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Risk and Resilience in an Urban School: How a Psychosocial Intervention Promotes the Educational Resilience of Latino Youth

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Risk and Resilience in an Urban School:
How a Psychosocial Intervention Promotes the Educational Resilience of Latino Youth

by

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DEDICATION

I would like to honor both sets of my grandparents for breaking open racial and gender barriers during the mid-20th century so that my parents, my siblings, my cousins and I could be who we wanted to be without fear of reproach or glass ceilings. From the bottom of my heart, thank you:

Kermith Roy Thompson, Sr.

Mary Swinton Thompson

Willie Henry Lambert, Sr.

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Sarah Vonzel Lambert

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ABSTRACT

According to the Pew Hispanic Forum, the dropout rates for Latino youth (15%) are higher than all other youth in the United States (White youth = 8%; Black youth = 12%). Many Latino youth have difficulty identifying with the school environment due to a lack of cultural connection to the context. Youth Program (YP) program is a peer-led, school-based program driven by the theoretical foundations of Positive Youth Development and Self-Determination theory and is distinguished by its emphasis on building social and academic skills that ease the transition into high school for ninth grade students. The current study examines the effectiveness of the YP program for establishing a context for Latino participants that fosters key ecological and protective mechanisms including resilient attitudes and behaviors, acquisition of friends with positive traits (e.g. oriented towards academic achievement), and endorsement of YP core values. Data were collected from 166 Latino high school students in an urban New Jersey community that the Brookings Institution describes as being in the 92nd percentile for economically depressed districts in the U.S. This study has three primary aims. First, we examined how the relationship between risk status and academic achievement might be moderated by participating in the YP school-based intervention. Secondly, we determined if YP participants reported higher levels of three distinct protective mechanisms (i.e. positive peer traits, resilient qualities, and endorsement of YP core values) than comparison group youth. Next, we investigated these three mechanisms' potential in producing main effects

in the relationship examined in our first hypothesis. Finally, we examined if these

mechanisms moderated the relationship between risk and 11th grade GPA. Power

analyses indicated the sample size yielded findings with medium statistical power.

Results indicated participation in YP predicted higher 11th grade GPAs for certain groups

of at-risk, and that these gains persisted two years after YP participation. Results also

indicated significant main effects of YP core values and resilience on the 11th grade GPA.

However, targeted mechanisms of the program were in the opposite direction of our

predictions. Specifically, comparison group youth reported higher YP core values than

YP youth at 12th grade. There were no significant moderating effects for any of the three

examined protective mechanisms. Implications for public policy and improving YP

program effects for Latino youth are discussed.

PREFACE

My adolescence was turbulent. Many of my classmates were blunt, and would tell you exactly how they felt at any given time. At home, asserting my emerging identity as a young man put me at odds with my single mother. In the community, my status as a Black man made me a target. To escape from my reality, I immersed myself in all things pop culture. Knowing MTV, popular movies, and astrology were my trademark. I also joined several Positive Youth Development (PYD) groups. A mentor emerged from one of these groups and helped me to piece together my disparate parts in time for college admissions.

The development of my interest in PYD programming for ethnic minority youth started with my difficult experiences as a teenager and has further blossomed with the work I have done with at-risk adolescents. I see risk and resilience as two sides of the same coin, but more than just chance is involved in which side lands facing up. Experience has taught me that the extra others do for you, and the extra you do for yourself, makes the difference. PYD and extracurricular activities have made all the difference in my life. As an employee for several of these, I know they have the potential to enhance the academic, behavioral, and emotional health for all ethnic minority youth.

When I first began this dissertation I sought to research the experiences of Black American youth, because after all, that is the demographic I represent. However, the non-profit organization I collaborated with afforded me the opportunity to learn about the

experiences of Latino youth instead. I am grateful to them for not only for providing me with a unique research sample, but also because conducting this research has expanded my perspectives about the ethnic minority experience in the U.S. and has empowered me to advocate for groups for which I have no membership in. I would encourage any young scholar of psychology to consider conducting research on groups where there is less than 100% overlap with their own personal identities. What I have learned is stepping outside of one's comfort zone is the first step toward true knowledge.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF SYMBOLS

Y	Dependent variable
b_o	Regression intercept
b_1	Partial regression coefficient
b_2	Partial regression coefficient
b_3	Partial regression coefficient
b_4	Partial regression coefficient
W	An independent variable in its original units
X	An independent variable in its original units
Z	An independent variable in its original units
XZ	Cross product of two predictors X and Z
e	Regression residual
M	Mean average
SD	Standard deviation
z	Standardized variable
N	Number of subjects (cases)
R^2	Multivariate squared correlation of IV set Y estimated from dependent variable sets A and B
F	Statistic used for ANCOVA significance test
r	Pearson product moment correlation coefficient
β	Standardized regression coefficient
Δ	Change in statistic

CHAPTER 1

LITERATURE REVIEW

Latino youth, now the largest ethnic minority group in the United States, have

staggeringly elevated high school dropout rates. According to the 2010 U.S. Census, over

twenty percent of all U.S. youth ages 17 and under are of Latino descent (Passel, Cohn, &

Lopez, 2011). Approximately 17 million youth belong to this pan-ethnic group. As much

as fifteen percent of this population is likely to quit school before graduation, compared

to 8% of White youth and 12% of Black youth, making Latino youth the most susceptible

to high school dropout in the United States (Fry, 2003). Some youth development

programs have been shown to increase youth academic success by increasing engagement

in the academic setting. However, research on these programs has largely neglected the

processes by which these programs benefit Latino academic performance. Youth

Program (YP), a Positive Youth Development (PYD) program that serves low-income

minority youth, invests contextual resources within an environment infused with Self-

Determination principles that promotes educational resilience. The exponential growth of

the U.S. Latino population since the year 2000 serves as a mandate for research that

informs the public policy needs of this burgeoning ethnic group (Ennis, Ríos-Vargas, &

Albert, 2011). The current study seeks to address that public policy need by examining

whether YP buffers the effects of risk status on markers of academic achievement among a sample of Latino youth, and exploring potential mechanisms by which YP influences youth educational resilience.

Many Latino youth have difficulty identifying with their academic abilities due to internalizing stereotypes and negative teacher expectations for simply being Latino (Gonzales, Blanton, & Williams, 2002; Devos & Torres, 2007). There are barriers beginning as early as Kindergarten that threaten the academic achievement of Latino youth. Using data from the Early Childhood Longitudinal Study Kindergarten Cohort (ECLS-K), Fryer and Levitt (2006) found that whereas White children performed over two standard deviations above the mean on math and reading ability tests during first and third grade, Latino children earned scores that placed the group one standard deviation below the mean on tests of reading and over two standard deviations below the mean for standardized math tests during these same two grades. Such disparities in academic achievement leave many Latino youth vulnerable to risk factors that threaten to derail promising futures before they have begun.

It should be noted that several challenges have been identified for Latino youth. The poverty rate for White youth ages 17 and under is 9%, while the equivalent rate for Latino youth is 27% (Fry, 2003). Therefore characteristics which are often identified as related to high poverty disproportionately impact these individuals. Often, Latino youth struggle to overcome language barriers, immigration recency, and lower levels of human capital from the family unit. Consequently, these factors have also been identified as school dropout factors specific to Latino youth (Martinez, DeGarmo, & Eddy, 2004; Perreira, Harris, & Lee, 2006). Furthermore, low-SES urban teens have decreased odds of benefiting from informal mentors. This lack of leadership is a mark of their oppression.

2

For example, Stanton-Salazar (2003) found results that suggest informal mentors help youth to make sense of cultural uncertainties and counter-influences that underpin their challenges in socialization and identity formation. Thus, Latino youth would likely benefit from programming that is accessible given their limited resources and provides bilingual informal mentors. This type of programming may aid these adolescents in overcoming language barriers and challenges specific to their low-acculturated and SES status.

These challenges are comprised of multiple risk factors that have been shown to correlate with low academic achievement among Latino youth. Socioeconomic status has been established as the single best predictor of academic performance for youth beginning with elementary school (Duncan & Brooks-Gunn, 1997; Zarrett et al, 2006). Individuals residing in the Latino community continue upward socioeconomic mobility albeit slower than other groups. Clauss-Ehlers and Levi (2002) reports that while one in ten non-Latino families live in poverty, one in four Latino families suffer the same conditions. Almost half (49%) of all Americans reported annual earnings at $50,000 or above in 2000, compared to almost a third (29%) of Latinos. The percentage of Latinos reporting earning less than 10K annually is greater than the rest of the population (Marotta & Garcia, 2003). A significantly high percentage (91%) of Latinos surveyed in 2000 lived in predominantly urban districts, and that number has not changed since 1990; half of all Latinos reported living in households comprising 3-5 people (Marotta et al, 2003).

The low socioeconomic status of certain Latino groups (Rumberger, 2004; Coleman, 1988), presents a web of risk such as teen pregnancy and language barriers that prevents PYD for Latino youth. The birth rate for Latino teenagers was three times that of

White teenagers in 2007 (Mathews, Sutton, Hamilton, & Ventura, 2010). Pregnancy has also been linked to lower educational attainment for teenage mothers (Unger, Molina, & Teran, 2000) and lower academic engagement by Latino students in predominantly Latino communities (Fry, 2003; Manlove, 1998).

Another potential risk factor for ethnic minorities is a lack of acculturation, which is defined as the modification of an individual's culture in response to inter-cultural contact (López, Ehly, & García-Vásquez, 2002). Often measured by English language acquisition, Latino and other ethnic minority youth who have not yet fully mastered English are considered at-risk for academic underperformance and low levels of school engagement (Eamon, 2005; Bernal, Saenz, & Knight, 1991) because of their acculturative status. Perreira, Harris, and Lee (2006) found that Latino youth with limited English proficiency are more at-risk for dropping out of high school than Latino immigrant youth. Not only does the language barrier inhibit youth from excelling at academic tasks, but it can also make it difficult to feel included in the school context and connected to peers and teachers. Poor academic performance and lack of a sense of belonging to the school can result in disengagement from the school environment.

Generational status often influences acculturation and some theorists suggest that with each subsequent generation, the process of assimilation and the stress of acculturation eases (Alba & Nee, 1997). Alba and Nee defined assimilation as the favorable reception immigrant populations receive at the time of their entry into a new society. Research on immigrant youth indicates that the increasing diversity of U.S.

society allows for divergent paths of acculturation, where some lead to upward mobility and others lead to the integration into socioeconomically disadvantaged groups (Portes & Rumbaut, 2001). Kalogrides (2009) examined the impact of generational status on the academic achievement of Latino high school students, and her results indicated that second- and third generation Latino youth demonstrated higher achievement than their first generation counterparts. Because we are interested in the experiences of Latino youth and not with the perceptions they receive in U.S. society, we will examine the two cultural variables – English language proficiency and generational status – that we believe have direct impacts on their academic achievement.

