In S. Prince-Embury & D. H. Saklofske (Eds.), *Resilience in Children, Adolescents, and Adults* (pp. 139-150): Springer New York.

Seaton, E. K., Yip, T., Morgan-Lopez, A., & Sellers, R. M. (2012). Racial discrimination and racial socialization as predictors of African American adolescents' racial identity development using latent transition analysis. *Developmental Psychology, 48*(2), 448-458.

Sellers, R. M., Copeland-Linder, N., Martin, P. P., & Lewis, R. H. (2006). Racial identity matters: The relationship between racial discrimination and psychological functioning in African American adolescents. *Journal of Research on Adolescence, 16*(2), 187–216.

Sellers, R. M., Smith, M. A., Shelton, J. N., Rowley, S. A. J., & Chavous, T. M. (1998). Multidimensional model of racial identity: A reconceptualization of African American racial identity. *Personality and Social Psychology Review, 2*(1), 18–39

Shelton, J. N., Yip, T., Eccles, J. S., Chatman, C. M., Fuligni, A. J., & Wong, C. (2005). Ethnic identity as a buffer of psychological adjustment to stress. In G. Downey, J. S. Eccles & C. M. Chatman (Eds.), *Navigating the future: Social identity, coping, and life tasks*. New York: Russel Sage Foundation.

Smith, E. P., Walker, K., Fields, L., Brookins, C. C., & Seay, R. C. (1999). Ethnic identity and its relationship to self-esteem, perceived efficacy and prosocial attitudes in early adolescence. *Journal of Adolescence, 22*(6), 867-880.

Spencer, M. S., Icard, L. D., Harachi, T. W., Catalano, R. F., & Oxford, M. (2000). Ethnic identity among monoracial and multiracial early adolescents. *The Journal of Early Adolescence, 20*(4), 365 -387.

Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American psychologist, 52*(6), 613-629.

Street, J., Harris-Britt, A., & Walker-Barnes, C. (2009). Examining relationships between ethnic identity, family environment, and psychological outcomes for African American adolescents. *Journal of Child and Family Studies, 18*(4), 412-420.

Suárez-Orozco, C., & Suárez-Orozco, M. (1995). *Transformations: Immigration, family life, and achievement motivation among Latino adolescents*. Stanford, CA: Stanford University Press.

Swenson, R. R., & Prelow, H. M. (2005). Ethnic identity, self-esteem, and perceived efficacy as mediators of the relation of supportive parenting to psychosocial outcomes among urban adolescents. *Journal of Adolescence, 28*(4), 465-477.

Telles, E., & Ortiz, V. (2013). Intergeneration assimilation patterns of Mexican American students. In B. Jensen & A. Sawyer (Eds.), *Regarding Educación* (pp. 43-65). New York, NY: Teachers College Press.

Thompson, V. L. S. (1994). Socialization to race and its relationship to racial identification among African Americans. *Journal of Black Psychology, 20*(2), 175 -188.

U.S. Census Bureau. (2011). *Child poverty in the United States 2009 and 2010: Selected race groups and Hispanic origin*. Washington, DC: Government Printing Office.

U.S. Department of Education National Center for Education Statistics. (2013). The Condition of Education 2013 (NCES 2013-037), Status Dropout Rates.

Ullman, J. B. (2006). Structural Equation Modeling: Reviewing the Basics and Moving Forward. *Journal of Personality Assessment, 87*(1), 35-50.

Umaña-Taylor, A. J. (2004). Ethnic identity and self-esteem: examining the role of social context. *Journal of Adolescence, 27*(2), 139-146.

Umaña-Taylor, A. J., & Fine, M. A. (2001). Methodological implications of grouping latino adolescents into one collective ethnic group. *Hispanic Journal of Behavioral Sciences, 23*(4), 347-362.

Umaña-Taylor, A. J., & Fine, M. A. (2004). Examining ethnic identity among Mexican-origin adolescents living in the United States. *Hispanic Journal of Behavioral Sciences, 26*(1), 36-59.