Beyond risks associated with SES, acculturative stress, and generational status, disengagement in academics occurs for several other reasons. For example, Ajzen (2002) has shown that an intention to complete a behavior predicts its occurrence so that negative self-perceptions of academic competence can lead to the intent to drop out. The self-perception one is ill-equipped to complete his/her high school education has been identified as a risk factor for academic achievement, especially in the Latino community (Eccles, 1983; Saunders, Davis, Williams, & Williams, 2004; Attinasi, 1989). School misconduct is another risk factor for academic underperformance. Classroom misbehaviors like chronic tardiness and cutting class have been shown to predict low grades (Pannozzo, 2005; Goldschmidt & Wang, 1999). Finn, Fish, and Scott (2008) identified truancy and fighting as examples of school misbehavior which often predicts negative educational sequelae. Truancy is an obvious risk factor for academic underperformance because it represents missed opportunities for learning, and research has shown that youth who demonstrate physical aggression are at risk for negative school

outcomes as fighting may lead to school suspension, which can lead to dropping out altogether (Bowditch, 1993). Youth who exhibit one example of school misconduct often demonstrate others simultaneously or at later developmental stages (Baker, Sigmon, & Nugent, 2001; Bryant & Zimmerman, 2002). Finn and colleagues (2008) found that youth with high self-reported classroom and school misbehaviors (e.g. truancy, fighting, excessive tardiness) demonstrated the lowest mean grade point averages (GPAs) compared to other youth with less frequent school and classroom misbehaviors. Forehand and colleagues (1998) have found that as an adolescent's number of risk factors increases, their grade point averages and math achievement scores tend to deteriorate. Multiple risk factors for Latino youth often lead to decreased opportunities for educational resilience.

For the current study, we use an index composed of these risk factors that is similar to other composite risk indices that have been used to predict early intelligence (Sameroff, Seifer, Barocas, Zax, & Greenspan, 1987), behavioral disorders (Williams, Anderson, McGee, & Silva, 1990), and psychiatric symptomatology (Rutter, 1979). The theory behind these composite indices is that the number of risk factors often has a more determining influence on outcomes than does the kind of risk factors that are included in the index. Sameroff and his colleagues (1993) argued that breaking apart the composite risk index into separate regressions makes it difficult to reveal statistically significant findings even when those regressions explain considerable amounts of variance. Using a composite risk index comprised of 10 discrete risk factors, they examined how cognitive outcomes (i.e. IQ) develop from preschool to adolescence. Results indicated that their composite risk index explained over a third of the variance in IQ in the same population

across nine years of age (Sameroff, Seifer, Baldwin, & Baldwin, 1993). This finding suggests that composite risk indices have the potential to predict fluctuations in markers of academic achievement.

Poverty and few community resources are common in many underserved Latino communities (Riggs, Bohnert, Guzman, & Davidson, 2010; Villarruel, Montero-Sieburth, Dunbar, & Outlay, 2005). Youth involved in the current study demonstrated risk factors associated with poverty including high levels of academic underperformance and teenage pregnancy. We included variables reflecting intent to drop out of high school, classroom, and school misconduct in our composite risk index. We believe that composing a risk index that addresses specific Latino risk factors highlights the uniqueness of the current study, and bridges the gap in literature between Latino risk factors and academic achievement.

Theoretical Foundations for Promoting Educational Resilience

Despite these risk factors associated with low academic achievement, Latino students also have the potential for resilience, and they may use this resilience to chart more favorable academic trajectories (Luthar, 1999; Luthar, Cicchetti, & Becker, 2000). Bryan (2005) defines educational resilience as the ability to academically achieve despite those factors which hinder their academic success. Supportive relationships with friends and teachers and frequent opportunities for significant contributions to their schools and communities are two protective factors that promote educational resilience (Bryan, 2005; Crosnoe & Elder, 2004). Protective factors like these lessen the impact of risk, reduce the danger inherent in that risk, and enhance the young person's sense of autonomy and competence.

7

Masten (2001) argues that all individuals have the capacity for resilience, but the degree in which individuals utilize this strength in the face of adversity varies. Positive Youth Development (PYD) theory suggests that when the strengths of youth are aligned with contextual resources across adolescence, the young person's resilience is likely to flourish (Lerner, 2006; Lewin-Bizan, Bowers, & Lerner, 2010; Zarrett et al., 2009). Aligning individual strengths and contextual resources requires paying close attention to the bidirectional influence between the young person and their surrounding environment. Lerner (2006) proposed that certain environments have more of these resources, termed "protective mechanisms", than others, and that these assets increase the potential for healthy youth development. Youth Program, a school-based peer-led program, is founded on PYD principles, aiming to provide youth with protective mechanisms necessary for building resilience across the high school years.

While YP is founded on PYD principles, it also has the added benefit of promoting self-determining values among its youth participants. Self-determination theorists suggest that disengaging from a context, such as school, results from the inability of the environment to meet individuals' three primary psychosocial needs: the need to feel connected to others; the need to exercise their autonomy; and the need to feel competent (Ryan & Niemiec, 2009; Grolnick, Farkas, Sohmer, Michaels, & Valsiner, 2007). Competent youth who self-regulate their behavior and monitor their own progress as they learn more material display high levels of academic achievement (Boekarts, Pintrich, & Zeidner, 2000). Student autonomy involves opportunities to set realistic performance goals, solve their own problems, or effectively monitor the accomplishment of projects they initiate. Youth with autonomous characteristics tend to display

significantly more adaptive classroom functioning and academic outcomes than do youth in more controlling settings (Reeve, 2009; Ryan & Deci, 2000). Finally, the feeling that one is cared for and has trusted mentor figures in their environment has been shown to predict high academic achievement (Kenny, Walsh-Blair, Blustein, Bempechat, & Seltzer, 2010). It would seem that the psychosocial need fulfillment that defines YP makes it viable impetus for PYD in Latino youth.

Youth Program in Action

YP is a PYD intervention currently implemented in several predominantly Latino high school districts in the New York tri-state area. YP uses a structured curriculum supported by youth development and prevention research and is designed to decrease risk factors by increasing students' protective factors during their transition into high school (Powell, 1993). Eleventh and twelfth grade students are selected to attend an exclusive leadership class where they learn to facilitate activities for YP participants. Each week, these peer leaders teach a class with faculty supervision. At the start of the academic year, ninth grade students are randomly selected to participate in these weekly YP outreach sessions as a component of the ninth grade physical health education curriculum delivered throughout the ninth grade year. Across the sophomore year, YP participants receive three booster sessions to reinforce the skills learned during ninth grade YP and provide structured opportunities for the sophomore students to re-connect with the peer leaders. These outreach and booster sessions represent the repeated exposure to the well-developed relationship between the participant and their YP environment and the protective mechanisms reserved for YP participants. At 11th and 12th grade they are recruited to be the student facilitators for the 9th grade YP students, further reinforcing psychosocial and achievement related assets in youth. The YP

9

program aims to provide a PYD context that meets the basic psychosocial needs identified by SDT and in turn, foster increased intrinsic motivation to engage in academics.

How YP facilitates this process of PYD may occur in several different ways. The weekly outreach activities participants engage in are based on a variety of YP core values, including but not limited to academic self-efficacy, adaptive help seeking, cognitive coping, and sense of school membership. Instilling these core values in youth with the purpose of fostering a sense of relatedness (i.e. school membership), competence (i.e. academic self-efficacy) and autonomy (i.e. cognitive coping) is what Self-Determination theorists argue is necessary for an individual to fulfill their own potential. When YP participants endorse these values, it is likely their academic achievement will increase in tandem. YP may be the opportunity these high school students are looking for to harness the autonomy necessary to manage their own challenging circumstances and overcome academic barriers. Lastly, we propose that participation in YP exposes youth to other positive peers – friends and classmates who send the message that their participation matters to them, that school is important, and that united, they can achieve more academically. Together, the Self-Determination and PYD theories help us to understand how an extracurricular context provides a mutually-influential environment that ultimately empowers at-risk Latino youth to demonstrate educational resilience despite their high risk status for academic underperformance and high school dropout.

The central thesis of this research proposes that Youth Program emphasizes and builds on the strengths of its Latino participants by exposing them to an environment replete with Self-Determination resources like autonomy, competence, and

relatedness, and that this continued exposure will be reflected by higher academic achievement than students who do not participate in Youth Program. To address these issues, we propose a study with four major parts. In the first set of analyses, we determine if participation in the YP intervention will buffer the negative impact of risk factors on the academic achievement of Latino participants. By enhancing protective factors, we expect participation in YP will lessen the impact of risk factors on the participants' academic functioning. In the second set of analyses, we compare YP participants to a non-intervention comparison group on three protective mechanisms: YP core values, positive peer traits, and resilient qualities. These three mechanisms are conceptualized as the methods by which YP meets the three basic psychosocial needs for promoting motivation that has been proposed by Self-Determination theory: YP core values represent the competence at-risk Latino students have gained to navigate their transition into high school; positive peer traits reflect the positive social support networks that fosters youth's sense of connection and engagement in the academic setting; and resilient qualities represent the youth's burgeoning autonomy and their ability to make the best decisions for themselves. By making these comparisons, we can better understand how YP participants may differ from non-YP participants due to participation in these crucial protective factors. In the third set of analyses, we will examine if these three protective mechanisms have any direct effects on the relationship between risk and academic achievement. The final set of analyses will test a moderation model linking risk status, academic achievement, and these three protective factors in an effort to examine how these factors may individually buffer the impact of risk status on 11th grade GPA among this young Latino sample.

Latino ethnicity within the United States. Passel and colleagues (2011) report there are 50.5 million Latinos in the U.S. The 2010 U.S. Census showed that Mexicans, Puerto Ricans, and Cubans continue to be the three largest Latino sub-ethnic groups in the U.S. (Lopez & Dockterman, 2011). However, the next four Latino sub-ethnic groups – Salvadorans, Dominicans, Guatemalans, and Colombians – grew faster than the former three groups between the years 2000 and 2010. The Latino population has a younger average age than any other ethnic group in the United States and researchers believe this is because of the high numbers of new births and the fact that many foreign-born Latinos arrived to the United States after 1990 (Domenech-Rodríguez, Baumann, & Schwartz, 2011; U.S. Census Bureau, 2007). It is estimated that the Latino community will account for 44% of population growth from 2000 to 2020 and they will contribute 62% of growth from 2020 to 2050 (U.S. Department of Commerce, 1997).

Youth development programs. Youth development programming has been shown to be effective in promoting educational resilience among youth identified at risk for academic failure (Peck, Roeser, Zarrett, & Eccles, 2008; Feinstein & Peck, 2008). In the last two decades, youth development programming has grown exponentially and are implemented in a variety of ways and in a variety of settings (Mahoney, Parente, & Zigler, 2009; Roth, Malone, & Brooks-Gunn, 2010; Zaff, Moore, Papillo, & Williams, 2003; Lauer et al., 2006). Although there is no standard design or operating protocol for how they are implemented, participation in youth development activities has been shown to predict higher rates of completing homework assignments, a greater sense of belonging and increased social competence in youth (Mahoney, Vandell, Simpkins, & Zarrett, 2009; Eccles & Gootman, 2002; Vandell, Pierce, & Dadisman, 2005).

The link between extracurricular activity involvement and improved academic achievement has been well established in previous literature (Crosnoe, 2001; Mahoney & Cairns, 1997; McHale, Crouter, & Tucker, 2001). Using the NELS:88 dataset, Gerber (1996) found that participation in extracurricular activities was related to increased academic achievement for both Black and White 8th graders, and that school-based activities were more predictive of this positive development than were externally based extracurricular activities. Another NELS:88 study revealed that participation in school-based extracurricular clubs increased scores for geography, reading, science, and math among 8th and 10th graders (Schreiber & Chambers, 2002). Mahoney, Lord, and Carryl (2005) studied the impact of extracurricular activity participation on the reading achievement scores of a multi-ethnic sample attending one of three public schools in an urban, underserved U.S. city. Results indicated that students who participated in enrichment learning (e.g. computers, music), supervised recreation, and art activities demonstrated higher reading achievement scores than students who only spent unstructured time with other children, their parents, or other adults after school hours (Mahoney et al., 2005).

Youth development programming for Latino youth. Among the four largest ethnic groups in the United States, youth from the Latino community are the least likely to participate in youth development programs (Simpkins, O'Donnell, Delgado, & Becnel, 2011; Pedersen & Seidman, 2005). Research also suggests that Latino youth are less likely than White youth to show engagement in informal academic activities if these activities are not directly controlled by their schools (Ream & Rumberger, 2008). The implication here is that these youth are more likely to participate and derive benefit from

a youth development intervention which is anchored by their schools than by those offered within their communities. This research also indicates that schools need to actively persist in providing Latino youth access to these activities. If participating in the youth development program is not enforced by school administrators or parents, Latino youth may ignore youth development opportunities altogether. Borden and colleagues (2006) conducted a study to examine the contextual factors that impact levels of engagement in youth development programs for Latino youth. Schoolwork and having a lack of money and transportation were the first and second most cited reasons Latino youth gave for not participating in these programs, respectively.

A recent meta-analysis of youth development programming effects on at-risk youth surveyed 35 interventions, yet only four of these included ethnic minority youth and only one intervention featured a primarily Latino sample (Lauer et al, 2006). Most of the research conducted on youth development programming for Latino youth focuses on comparing participation rates of Latino youth to the youth of other ethnic groups (Simpkins et al, 2011; Pedersen et al, 2005), however the limited number of researchers who have examined the effects of youth development programs on Latino youth have found these programs can predict positive social competence, ethnic identity exploration, and feelings of success in school among youth in this ethnic group (Riggs et al, 2010; Villarruel et al, 2005; Diversi & Mecham, 2005). For example, Riggs and Greenberg (2004) evaluated the after-school program *Generacion Diez* created to positively influence academic achievement among rural Latino youth. After completing homework, youth in *Generacion Diez* enjoyed group activities and were then taught lessons from two curricula: the first was based on academic achievement and the second on fostering social

14

and emotional competence. Results indicated that program participants reported significant increases in reading, spelling, and mathematics scores from pre- to posttest. Independent scholars Marcelo Diversi and Connie Mecham evaluated an after-school program created for the influx of Latino immigrant students in rural Utah (2005). This program paired local college students with eighth- and ninth grade Latino students to help with homework and aid in the acculturation process. After participating in the program for more than a year, most of the participants reported significant gains in their academic achievement (Diversi et al, 2005). However, the experiences of high-school aged Latino youth and the impact youth development interventions can have on their academic achievement years after their initial program contact is largely missing from this literature.

  Research goals. YP is currently implemented in independent school districts spanning 12 states (including the District of Columbia), Japan, Peru, and Brazil. The collaborating non-profit organization provides staff training, program materials, and ongoing technical assistance to ensure uniform implementation regardless of the diverse settings where this PYD program is executed. A study conducted by The William Penn Foundation in conjunction with the City of Philadelphia school district found some initial support for the positive impact YP has on academic achievement. Results indicated that urban high school students who participated in YP ($n = 960$) outperformed non-participants ($n = 3,244$) in four academic subjects (i.e. English, mathematics, science, and social studies) (School District of Philadelphia, 1995). Other research indicated that students participating in YP (77%) were significantly more likely to complete high

School in four years than those in the comparison group (67%) (Johnson, Rothschild, & Bry, 2009). However, these studies did not examine the effects of YP on Latino youth specifically, or take into account the risk factors associated with low SES or acculturation on Latino students' poor academic achievement. They also did not account for culturally specific risks, similar to other studies (Simpkins et al, 2011; Borden et al, 2006; Villarruel et al, 2005). Contextual factors like this likely influence the educational experience of Latino youth and should be considered when evaluating the ability of YP to increase academic performance among this unique population.

Moreover, similar to most other interventions to date, previous research on the impact of YP has not addressed the processes by which participation facilitates educational resilience. There are few youth development interventions that examine how PYD is facilitated among Latino high school students. Riggs, Bohnert, Guzman, and Davidson (2010) have proposed that this process includes opportunities to build relationships with non-deviant peers and classmates, increased supervision from caring adults, and the cultivation of personal identities. Riggs and colleagues suggest that Latino youth who participate in PYD activities can explore their own ethnic identities and different aspects of their lives with other youth with whom they can identify. We plan to address each of these methodological and theoretical concerns in the present study.

Specifically, this study will examine the impact of YP on educational resilience among a Latino sample. In Question One, we will address the potential impact participation in YP at grade 9 has on the academic achievement of Latino high school students during the 11th grade. In Question Two, we will examine differences during grade 12 in three protective mechanisms proposed to be the primary mechanisms in which YP influence academic achievement (i.e. YP core values, positive peer traits,

resilient qualities) between YP participants and non-YP participants. In Question Three, we will determine whether these protective mechanisms have any significant main effects on 11th grade GPA. Finally, in Question Four we will examine how these key protective mechanisms moderate the relation of risk on academic achievement.

<u>Question One: Participation in Youth Program</u>

Participation in Youth Program will moderate the relationship between risk status and academic achievement among an underserved population of Latino high school students so that YP participation will buffer some of the impact of risk on academic achievement.

Youth Program is a youth development intervention that is implemented once a week during the ninth grade students' health and physical education class. This intervention utilizes 11th and 12th grade students as peer leaders to facilitate group activities that are based on several protective factors (e.g. academic self-efficacy, sense of school membership). Peer leaders are trained to lead these activities in a weekly leadership class that is taught by trained YP faculty advisors. YP participants apply their newfound skills and knowledge to implement a community service project of their own during their second semester of ninth grade.

YP is structured to meet the five components identified to be a high quality program: engagement, breadth, duration, exposure, and intensity (Roth, Malone, & Brooks-Gunn, 2010). YP participants show engagement by speaking in weekly discussions and being active in the planning and execution of their required community service project. The breadth of experiences in YP is wide – participants contribute their collective agency to solve problems in their local neighborhoods, attend two scheduled Family Night events throughout their ninth grade year, and receive mentorship weekly from peer leaders. The duration of the YP youth development intervention spans half

the participant's high school career. The total exposure will last even longer if the participant becomes a peer leader in their junior or senior year. Ninth grade participants engage in weekly YP outreach sessions, receive exposure to peer leaders, and bond with their classmates every week, further distinguishing YP from other youth development interventions for the intensity of participation required.

High quality youth development interventions that target at-risk youth have demonstrated the potential for producing positive effects. In particular, research suggests that some Latino adolescents perceive positive development as holistic, so PYD interventions, which by nature, address mental, physical, spiritual, and social health are likely to enhance well-being (Garcia, Duckett, Saewyc, & Bearinger (2007). For example, the nationwide nonprofit organization YMCA created an after-school program, *Virtual Y*, to meet the social and academic needs of New York City public school students. This prevention-based after-school program targets youth in under-served neighborhoods and focuses on three components of PYD: spiritual development (assets and values), physical health development (recreation and nutrition), and mental development (academics and literacy). Preliminary evaluation research aimed to understand program effects on its largely at-risk adolescent population indicated that students participating in *Virtual Y* demonstrated significantly higher scores on citywide math tests than comparison youth (Foley & Eddins, 2001). However, the academic benefits of *Virtual Y* have not yet been tested among Latino youth. Similar to *Virtual Y*, the YP intervention is a multi-component PYD intervention that addresses the affective, cognitive, and social aspects of youth development.

School-based after-school youth development interventions in particular have been shown to be effective in increasing academic achievement among at-risk youth. Slicker and Palmer (1993) examined the effects of a mentor school-based after-school program specifically targeted for at-risk youth, and found that students who received effective mentorship demonstrated significantly lower dropout rates compared to students whose mentors failed to maintain consistent contact with their protégés. Marcelo Diversi and Connie Mecham (2005) evaluated an after-school program that employed college students as mentors for recently immigrated Latino eighth- and ninth grade students. Participants and their mentors worked on academic tasks and discussed acculturation issues twice weekly for at least 1.5 hours each day. Results indicated the mean GPA of participating youth increased from 1.95 to 2.45 by the third quarter of participation in this program; by contrast, students who dropped out of the program experienced declines in their GPA (Diversi et al, 2005).

Hanlon and colleagues (2009) evaluated an after-school program called *The Village Model of Care* which sought to improve academic performance and instill cultural values for its Black adolescent population by hosting weekly group discussions focusing on ethnic identity and coping strategies for racism. Students who attended at least half of the prescribed weekly sessions reported greater increases in GPA than those students who participated in less than half of the *Village Model of Care* sessions (Hanlon, Simon, O'Grady, Carswell, & Callaman, 2009). Lastly, Barr and associates (2006) reported findings from a formative evaluation of *The After-School Corporation* (TASC), a non-profit organization that provides resources to New York City and State schools to enhance the quality of school-based after-school programs. TASC-funded after-school

programs provide academic, athletic, and cultural enrichment activities. Results indicated that high-school aged TASC participants were more likely to have higher numbers of earned credits toward graduation a year after exposure to the program than non-participants (Barr, Birmingham, Fornal, Klein, & Piha, 2006). These programs produced improved functioning because they each encouraged positive relationships for youth, in addition to integrating issues of culture and ethnicity. However, information specific to Latino populations is limited in the TASC literature. The current study proposes that the Latino students participating in YP are likely to reflect academic improvements similar to that of the youth who participated in these previous culturally sensitive mentor-based after school programs.

YP is unique from most youth development interventions in that it is scheduled into the participant's school day. It is not an activity a student can choose not to attend after class is dismissed. Furthermore, given the barriers Latino youth face in access and continued participation in after-school programs (Borden et al., 2006), a school-based program like YP provides access to all Latino youth. The universal design of this youth development intervention allows it to serve diverse groups of youth in the school context. Eisenman (2007) suggests that youth programming driven by Self-Determination Theory is critical during the transition between middle and high school when feelings of school engagement are most threatened. YP was designed by the non-profit organization in 1979 to enrich students' interpersonal and academic competencies and increase students' sense of belongingness within the school context (Powell et al, 1993). YP participants receive normal health and physical education classes four days a week, and on the remaining day, they receive YP curriculum, which builds pro-social behaviors while enhancing their academic skills.