Umaña-Taylor, A. J., & Updegraff, K. A. (2007). Latino adolescents' mental health: Exploring the interrelations among discrimination, ethnic identity, cultural orientation, self-esteem, and depressive symptoms. *Journal of Adolescence, 30*(4), 549-567.

Umaña-Taylor, A. J., Wong, J. J., Gonzales, N. A., & Dumka, L. E. (2012). Ethnic identity and gender as moderators of the association between discrimination and academic adjustment among Mexican-origin adolescents. *Journal of Adolescence, 35*(4), 773-786.

Unger, J. B., Gallaher, P., Shakib, S., Ritt-Olson, A., Palmer, P. H., & Johnson, C. A. (2002). The AHIMSA Acculturation Scale: A new measure of acculturation for adolescents in a multicultural society. *The Journal of Early Adolescence, 22*(3), 225-251.

Uwah, C. J., McMahon, H. G., & Furlow, C. F. (2008). School belonging, educational aspirations, and academic self-efficacy among African American male high school students: Implications for school counselors. *Professional School Counseling, 11*(5), 296-305.

Valentine, S. (2001). Self-esteem, cultural identity, and generation status as determinants of Hispanic acculturation. *Hispanic Journal of Behavioral Sciences, 23*(4), 459-468.

Witherspoon, K. M., Speight, S. L., & Thomas, A. J. (1997). Racial identity attitudes, school achievement, and academic self-efficacy among African American high school students. *Journal of Black Psychology, 23*(4), 344-357.

Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment. *Journal of Personality, 71*(6), 1197-1232.

Yancey, A. K., Aneshensel, C. S., & Driscoll, A. K. (2001). The assessment of ethnic identity in a diverse urban youth population. *Journal of Black Psychology, 27*(2), 190-208.

LIST OF APPENDICES

Appendix A. Demographic Cover Sheet

Please answer the next few questions to tell us a little about yourself.

Name _____ Student ID# _____

What language(s) do you speak at home? _____

1. **My** race/ethnicity is **(circle all that apply):**
   (1) Asian or Asian American, including Chinese, Japanese, and others
   (2) Black or African American
   (3) Hispanic or Latino, including Mexican American, Central American, and others
   (4) White, Caucasian, Anglo, European American; not Hispanic
   (5) American Indian/Native American
   (6) Mixed; Parents are from two different groups

2. My **father**'s ethnicity is: **(circle all that apply):**
   (1) Asian or Asian American, including Chinese, Japanese, and others
   (2) Black or African American
   (3) Hispanic or Latino, including Mexican American, Central American, and others
   (4) White, Caucasian, Anglo, European American; not Hispanic
   (5) American Indian/Native American
   (6) Mixed; Parents are from two different groups

3. My **father** was born outside of America **(Circle) YES NO**

4. My **father**'s family is from: **(circle all that apply):**

(1) Asia	(5) Africa	(9) Honduras
(2) India/Pakistan	(6) United States	(10) Puerto Rico
(3) Middle East	(7) Mexico	(11) Ecuador
(4) Europe	(8) Dominican Republic	(12) Other_____

5. My **mother**'s ethnicity is: **(circle all that apply):**
   (1) Asian or Asian American, including Chinese, Japanese, and others
   (2) Black or African American
   (3) Hispanic or Latino, including Mexican American, Central American, and others
   (4) White, Caucasian, Anglo, European American; not Hispanic
   (5) American Indian/Native American
   (6) Mixed; Parents are from two different groups

6. My **mother** was born outside of America **(Circle) YES NO**

7. My **mother**'s family is from: **(circle all that apply):**

(1) Asia	(5) Africa	(9) Honduras
(2) India/Pakistan	(6) United States	(10) Puerto Rico
(3) Middle East	(7) Mexico	(11) Ecuador
(4) Europe	(8) Dominican Republic	(12) Other_____

8. Were any of your **grandparents** born outside of America? **(Circle) YES NO**

Appendix B. Multi Ethnic Identity Measure (Phinney, 1992)

In this country, people come from many different countries and cultures, and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Hispanic or Latino, Black or African American, Asian American, Chinese, Filipino, American Indian, Mexican American, Caucasian or White, Italian American, and many others. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