20

Every youth development intervention creates its own social milieu complete with rules, shared goals, and activities. Those interventions guided by Self-Determination theory create an environment which fosters experiences of relatedness, competence, and autonomy, and they do so by imbuing the environment they create with three explicit dimensions (Grolnick et al, 2007). Involvement, the first dimension, is demonstrated in YP by its inclusion of three levels of supportive individuals, starting with a team of community stakeholders charged with supporting and sustaining YP in the high school; school faculty who take time out of their schedules to receive advisor training and commit to teaching a year-long peer leadership course in addition to their traditional teaching duties; and the 11th and 12th grade students who participate in that course, facilitate weekly outreach sessions, and act as peer leaders for YP participants. Similar peer-training approaches have shown positive results in increasing positive outcomes for maltreated pre-school children (Fantuzzo, Manz, Atkins, & Meyers, 2005), urbanized youth living in poverty (Frazier, Cappella, & Atkins, 2007), and Latino children with learning disabilities (Christensen, Young, & Marchant, 2007). Within the PYD perspective, the peer-training approach of YP is likely to "build on youth assets", fostering positive trajectories into emerging adulthood.

The second dimension necessary for programming driven by Self-Determination theory is structure (Grolnick et al., 2007), and YP provides this by using a sequence of events that is repetitive, yet challenging. Each outreach session uses an activity-based model that first sparks conversation among participants surrounding the activity's theme, and then the participants engage in a hands-on, skill-building activity. After each activity, peer leaders lead participants in a group discussion on the learning that has occurred. Each of these activities is themed on a distinct YP core value, including academic self-

21

efficacy, adaptive help-seeking, sense of belongingness, and cognitive coping skills. After a semester of receiving such skills through activity-based learning and group discussion in a safe context, YP participants utilize their skills to plan and execute a community service learning project. Research suggests civic engagement increases when youth also receive pro-social value training and opportunities to discuss social interaction (Eccles & Gootman, 2002; Zarrett & Eccles, 2006; Youniss, Bales, Christmas-Best, Diversi, McLaughlin, & Silbereisen, 2003). Martin, Martin, Gibson, and Wilkins (2007) evaluated a Century 21 after-school program geared towards promoting pro-social behaviors among an urban sample of Black American male adolescents. Results indicated that participation in this program produced academic improvements in mathematics, reading, and composition as measured by the Kaufman Brief Intelligence Test (KBIT) and the Kaufman Test of Educational Achievement (KTEA). Chen, Rubin, and Li (1997) examined the impact of student leadership roles on the academic achievement of 237 urban Chinese pre-adolescents. The researchers found that not only was academic achievement positively and significantly correlated with student leadership roles, these leadership roles had significant contributions to academic achievement over the course of two years controlling for sex and academic achievement stability (Chen, Rubin, & Li, 1997). These studies suggest the strong impact that PYD programs which promote leadership ability and pro-social behaviors may have on the academic achievement of youth representing diverse cultures and settings.

Furthermore, YP provides autonomy support, the third Self-Determination environmental dimension, as participants are allowed a choice in which project they will pursue and are encouraged by peer leaders and faculty advisors to actively solve problems as they arise. Through tackling their community service projects, youth build

important skills and develop their sense of agency and mastery, all of which function to enhance their academic success and strengthen their engagement in the school setting. Youth agency-, competence-building, and connection to community-based activities like these are hallmarks of PYD (Lerner, Almerigi, Theokas, & Lerner, 2005) including academic engagement and achievement.

YP is currently operated in several New Jersey school districts that have heavy representation from the Latino community. The current study was conducted at a school with a Latino enrollment rate of over 95%. Some cross-cultural researchers debate that autonomy, a key component of Self-Determination theory, is not universally beneficial. Their argument is that such a theory reflects more Western values and is not applicable to more collectivistic cultures like that of the Latino community (Markus & Kitayama, 2003). In contrast, other researchers have shown that high self-perceptions of autonomy, competence, and relatedness may be related to more satisfying learning experiences in more collectivistic cultures like Brazil, China, and South Africa (Chirkov, 2009; Jang, Reeve, Ryan, & Kim, 2009; Chirkov, Ryan, & Willness, 2005) than individualistic cultures.

Research suggests that PYD programs can use these elements of Self-Determination theory to transcend issues of SES and social class. Eisenman (2007) found that when extracurricular programming driven by Self-Determination theory is infused into the general curriculum so all students benefit as YP does, at-risk youth in particular are less likely to feel singled out. This PYD intervention provides protective mechanisms to youth of varying risk profiles simultaneously, so poor or otherwise underserved youth and middle-class youth alike develop together. YP also addresses issues of accessibility

for the second most cited reason (i.e. lack of money and transportation) Latino youth

report in avoiding PYD programs by embedding itself within the school day.

Through participation in the YP program during the ninth grade year and the

consistent exposure to peer leaders that the program affords participants throughout their

high school years youth are provided opportunities for developing skills, building a sense

of agency and competence, and establishing connections and feelings of relatedness, that

may be salient protective factors in the process of transitioning into high school for these

Latino adolescents. Based on previous research and the theoretical foundations of Self-

Determination Theory and Positive Youth Development, we propose that participation in

YP will act as a protective mechanism, lessening the impact of participants' risk status on

their academic achievement. Specifically, we hypothesize that GPA will be higher for YP

participants than non-YP participants because of the numerous resources YP provides

and the personal assets that they foster in youth. Acculturation will be included as a

covariate in this model to control for the impact English language proficiency and

generational status may have on academic achievement.

> Question Two: Comparison between Youth Program and Comparison Groups
> *Students who participated in Youth Program will report greater exposure to peers with positive characteristics, higher levels of personal resilient qualities, and greater endorsement of Youth Program core values (i.e. academic self-efficacy, adaptive help seeking, cognitive coping, sense of belonging) than students in the comparison group.*

The Self-Determination theory (Deci & Ryan, 2000) proposes that individuals

adapt by participating in interesting activities, using their competencies, enjoying

relationships in social settings, and mixing interpersonal experiences and intrapsychic

energies into one unit. YP is a PYD intervention focused on providing these experiences

for youth to foster assets that promote such adaptation for youth transitioning into high

school. YP might be best explained as a PYD intervention that ensures youth develop key

24

assets that enable them to maximize their school experience. Of the numerous assets YP aims to nurture, this study will examine three which, based on previous research, are hypothesized to be most effective for promoting educational resilience – positive peer traits, YP core values, and resilient qualities. In Study 2, we will examine how YP participants and non-YP participants differ on these three crucial contextual supports and intrapersonal assets for PYD.

Positive peer traits

Research indicates that Latino adolescents frequently report patterns of isolation and interpersonal distance from family members (Stanton-Salazar, 2001; Spina, 2002). In order to ward off feelings of isolation, many Latinos rely on *personalismo*, a cultural value that emphasizes relationships should be appreciated for their own value and not as a means to another end (Clauss-Ehlers et al, 2002). Among Latino youth, personalismo may take the form of positive peer traits like serving as a role model in their peer group, providing informal therapy, and offering their unique awareness of the high school social and academic environment.

Perreira, Harris, and Lee (2006) conducted a study that sought to compare rates of educational attainment between foreign-born and native-born American adolescents. This research team identified a construct called "school capital" that influenced patterns of educational attainment, defined as the percentage of youth who participated in school activities and expected to earn a middle-class income. Schools with high numbers of students who fulfill peer leader responsibilities demonstrated high levels of school capital, and researchers found that this was especially important for schools in immigrant and ethnic minority neighborhoods (Perreira, Harris, Lee, 2006). Fernandez-Kelly (2002) examined different forms of social capital in the Latino community and found that non-

familial relationships were especially important for youth in this community. Perreria and

colleagues (2006) conceived of social capital by delineating community forms of capital

from school-based forms. Community-level social capital was measured by the level of

advantage and ethnic diversity of a youth's neighborhood, and school-level social capital

was defined as the percentage of youth in an adolescent's school who were engaged in

school activities and expected to earn above low-income wages in their adult years

(Perreria et al, 2006). In the YP program, where students are expected to reflect on the

challenges of high school life and contribute to a common goal (i.e. community service

project), it is hypothesized that participants will bond with their classmates and peer

leaders, resulting in the development of positive peer networks and high levels of school-

level social capital. Research suggests that youth engaged in PYD programming develop

a unique culture that is based on activities and shared values (Brown, 1990). These shared

values and behaviors are hypothesized to influence the individual members of the peer

group.

Horvat, Weininger, and Lareau (2003) found supporting evidence for the theory

that participating in school-based extracurricular activities contributes to a student's

social network. Even when the peers that youth participate with in a program are not their

friends, they still remain highly influential on youth development as members of the

participant's social group. Social groups differ from friend networks in that not all

relationships within a social group are directly linked, but membership to the social group

comes with resources, a sense of identity and feelings of attachment (Molloy, Gest, &

Rulison, 2010). When the program ensures that the social group is based on mutual

respect, frequent and positive interactions with peers, and a focus on pro-social behaviors

like YP does, youth benefit from their participation (Dishion, Andrews, & Crosby, 1995;

Kinderman, 2007). It has been widely accepted that students who engage in school-based extracurricular activity tend to report having peer groups with higher academic performance and educational aspirations than those students who do not participate (Eccles & Barber, 1999; Larson, Hansen, & Moneta, 2006). Fredricks and Eccles (2005) found that youth involved in PYD programs report having more academic and pro-social friends than non-participating youth. Their findings indicate that such pro-social peers may positively support conventional behaviors, pressure their friends to engage in the school setting, and model commitment to academic pursuits. Moreover, it has been suggested that youth in PYD programs tend to have more friends who aspire to attend college and demonstrate less risky behaviors (Eccles et al., 1999; Barber et al., 2001).

YP begins the process of fostering positive peer relations by establishing an Activity Day early in the academic year which is designed to help ninth grade students form cohesive peer groups. This unique YP event encourages ninth grade students to develop an alliance with one another, learn how to be team players, and develop problem solving skills. YP participants also learn healthy practices for social interaction and sharing team feedback during Activity Day. Throughout the year, weekly activities encourage YP participants to get to know each other, discuss their personal values, and debate important topics. These activities create a space where YP participants can be honest with each other and form strong bonds with their peers. In this environment, youth are exposed to both same-age peers and older students who teach pro-social values and aid in fostering competence and social skills. When participants decide to include other YP participants and peer leaders in their chosen peer group, they are choosing to integrate the influence of academic and social norms into their identities (Sokatch, 2006; Ream et al., 2008).

Resilience

The second proposed benefit of participation in this PYD program is the harnessing of students' resilient qualities to thrive despite their risk status. As stated previously, resilience is defined as the achievement of positive developmental trajectories despite significant threats to one's health and well-being (Masten et al, 2001). Although several youth development interventions claim to build resilience in at-risk youth populations, few have directly measured the concept of resilience and fewer still have investigated the relation of resilience and academic achievement among poor, Latino youth. Most resilience studies have looked at those suffering from exposure to war, sexual assault, and other traumatic incidents which trigger Post-traumatic Stress Disorder symptoms (Vetter, Dualev, Mueller, Henley, Gallo, & Kanukova, 2010; Wolmer, Hamiel, Barchas, Slone, & Laor, 2011; Steenkamp, Dickstein, Salters-Pedneault, Hofmann, & Litz, 2012) and not from disadvantage associated with chronic low SES. Gallo and colleagues (2009) argue that for many Latinos, resilience is at least partially driven by cultural factors such as family interdependence and spirituality.

High social functioning may also be a component of Latino resilience. For example, Flores and colleagues (2005) examined the role of relationship features in predicting resilience among Latino children during a summer day camp. These researchers created a composite resilience score which included measures obtained from participants' peers and their camp counselors. The peer-based resilient index measured social functioning, and the camp counselor-based resilient index measured counselors' perceptions of participants' pro-social behavior, aggressiveness, withdrawal behaviors, internalizing, and externalizing behavior problems. Results indicated that the interpersonal features of the relationship with program mentors predicted resilient

behaviors in Latino children (Flores et al., 2005). This example of resilience research highlights the importance of relatedness and mentoring relationships in the Latino community.

Oades-Sese and Esquivel (2006) conducted cluster analysis methods to classify profiles of resilience among Latino preschool children participated in urban public schools. This study's primary outcome measure was social competence observed through social play as measured by the *Penn Interactive Peer Play Scale.* These researchers included questionnaires that measured temperament, emotion regulation, Spanish and English language proficiency, autonomy, and acculturation. Results indicated two distinct profiles of resilience. The first profile reflected Latino youth who demonstrated high levels of autonomy and emotion regulation, low levels of inhibition and negative emotionality, English fluency and some Spanish proficiency; the second profile reflected Latino youth who also reported high levels of emotion regulation and autonomy and low levels of negative emotionality. However, this second group was fluent in Spanish and only somewhat proficient in English. This research suggests that among Latino preschoolers within urban public schools, resilience is akin to high levels of self-regulation, the absence of negative affect, and the ability to traverse English and Spanish culture. Both of these resilient profiles demonstrated high levels of play interaction compared to non-resilient participants (Oades-Sese et al, 2006). Although this is a preschool population, these findings lend themselves to an understanding of what resilience may look like at the start of some Latino youths' educational trajectories.

Wagnild and Young (1990) proposed a conceptual framework of resilience that interconnects five distinct constructs: self-reliance, meaning, equanimity, perseverance, and existential aloneness. Within this framework, resilient youth are defined as those

who: 1) depend on themselves, their skills and knowledge (self-reliant); 2) actively search for meaning and can articulate what dreams and hopes they have for their future, and 3) hold a balanced perspective of life (equanimity). Gramzow and colleagues (2008) investigated cardiovascular reactivity while interviewing students about their academic performance to determine whether students who exaggerated their GPAs were acting out of anxiety or equanimity. The authors concluded that academic exaggerators demonstrated emotionally adaptive (equanimous) processes and explained these processes may be why these students improved their academic performance over time. Lastly, resilient youth are perseverant, showing a willingness to struggle in renovating their lives, embrace what separates one from others (existential aloneness; Wagnild, 2009). In the present study, we propose that academic achievement is related to these five constructs, and one aim of the current study is to test, for the first time, the relation between these five constructs and the educational achievement of at-risk Latino youth. We hypothesize that these five traits will act as protective mechanisms to overcome the personal and academic obstacles these Latino youth face in their daily lives. Explicitly measuring resilience helps to detect adaptive developmental regulations as they emerge within a setting that advances the well-being of the participant and their YP context.

YP was developed upon a strengths model, focusing on the development of protective mechanisms and resilience instead of a decrease in psychopathology (Wolmer et al, 2011). The assets YP provides include coping resources, a social support network to prevent negative emotionality, and the opportunity to build autonomy through self-directed community service projects, which may lead to Latino participants demonstrating the resilient profiles mentioned earlier (Oades-Sese et al, 2006). This PYD intervention is also facilitated by faculty advisoers and provides peer mentors, as Flores

and colleagues (2005) demonstrate is crucial for resilient functioning among Latino youth.

In the YP context, Latino students begin their high school career with mentors, and later have the opportunity to become the mentors, supporting continued connectedness and contributing to the development of agency. YP aims to support the autonomy students need to make intelligent choices outside of the context and introduces the participant to others who they can readily contact when they are not sure of themselves. As these youth matriculate through high school, we hypothesize that they will learn to persevere through academic challenges, develop self-reliance as they navigate their own identities, and show equanimity when discussing their academic performance with others. We expect YP participants to report higher levels of resilience than comparison group participants because they have been exposed to an environment that encourages choice and active problem solving (Grolnick et al., 2007).

Youth Program Core Values

The curriculum of the PYD intervention is based on 11 protective factors, and research has shown these factors aid in the transition into high school (Powell et al, 1993). These protective factors are the core values upon which the intervention's weekly activities are based, and we expect program participants to endorse these core values as a result of their participation. This study selected four of the 11 core values – academic self-efficacy, cognitive coping, adaptive help seeking, and a sense of school membership – because these core values in particular represent YP's commitment to enhancing academic skills through high school and reducing the risk of drop out. This particular set of skills also represent the fundamental social needs proposed by Self-Determination theory (competence, autonomy, and relatedness): academic self-efficacy is used to

31

elevate personal academic standards (competence); cognitive coping skills are activated

to solve new problems autonomously; adaptive help-seeking is employed when the

student cannot solve the problem autonomously, and a sense of school membership

(relatedness) for the patriotism necessary to promote increased engagement in the school

environment. We propose that a YP participant will report stronger endorsement of these

core values than non-participants.

Adaptive help-seeking. Adaptive help-seeking has been defined as a strategy to

use when tasks and problems become too challenging for the skills of one person

(Karabenick & Newman, 2009). This protective mechanism has been shown to be

particularly important for better health behaviors. Gallo and colleagues (2009) reported

that Latinos with strong interpersonal connections with their families and cultural values

are more likely to seek medical attention and regain their health following injury or

illness than those with weaker familial connections.

Adaptive help-seeking has also shown to be important in the academic arena.

Ryan and Pintrich (1997) conducted a study to understand how academic goals are

related to help-seeking behaviors. The study sample included 443 fifth-grade students of

various ethnicities in working class neighborhoods throughout southeastern Michigan;

there were no significant ethnic differences in any of the variables. Results indicated that

students who were more concerned with building their mastery were more likely to

demonstrate adaptive help-seeking than were students who were concerned with

performance (displaying that competence to others) (Ryan et al., 1997). A developed

sense of mastery has been linked with adaptive achievement behaviors, whereas

performance-based goals are considered detrimental to learning (Pintrich & Schunk,

1996; Ryan et al, 1997). Adaptive help-seeking (and the mastery-orientation that

promotes this adaptive skill) has been shown to be linked with increased academic engagement and achievement (Karabenick & Newman, 2006). For example, Ryan and Shin (2011) found that help-seeking behaviors predicted significant improvements in academic performance within one academic year and that the more confident students are, they less likely they are to avoid seeking help when necessary.

Webb and Mastergeorge (2003) suggested three structural components for peer learning environments which promote adaptive help-seeking: 1) school staff must provide explicit instruction in explaining tasks; 2) there must be an atmosphere of reciprocal questioning where participants are empowered to ask high-level questions about the activities, and; 3) the role of facilitator is crucial to providing feedback for group process. YP peer leaders are trained to model these techniques for the participants, sending the message that it is okay to seek help in other parts of their school environment as well. Moreover, it has been documented previously that the relationship between social approval and youth experiences of embarrassment for help seeking was positively correlated; however, working in small groups was shown to reduce this social anxiety surrounding academics and promote a more collaborative spirit among peers (Ryan, Hicks, & Midgley, 1997; Newman, 1994). The environment of YP provides small group activity and large-scale collaboration opportunities which aim to allow the student to ask peers for help without fear of embarrassment, improve their ability to ask effective questions, and increase their academic performance by clarifying their requests.

Academic Self-efficacy. Bandura (1997, 2001) was the first to propose the idea of self-efficacy, defined as an individual's assessment of whether they believe that their actions will produce desired effects. Bandura's social cognitive theory states that as self-efficacy develops, affective, cognitive, and motivational processes become

33

interdependent and streamline toward the person's goals, fueling self-perceptions of mastery in their immediate environment. Academic self-efficacy, then, is a derivation of this literature and is defined as the self-assurance that one can successfully complete academic tasks based on their previous experiences and abilities (Mercer, Nellis, Martínez, & Kirk, 2011).

SDT and several other motivational theories also support the idea that aspirations are largely influenced by what individuals think they can do, so being in an environment where youth are told they can achieve academic success is likely to elevate their academic goals (Grolnick & Ryan, 1987; Marsh, Walker, & Debus, 1991). Academic self-efficacious individuals quickly learn the difference between academic goals which can be secured autonomously, those goals that require tutoring, and those which only can be achieved with the support of a group of like-minded classmates. These academic self-efficacy beliefs are thought to influence the youth's causal attribution style so that when participants underperform academically, they ascribe their failure to insufficient effort as opposed to low ability (Bong, 2004; Bandura, 1993).

YP aims to equip participants with multiple resources to promote academic self-efficacy including activities that ask youth to recall their previous success experiences, mobilize all of their academic strengths, and try their best to succeed in school work. Research suggests a highly developed sense of academic self-efficacy facilitates ambitious academic aspirations and performance (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Caprara, Scabini, Barbaranelli, Pastorelli, & Regalia, 1998). Carroll and colleagues (2009) examined structural relations among academic achievement and self-efficacy among a sample of high school-aged Australian youth and found that youth who trusted their capabilities in exercising control over their academic pursuits achieved

higher grades than those who demonstrated less developed academic self-efficacy. Chemers, Hu, and Garcia (2001) examined the effects of academic self-efficacy on the academic performance and expectations of a multi-ethnic college freshmen sample. Results indicated that academic self-efficacy had significant direct effects on students' academic expectations and academic performance, so that highly efficacious students demonstrated better academic performance and held greater academic expectations than less efficacious students (Chemers, Hu, & Garcia, 2001).

Academic self-efficacy has been shown to be particularly important for academic achievement among Latino youth. This protective mechanism was found to be associated with academic persistence and personal adjustment among Mexican American college students (Gloria, Castellanos, López, & Rosales, 2005; Solberg, O'Brien, Villareal, Kennel, & Davis, 1993). Chun and Dickson (2011) conducted structural equation modeling to examine the relationships between academic self-efficacy, sense of school belonging, and academic achievement among Latino youth living in a community along the U.S.-Mexico border region. The researchers included an adapted version of Bachman's (1970) School Ability Self-Concept Index to measure academic self-efficacy, Goodenow's (1993) Psychological Sense of School Membership Scale to measure sense of school belonging, and student self-report of grade point average at the most recent grading period in math, English, and science. Results indicated that sense of school belonging likely enhanced academic achievement by increasing academic self-efficacy. More research is needed that will examine how youth development programs promote this developmental asset among high school-aged Latino youth.

Cognitive Coping. As students mature, their abilities to cope with negative life events increases and shifts from externally-oriented coping methods toward more

35

internally-oriented cognitive strategies (Aldwin, 1994; Garnefski, Legerstee, Kraaij, Kommer, & Teerds, 2002). Examples of these strategies include planning ahead, predicting the future consequences of a given action, and providing alternative explanations of events. These are known as cognitive coping skills, and they may have as much utility at school as they do in home environments. Monkong, Pongpanich, Viwatwongkasem, Chantavanich, Wongpiromsarn, and Katz (2009) examined the efficacy of a youth development intervention designed to train adolescents to cope with their stress through life skills instruction. The study sample was randomized and half of the participants were trained on emotion regulation, conflict resolution, and the concept of thinking. After the training was completed, intervention participants demonstrated significant increases in cognitive coping skills and decreases in perceived stress (Monkong et al., 2009).