Please mark how much you agree or disagree with each statement. There are no right or wrong answers.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.	**A**	**B**	**C**	**D**
2. I am active in organizations or social groups that include mostly members of my own ethnic group.	**A**	**B**	**C**	**D**
3. I have a clear sense of my ethnic background and what it means for me.	**A**	**B**	**C**	**D**
4. I think a lot about how my life will be affected by my ethnic group membership.	**A**	**B**	**C**	**D**
5. I am happy that I am a member of the group I belong to.	**A**	**B**	**C**	**D**
6. I have a strong sense of belonging to my own ethnic group.	**A**	**B**	**C**	**D**
7. I understand pretty well what my ethnic group membership means to me.	**A**	**B**	**C**	**D**
8. In order to learn more about my ethnic background, I have often talked to people about my ethnic group.	**A**	**B**	**C**	**D**
9. I have a lot of pride in my ethnic group.	**A**	**B**	**C**	**D**
10. I participate in cultural practices of my own group, such as special food, music, or customs.	**A**	**B**	**C**	**D**
11. I feel a strong attachment towards my own ethnic group.	**A**	**B**	**C**	**D**
12. I feel good about my cultural or ethnic background.	**A**	**B**	**C**	**D**

Appendix C. Acculturation, Habits, and Interests Multicultural Scale for Adolescents (Unger et al., 2002)

Please complete the following statements by saying "The United States", "The country my family is from", "Both", or "Neither". Pick only one of those choices to complete the sentence.

	The United States	The country my family is from	Both	Neither
1. I am most comfortable being with people from...	**A**	**B**	**C**	**D**
2. My best friends are from...	**A**	**B**	**C**	**D**
3. The people I fit in with best are from...	**A**	**B**	**C**	**D**
4. My favorite music is from...	**A**	**B**	**C**	**D**
5. My favorite TV shows are from...	**A**	**B**	**C**	**D**
6. The holidays I celebrate are from...	**A**	**B**	**C**	**D**
7. The food I eat at home is from...	**A**	**B**	**C**	**D**
8. The way I do things and the way I think about things are from...	**A**	**B**	**C**	**D**

Appendix D. General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)

Below are sentences that might or might not describe you. Please indicate how well these sentences describe you by marking the corresponding letter on your response sheet.

	Not True At All	Hardly True	Moderately True	Exactly True
1. I can always manage to solve difficult problems if I try hard enough	**A**	**B**	**C**	**D**
2. If someone opposes me I can find the means and ways to get what I want	**A**	**B**	**C**	**D**
3. I am certain I can accomplish my goals	**A**	**B**	**C**	**D**
4. I am confident that I could deal efficiently with unexpected events	**A**	**B**	**C**	**D**
5. Thanks to my resourcefulness I can handle unforeseen situations	**A**	**B**	**C**	**D**
6. I can solve most problems if I invest the necessary effort	**A**	**B**	**C**	**D**
7. I can remain calm when facing difficulties because I can rely on my coping abilities	**A**	**B**	**C**	**D**
8. When I am confronted with a problem I can find several solutions	**A**	**B**	**C**	**D**
9. If I am in trouble I can think of a good solution	**A**	**B**	**C**	**D**
10. I can handle whatever comes my way	**A**	**B**	**C**	**D**

Appendix E. Perceived Social Support from Teachers

The following statements relate to you giving or receiving social support. Please read each statement then fill in the degree to which the statement is generally true for you.

	Never	Almost Never	Some of the Time	Most of the Time	Almost Always
1. My teacher(s) cares about me.	**A**	**B**	**C**	**D**	**E**
2. My teacher(s) treats me fairly.	**A**	**B**	**C**	**D**	**E**
3. My teacher(s) makes it okay to ask questions.	**A**	**B**	**C**	**D**	**E**
4. My teacher(s) spends time with me when I need help.	**A**	**B**	**C**	**D**	**E**

Note. Items were adapted from the teacher subscale of the Child and Adolescent Social Support Scale (Malecki, Demarary, Elliott, & Nolten, 1999).