Pincus and Friedman (2004) conducted a school-based youth development intervention designed to increase cognitive coping skills among a sample of elementary school students. Participants were divided into three groups: a cognitive-affective skills training group that taught how to identify emotions, how to deal with emotional situations, and apply these techniques in stressful situations; a problem-solving skills training group with no emotional skills component; and a discussion group which encouraged group process over stressful situations, but offered no skills training. This last group served as the comparison group. Results indicated that participants in the first group demonstrated significant increases in emotion-focused strategies than the other two groups, and participants in the cognitive-affective and problem-solving skills training groups showed significant gains in the total amount of cognitive coping skills they generated after the intervention (Pincus et al., 2004). What these two interventions have

in common with the current study is that each of these programs fosters coping skills that are important for positive youth development. Suldo, Shaunessy, Thalji, Michalowski, and Shaffer (2009) identified five primary sources of stress that high school youth cope with: parent-child relationships, peer relationships, challenging life events, family problems, and academic problems. YP and other PYD interventions which promote adaptive coping methods for stress give youth the opportunity to manage these stressors in a safe environment. The use of cognitive coping skills like these has also been shown to improve performance in academic pursuits (Boekarts et al, 2000; Zimmerman, 2000). Few opportunities in a typical school day provide these resources, but within the YP environment, these discussions may become a sounding board for ideas on how to navigate the often difficult transition into high school. By sitting with YP peer leaders and classmates each week and discussing real-life challenges, we hypothesize that YP participants may be able to share creative solutions and develop this repertoire of cognitive coping that they can use during their transition into high school, in combination with the larger skill set YP aims to provide its participants.

Sense of School Membership. Psychological membership, the degree to which students feel personally accepted, respected, and supported by their peers in the school environment, may be critical to the educational resilience of youth (Goodenow, 1992). Gallo and colleagues (2009) suggest that the Latino cultural values of *simpatia* (proclivities toward pleasant social interaction) and *allocentrism* (placing the needs of the group above individual needs) may stimulate youths' sense of school membership by increasing school support and cohesiveness. Developing close bonds with school-based social groups and the peers a student finds there as well as participating in fun, organized

37

activities together, all contribute to this sense of belonging (Ryan, Stiller, & Lynch, 1994; Skinner & Wellborn, 1994). The YP program aims to foster these close bonds and engage youth in purposeful group activities to foster this sense of connection.

Several youth development interventions have shown how participation in school-based programs can increase feelings of school membership and improve attitudes toward one's school. For example, *YouthFriends*, a school-based intervention that pairs students Kindergarten through 12th grade with caring adults once a week where they discuss substance abuse prevention, appropriate school behaviors, and school connectedness, showed program youth had greater increases in self-perceptions of school membership than comparison youth (Portwood, Ayers, Kinnison, Waris, & Wise, 2005). Similarly, the school-based youth development intervention *Across Ages*, required participants to complete community service activities and receive mentorship from adults in the community. Participants scored higher on scales measuring attitudes toward school than comparison group participants (LoSiuto, Rajala, Townsend, & Taylor, 1996). It is likely that students participating in YP will demonstrate higher relatedness for their schools than non-participants. YP fosters a sense of school belonging among youth by bridging their lives at school with parental concerns by implementing two Family Night events and helping youth organize a service-learning event where they serve as representatives for the high school in their local communities.

YP provides three contextual resources – positive peer traits, resilient qualities, YP core values – to create a school environment that nourishes the psychosocial need satisfaction of Latino high school students, and in turn, promote educational resilience. Specifically, YP focuses on establishing a setting that provides an inclusive environment,

38

positive peers, and autonomous opportunities to develop resilience, build competency,

academic self-efficacy, and other core values. Therefore, we expect participation in the

YP program, driven by the strengths-focused PYD framework and Self-Determination

theory, to result in YP participants reporting higher levels of these assets than non-YP

participants. We also hypothesize that these three protective factors – positive peer traits,

resilient qualities, and Youth Program core values – will significantly predict eleventh

grade academic achievement in our sample of at-risk, urban Latino youth.

Questions Three and Four: Youth Program Protective Factors Predicting 11th Grade GPA
and Moderating the Relationship between Risk Status and Academic Achievement

> *Positive peer traits, resilient qualities, and/or Youth Program core values will predict 11th grade GPA and moderate the relationship between risk status and academic achievement among an underserved population of Latino high school students so that these characteristics will buffer some of the negative effects risk has on academic achievement.*

The PYD perspective emphasizes the potential for plasticity in the course of an

individual's development and argues that this potential for system change exists because

of the mutually impactful relationship between individuals and their setting in which they

are embedded (Lerner et al., 2005). This study examines how YP utilizes this plasticity to

advance well-being in the school setting and adaptive academic functioning in program

participants. PYD is optimized in contexts that reinforce personal strengths (Durlak et al.,

2007), and the YP setting meets this criteria by structuring an environment heavy with

the principles of Self-Determination theory (i.e. autonomy, competence, relatedness). We

propose that the specified moderators in this study (i.e. positive peer traits, resilient

qualities, YP core values) serve as applied constructs for these three protective

mechanisms, and that after controlling for youth acculturation, they are the key

mechanisms by which YP buffers the impact of risk on academic achievement. Making

recommendations for the improvement of a youth development intervention cannot be

done without first identifying variables or processes of the intervention that are responsible for behavior change (Farrell, Meyer, Kung, & Sullivan, 2001; Baron & Kenny, 1986; Allen, Kuperminc, Philliber, & Herre, 1994). Further, examining both mechanisms and outcomes can help interventionists to replicate PYD programs like Youth Program on a larger scale and develop best practices for increasing academic achievement among at-risk youth (Bauman, Stein, & Ireys, 1991). Inspection of the processes which moderate the relationship between risk factors and outcomes among youth development programs is one approach to make these recommendations. For the current study, we conceptualize the protective factors examined in the second study, including personal resilient qualities, the positive characteristics of the YP participants' friends, and core values, as the key mechanisms by which YP may promote academic achievement among Latino youth. Further, we hypothesize that these key mechanisms will buffer the ill effects of risk on academic achievement.

Positive peer traits as a moderator. The powerful influence of the young peer group is bi-directional: the exposure of this group can have an impact on the development of the individual, and the individual's influence on their peers can also promote change within the group. This bidirectional influence builds group interest. Numerous studies highlight the significantly positive impacts peer quality has upon academic achievement (Zimmer & Toma, 2000; Sacerdote, 2001; Hanushek, Kain, Markman, & Rivkin, 2003). Véronneau and Dishion (2011) conducted a study examining the positive effects of peer characteristics on participants' academic achievement and found that certain peer characteristics (i.e. school engagement) significantly predicted positive changes in participant GPA. Altermatt and Pomerantz (2003) conducted longitudinal research that

investigated the influence of peers on the academic performance of participants. Results indicated that changes in participants' report card grades were predicted by the prior academic performance of their peers, suggesting that youth who prioritize their education also influence their peers to do the same.

Feldman and Majatsko (2005) proposed peer group relationships, a major component of YP, are moderating factors that effective youth development interventions address in an effort to produce positive outcomes. Affiliating with peers who demonstrate strong academic orientations is likely to increase the chances for educational resilience by increasing motivation to engage in academics and by modeling how to master challenging academic tasks (Altermatt et al, 2005). No studies to date have looked at the relation positive peer traits and academic achievement among poor, Latino youth. The current study will address this gap in research by exploring whether positive peer traits have any direct effects on the relationship between risk and academic achievement, and if this protective mechanism can also moderate this important relationship.

Resilience as a moderator. The relationship between resilience and academic achievement has been examined in other studies. Rajendran and Videka (2006) examined the academic components of resilience among a sample of multi-ethnic adolescents who had been referred to the child welfare system on reports they had been abused. In their study, resilience was operationalized as the combination of three latent constructs – the adolescent's sense of relatedness with their caregiver, their academic achievement, and their social competence. Results indicated that for every one-point standard deviation increase in resilience, the academic skills among the sample also improved by 0.38 units (Rajendran et al, 2006). Hartley (2011) examined the degree to which resilience predicted

41

the cumulative grade point average of a multi-ethnic sample of university students using the Connor-Davidson Resilience Scale (CD-RISC; Connors & Davidson, 2003). Results indicated that resilience accounted for a significant amount of variance for cumulative GPA (Hartley et al, 2011).

For the current study, we conceptualize resilience as possessing five traits: self-reliance, meaning, equanimity, perseverance, and existential aloneness (Wagnild, 2009). PYD settings that nurture these resilient qualities expose participants to community service opportunities, hands-on activities, and positive interpersonal contact that develop a person's sense of resilience. School-based activities that conclude with a group discussion to help youth process what they have learned and make meaning out of the activity's lesson also help in the development of resilience for youth. When youth encounter obstacles during the community service project, their YP program peer leaders step in to remind them of past successes so they can take setbacks in stride and encourage the youth to persevere in the face of adversity. When these resilient youth are alone studying and learning, they are expected to internalize more confidence in their ability to meet academic expectations. The equanimity and meaning associated with resilience will help youth to understand that greater academic challenges are a signal that their teachers believe they have mastered prerequisites and are thus ready for the next level. We conceptualize resilience as an important protective factor that may have a serious impact on the relationship between risk and academic achievement for Latino youth, and we propose that resilience will have a significant moderating effect on this relationship.

Youth Program core values as a moderator. Four protective factors from the YP curriculum – academic self-efficacy, adaptive help-seeking, sense of school membership and cognitive coping – have been identified as key core values of the YP

curriculum that were expected to directly influence youth academic achievement. These mechanisms serve as the foundation in YP activities, goals, and group-based discussions. Bandura, Barbaranelli, Caprara, and Pastorelli (1996) reported that academic self-efficacy promotes academic achievement by nurturing both academic aspirations and pro-social behaviors. Multon and colleagues (1991) provide more support for the theory that academic self-efficacy beliefs may work to counteract the impact of risk status on academic achievement; their results indicated that academic self-efficacy contributed to levels of motivation and academic performance. Academic self-efficacy has also been found to predict academic achievement among Mexican American college students (Hackett, Betz, Casas, & Rocha-Singh, 1992).

The method in which youth cope with stressful circumstances is associated with psychological well-being (Compas, Orosan, & Grant, 1993; Fields & Prinz, 1997; Kraaij et al, 2003). Wang and Holcombe (2010) found that use of cognitive coping skills predicted increased GPA among a multi-ethnic sample of eighth grade students. Neff, Hsieh, and Dejitterat (2005) proposed that employing emotion-focused cognitive coping skills may be adaptive when youth are challenged with academic underperformance because the situation has already happened and their use of cognitive coping can help them adjust to the reality of failure. It is expected cognitive coping also plays a role in handling stress associated with risk factors that may inhibit optimal academic achievement. No studies to date have looked at the relation of cognitive coping and academic achievement among poor, Latino youth, however low-income and ethnic minority status is often associated with a dearth in cognitive coping skills (Gallo et al, 2009). By promoting cognitive coping, YP addresses a crucial need for positive Latino youth development.

43

Adaptive help-seeking may also have the potential to lessen the impact of risk status on academic achievement. Research suggests that the frequency with which youth request explanations to clarify their schoolwork and instances where they incorrectly attempt to solve a problem and then ask clarifying questions are related to better academic performance (Newman & Schwager, 1995). Karabenick (2004) examined adaptive help seeking behaviors among a sample of undergraduate students in two different chemistry courses. Results indicated that course performance had a significant positive relationship with adaptive help seeking, and that those students who avoided seeking help demonstrated academic underperformance. A recent comprehensive review of adaptive help seeking research detailed the motivational process and interventions for building this self-regulating strategy, but neglected to draw links between adaptive help seeking and academic achievement among high school youth (Karabenick & Dembo, 2011). More research is needed that examines the relationship of adaptive help-seeking and academic achievement among poor, Latino youth.

A sense of school belongingness is also proposed to help buffer the deleterious effects of risk on academic achievement. Research has shown that this developmental asset has been linked to youth academic attitudes and motivations (Solomon, Watson, Battistich, Schaps, & Delucchi, 1992). For example, Battistich, Solomon, Kim, Watson, and Schaps (1995) found that a sense of school belongingness had a significantly positive effect on performance measures of reading comprehension among a sample of middle school-aged youth. Sánchez, Colón, and Esparza (2005) examined the role of youth sense of school belongingness in the academic adjustment of a sample of urban Latino youth. Results indicated that sense of school belongingness had a significant positive relationship with expectancies for success in English courses and academic effort and a

negative relationship with absenteeism. Few studies have looked at the impact this protective mechanism may have on academic achievement among poor, Latino youth (Kuperminc, Darnell, & Alvarez-Jimenez, 2008; Sánchez et al, 2005). The current study will explore the relations between sense of school belongingness and academic achievement among low-income Latino high school youth. These four YP core values are conceptualized as a moderator that both reorganizes youth concepts of self in the school setting but also helps them to adapt to contextual changes during the transition into high school. Together, these core values help youth to view themselves as competent, to be able to relate to and ask help from others, and to autonomously chart their own paths as they matriculate through high school. Acquisition of this skill set is expected to counteract the effects that youth unique risk profiles may have on their academic trajectories.

These four studies suggest that the key resources of the YP experience – the classmates and peer leaders the participants meet, the content participants learn, the inner strengths in which the program fosters – contribute to the participant's educational resilience. Whichever component(s) emerge as significant predictors and moderators will illuminate the process by which YP instills educational resilience in this at-risk sample of Latino youth. Determining these processes will inform recommendations for how YP can improve future trainings and implementations.

CHAPTER 2

METHODS

Participants

        This paper uses data from the program evaluation of Youth Program (YP; Powell

et al, 1993), a larger study of behavioral and academic adjustment conducted by Dr.

Valerie Johnson and her colleagues at Rutgers, The State University of New Jersey. This

study began with a cohort of ninth grade students who have been followed over three

waves of data collection through their high school career (9th, 10th, and 11th grades).

Because we were interested in the longitudinal consequences of YP participation, we

used survey information collected during the 1st and 3rd waves of data collection when the

youth were in 9th and 11th grade, respectively.

        Participants were 166 twelfth grade students in an urban mid-Atlantic public high

school. The school district is located within a city that has been acknowledged by the

Brookings Institution as being in the 92nd percentile for economically depressed districts

in the U.S. (Honey, Culp, & Carrigg, 2000). Over a quarter (27.5%) of the city's children

fell below the federal poverty line. The sample was representative of the predominantly

Latino populated school with 96% self-identified as Latino, 2% Black American, and 6%

"other." Participants were chosen from a group of 284 students (60% female) who were

participating in a longitudinal program evaluation for the psychosocial intervention

entitled, "Youth Program". YP is a peer outreach program which works to streamline and

enhance the transition for ninth grade students into high school.

Design and Procedures

      Overview. In 2007, all students were surveyed during the first semester of their freshman year of high school (baseline) with approval from the Institutional Review Board of Rutgers University. Youths' parents completed informed consent forms and youth completed informed assent to participate in the study. The high school was organized into three small learning communities (SLC) where students worked with the same team of teachers and took the same health and physical education classes throughout their high school career. Students were assigned to one of the three SLCs as ninth grade students. The research design included randomly assigning two SLCs to provide the program to ninth grade students and the other SLC served as comparison youth and provided no program to ninth graders. After randomly assigning the YP participants and comparison youth SLCs, the incoming ninth grade students ($N = 284$) were randomly assigned to one of the SLCs. In sum, 93 students were randomly assigned to receive a typical program (health and physical education with no YP), 191 students were randomly assigned to participate in weekly sessions of YP within their health and physical education classes. Crosstab analysis indicated that the attrition rate for participants was greater than 40%, and that a higher percentage of students were missing from the YP group at the 2010 follow-up, than were missing from the comparison group ($\chi = 4.56$, $p = 0.03$). It is unclear why such group attendance rates differed; possible reasons include youths' families moving or a lack of interest in participating in the study. However, we tested for differences in demographics (i.e. gender, parental education) and GPA at baseline and found no significant differences between comparison and intervention youth for any of these variables (see Table 2.6).

The current study was approved by the Institutional Review Board of the University of South Carolina to conduct an additional wave of data collection three years post-baseline. Researchers collected information from youth during their physical health education classes on acculturation, resilience, academic achievement, peer attributes, personal and social risk factors, and YP core values during the first semester of the 2010-2011 academic year. Youth completed informed assent forms, but the institutional IRB allowed the research team to forego collecting informed consent from parents again. All participants were given the option to use a Spanish survey. For the current study, data on academic achievement, school attendance, and gender collected during the sample's 9th grade year were also used. Students received compensation for the baseline data collection but were not compensated for their time at the three year follow up.

Measures

Predictor Variable

Risk Factors. To assess risk for dropout/academic underperformance, a composite risk variable was created that included key indicators of risk that have been identified as prominent challenges for Latino youth. The methodological practice of combining risk items into one measure is known as the Rasch technique, which represents risk as an additive construct (Rasch, 1960; Schmidt, 2003; Sameroff et al, 1993). This theory implies that the more events an individual has experienced, the higher the amount of demand that is placed upon the individual. Multiple studies on youth development have used composite measures of risk to predict negative outcomes. Klein and Forehand (2000) examined child functioning outcomes (i.e. externalizing behavior, depressive symptoms) among urban, low income Black children. The researchers used a

composite measure of risk which included items asking the child for their mother's education level and the child's self-report of psychological symptomatology. Results indicated this composite measure of risk accounted for significant variance in analyses predicting child self-report of depressive symptoms (Klein et al, 2000).

Schmidt (2003) examined the relationship between three combined indices of risk (i.e. acute family adversity, chronic family adversity, school adversity) and school misconduct and found that participants who scored high on the composite risk scale were more likely to exhibit high levels of school misconduct. Forehand, Biggar, and Kotchick (1998) used a composite index of five risk factors including parental marital status and mother-adolescent interpersonal conflict to predict losses in academic achievement among young adults. Results indicated that an increase from three to four risk factors predicted a significant decrease in academic functioning throughout an adolescent's high school career (Forehand et al., 1998). The composite risk variable in the current study includes school misconduct, teenage pregnancy, self-reported chances of dropping out of high school, and self-reported school tardiness. Selected items from the School Success Profile Trouble Avoidance Subscale (SSPTAS; Richman & Bowen, 1997) including the self-report of cutting at least one class, showing up for school late, having been sent out of class because of misbehavior, parents having received a warning about their attendance, grades, or behavior, having gotten into a physical fight with another student, having been placed on in-school suspension, and having been placed on out-of-school suspension comprised the academic misconduct portion of the composite risk index. The SSPTAS has been used in other research examining risk among Latino youth (Garcia-Reid, 2007; Mun, Johnson, & Pandina, 2009). Youth were also questioned if they had

49

children at the time of assessment, if they expected to have children by the end of their 12th grade year, and what the chances were youth thought they would drop out of school. All variables were independently correlated with GPA. Please see Table 2.1 for a list of the variables that comprise the composite risk variable.

Information on intent to drop out of high school, pregnancy, and academic misconduct were collected from YP participants at 2010 follow-up data collection to measure individual levels of exposure to risk. Participants were asked to score two items that measured their self-perceived risk of remaining in high school (i.e. *"I often consider dropping out of school"* and *"I intend to drop out of school"*). Both items were rated on a 7-point Likert scale, starting with "*Not at all in agreement*" and ending with "*Completely in agreement*". These question items demonstrated an intraclass correlation coefficient of .63 in a longitudinal model of high school dropout among French-Canadian adolescent students (Vallerand, Fortier, & Guay, 1997). Two items on teenage pregnancy were collected from youth. These two items – "*Do you currently have children?*" and *"Are you expecting to have a child before the end of your 12th grade academic year?"* were derived from Wayman's (2002) study examining the association certain risk factors had with high school diploma attainment in dropouts. The Cronbach alpha reliability for that study's composite risk index reached .65, however other forms of reliability were not available in the publication and should also be considered (Wayman et al, 2002).

These risk factor items were standardized by subtracting the score from the mean and dividing by the standard deviation, creating *z-scores* (Cohen, Cohen, West & Aiken, 2003). The z-scores of each risk item were then summed to create a composite risk index where scores ranged from three to 24. Combined with the items about teenage pregnancy

and intent to drop out of high school, the composite risk measure achieved a Cronbach's alpha of .75.

Moderating Variables

Youth Program Participation. YP participation was measured using a dummy variable, where '1' indicated YP participation and non-participants served as the comparison group and were scored as '0'.

Youth Program Core Values. The Youth Program Survey is a 248-item questionnaire that included subscales measuring each of the core values the program aims to instill within participants. For this study, we are specifically interested in four core values as these are most closely related to academic achievement – academic self-efficacy, adaptive help-seeking, cognitive coping, and sense of school membership. These subscales have previously been used among Latino adolescent populations to measure school functioning with substantial success (Johnson, Holt, Bry, & Powell, 2008; Holt, Bry, & Johnson, 2008). We used exploratory factor analyses to examine the latent dimensionality of the selected YP core values and to allow the respective items to relate to any factor underlying participant responses (Worthington & Whittaker, 2006). These methods allowed us to easily recognize items which measured several factors simultaneously. Items that fell into more than one category were discarded as they were considered to be poor indicators of the construct. This was included in the procedure to prevent the sharing of items which cross-loaded too highly among two or more factors.

Because the researchers were interested in learning how the current study population responded to the scales and how the underlying factors accounted for the shared variance among the items, we conducted principal-components analysis. This data reduction technique entails reducing scores from a large matrix of measured variables

51

down to scores on a smaller matrix of composite variables that keep as much information from the first matrix as possible. A major limitation of principal-components analysis is that this technique does not attempt to model the configuration of correlations among the original variables, (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Despite limitations like these, principal-components analysis was a better choice for the current study because the alternative (i.e. common-factors analysis) aligns more closely with developing new scales, and each of the current study's scales have been previously developed and validated.

When conducting exploratory factor analysis, using the largest sample size available is crucial because small sample sizes risk unstable patterns of covariation. Worthington and Whittaker (2006) suggest that samples are likely to be adequate when data sets contain communalities higher than .50. Our sample size included 175 participants and the communalities for the YP core value constructs ranged below .50. The implication here is that the diminished sample size increased the likelihood of unstable correlations among the YP core value items. Because this communality score places the factorability of the data in question, the researchers also conducted the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy. The KMO helps describe the association of partial correlations to the sum of squared correlations (Worthington et al, 2006). The KMO test of sampling adequacy was used to evaluate the factorability of the four selected YP core values. The YP core values construct yielded a KMO score of .83, exceeding the .60 standard Tabachnick and Fidell (2001) suggested as required for adequate factor analysis.

We chose the oblique rotation method because this was a data-based approach that is used when factors are assumed to be correlated (Worthington et al, 2006). In order

52

to evaluate factor retention, only factors which reflected eigenvalues greater than 1.0 were retained to guard against unstable factorability (Kaiser, 1958). Also, factors with less than two items were not retained because the items from these factors did not reach the Pearson r (i.e. $r > .70$). For the remaining factors, the researchers deleted all items less than .40 and items which had less than a .15 difference from the next highest factor loading. These standards were suggested by Worthington and Whittaker (2006) to provide a conservative estimate of item-factor loading. These exploratory factor analysis methods yielded six factors for the YP core values construct. The researchers averaged the mean scores of each item within the factor to create variables which reflected the larger construct. See Table 2.2 for a list of factor loadings for the YP core value construct.

Academic self-efficacy. Academic self-efficacy (Zimmerman, Bandura, & Martinez-Pons, 1992) was measured by seven items including *"How well can you motivate yourself to do school work"*. Participants rated their agreement for these items using a 4-point Likert scale ranging from 1 (*Not Very Well at All*) to 4 (*Very Well*). Academic self-efficacy has been shown to have adequate validity in previous studies (Johnson, Pandina, Bry, Powell, & Barr, 2006; Bray, Nash, & Froman, 2003) and in the present study these items demonstrated an alpha reliability of .89.

Adaptive help-seeking. Adaptive help-seeking (McNeal & Hansen, 1999) was measured by four items including *"How well can you get a family member to help you with a problem"*. Participants rated their agreement for these items using a 4-point Likert scale ranging from 1 (*Not Very Well at All*) to 4 (*Very Well*). Adaptive help-seeking has been shown to have adequate validity in previous studies (Johnson, Mun, & Pandina, 2008; Johnson, Pandina, & Bry, 2008) and in the present study these items demonstrated

an alpha reliability of .76.

Cognitive coping. Cognitive coping was measured by twelve items including *"I know how to relax when I feel too much pressure"*. Participants rated their agreement for these items using a 4-point Likert scale ranging from 1 (*Really False*) to 4 (*Really True*). These items demonstrated an alpha reliability of .85 (Johnson et al, 2008) in previous YP research. Cognitive coping has been shown to have adequate validity in previous studies (Bry, Johnson, Choing, & Urga, 2005; Johnson et al, 2008) and in the present study these items demonstrated an alpha reliability of .75.

Sense of school belonging. Sense of school belonging (Goodenow, 1993) was measured by thirteen items including "*I can really be myself at this school*". Participants rated their agreement for these items using a 4-point Likert scale ranging from 1 (R*eally False*) to 4 (*Really True*). Sense of school belonging has been shown to have adequate validity in previous studies (Poteat & Espelage, 2005; Hagborg, 1998) and in the present study these items demonstrated an alpha reliability of .84.

Resilience. The 14-item Resilience Scale (RS-14) was used to assess resilient behaviors and attitudes at the three year follow up. The RS-14 is an abbreviated version of the 25-item Resilience Scale, the first psychometric designed to make direct assessments of resilience (Wagnild, 2009). Exploratory factor analysis on the resilience construct yielded only one factor, so the items from this scale were averaged to create a variable that reflected the larger construct (see Table 2.3). Participants responded to questions like *"When I'm in a difficult situation, I can usually find my way out of it"* using a 7-point scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Resilient scores range from 14 to 98, and a threshold score of 78 was chosen for the current study

because this is the lowest moderate resilient score possible. The RS-14 demonstrates acceptable internal consistency ($\alpha = 0.91$) and convergent validity with measures of self-actualization ($\alpha = 0.63$) and stress management ($\alpha = 0.43$). The RS-25 has been previously validated on low SES, young Mexican American adults (Linderberg, Solorzano, Bear, Strickland, Galvis, & Pittman, 2002) and a primarily Latino adolescent population (Hunter & Chandler, 1999) and correlates significantly with the RS-14 ($r = 0.97$, $p < 0.001$).

Positive peer traits. A Positive Friend Characteristics scale was compiled from eight items from the 3rd and 4th Waves Youth Self-Administered surveys of the Maryland Adolescent Development in Context Study (MADICS). This scale measured how many of the participants' friends fit various behavioral-attitudinal depictions. Factor analysis was conducted to identify a small number of items from the larger number included in the Positive peer traits scales using similar procedures described above for the YP core values factor analysis. We used Worthington and Whittaker's (2006) .50 communality criteria here as well; the positive peer traits construct never ranged below .61, so it is likely that the positive peer trait items correlated with each other in a stable fashion. The KMO test of sampling adequacy was used to evaluate the factorability positive peer traits. The positive peer traits score yielded a KMO score of .80, exceeding the .60 standard Tabachnick and Fidell (2001) suggested as required for adequate factor analysis. Our exploratory factor analysis methods yielded two factors for the positive peer traits construct. See Table 2.4 for a list of factor loadings for the positive peer traits construct.

The first factor consisted of three items and measured positive peer traits. Youth were asked how many of the friends that they spend most of their time with (a) "*do well*

in school," (b) "*plan to go to college,*" and (c) "*like to discuss schoolwork or other intellectual things with you?*" (1 = *None of Them*, 5 = *All of Them*). The second factor also consisted of three items and assessed the frequency of positive behaviors in the participant's chosen peer group (1 = *Almost never*, 5 = *Almost always)*: How often do the friends you spend most of your time with (d) "*let you know that they really care about you,*" (e) "*help you do something that's important to you,*" and (f) "*help you feel good about yourself*?" Similar composite scores have been created with levels of internal consistency ranging from .72 to .81 and have demonstrated predictive validity among Black and White American adolescent samples in previous research (Simpkins, Eccles, & Becnel, 2008; Fredricks et al, 2008). The scores from this scale will be used in a set of moderation analyses as well as the between-groups factor in a two-tailed ANCOVA.

Outcome Variable

Academic Achievement. Academic achievement was measured by using the youths' GPA from official school records. This GPA was collected at the end of the youth's 11th grade year to prevent data attrition due to possible dropout from high school in the summer leading to their 12th grade academic year. This academic achievement variable was created by averaging the participants' language arts, mathematics, science, and social studies scores. This composite score was then recoded into a four-point variable to reflect the grading scale of the local school district, (e.g. 4.00 = A, 1.00 = D).

Control Variables

The study uses a randomized research design, but to further eliminate any endogeneity biases researchers will control for variables that may be linked to the extracurricular activity experience for Latino high school students. Interventionists must

be careful not to ascribe positive impacts from extracurricular activity participation alone. If a student is self-motivated and joins a youth development program, it might lead to overestimated positive effects for the program itself. On the contrary, participating students with less self-motivation or who are assigned to these programs by school administrators require more attention from their program coordinators, yet the positive effects of the program are likely to be underestimated. This is known as the endogeneity bias (Duncan, Magnuson, & Ludwig, 2004), and it occurs when researchers make assumptions about study results without accounting for the student's motivations/intentions for choosing to participate in an intervention. This research suggests that the implications of context-determining processes for students (i.e. gendered experiences, acculturative stress) should be integral to the interventionist's efforts in predicting participant outcomes.

Gender. Controlling for gender in this Latino high school student sample is important because of the conflicting research on gender impacts on Latino/a academic achievement. Some research suggests Latino parents are less likely to socialize or allow their daughters to attend college than their sons (Cohen, Chacón, Camarena, González, & Stover, 1983; Lopez, 1995), yet it has also been shown that males are at greater risk for dropping out of high school in the Latino community than females (Allensworth & Easton, 2005; Roderick & Camburn, 1999). Self-reported gender was coded as "1" for males and "2" for females.

Acculturation. Acculturation was measured by using the Language Use and Generation subscales of the Brief Acculturation Scale for Hispanics (BASH; Norris, Ford, & Bova, 1996). The BASH Language Use scale is a 4-item self-report

questionnaire designed to assess an individual's level of familiarity with the English language. Each item is a statement to which participants respond using a 5-point Likert-type scale with options ranging from *Only Spanish* (1) to *Only English* (5). This subscale was originally created by Marin and colleagues (1987) to study the acculturation of Mexican American youth. Language Use subscale scores ranged from 4 to 20; the scores were computed by dividing the total by the number of items.

The Generation subscale asked youth what country they were born in and asked the name of their guardian's native country. Youth who reported their country of birth as outside the U.S. and the same as their guardians' were scored as '1' for first generation. Youth who reported their country of birth as the U.S. but reported their guardian's native country as outside the U.S. were scored as '2' for second generation. Youth who reported their guardians' and their own native country as the U.S. were scored as '3' for third generation. This procedure for identifying generational status was also used by Kalogrides (2009) in her study of Latino youth and academic achievement.

The BASH was validated using a sample of second- and third-generation Puerto Rican and Mexican American adolescents and yielded acceptable reliability (α = .80 to .90) and consistently measures validity for acculturation (Wallace, Pomery, Latimer, Martinez, & Salovey, 2010). Research indicates that high levels of acculturative stress, or feelings that one is unable to acculturate into a non-native culture, have been correlated with low self-reported levels of social support (Hovey & King, 1996), self-esteem (Mena, Padilla, & Maldonado, 1987), and career self-efficacy (Miranda & Umhoefer, 1998). An acculturation variable was created by using the mean of these two subscales. Acculturative stress scores range from 1.25 to 4.50. High scores on this scale suggested U.S. nativity, high comfort with the English language, and perceived low stress levels

with the youth's acculturative status.

Analytical Procedures

Descriptive statistics were generated for the YP participants and comparison youth on demographic variables, including gender and family income. The three mechanisms under investigation (i.e. YP Core Values, resilience, positive peer traits) and all other continuous variables (e.g. risk) were centered in order to obtain z-scores. T-tests were used to determine whether any differences existed between the YP and comparison groups on key characteristics related to academic achievement (e.g. risk, GPA, protective mechanisms). Risk status, acculturation, and gender were entered as covariates in the analyses.

Hypothesis 1

Hypothesis 1 predicts that YP participation will moderate the relationship between risk status and academic achievement, so that YP participation will buffer some of the negative impact risk has on academic achievement. Sequential regression analyses will be performed to test for these moderation effects. The following general regression equation will be used: $Y = b_0 + b_1(W) + b_2(X) + b_3(Z) + b_4(XZ) + e$. As applied to this hypothesis, Y equals the 11th grade GPA, W equals the covariate, X equals the risk status composite score, Z equals YP participation, and XZ represents the interaction term between risk status and YP participation. Interaction terms were generated for the moderation analyses. The interaction term and the composite risk variable were centered to reduce the likelihood of multicollinearity (Robinson & Schumacker, 2009). Covariates that did not contribute to explained variance were removed.

Acculturation was included as a covariate in this model. For this sequential regression, the acculturation and risk status composite score variables were entered in Step 1, YP participation was entered in Step 2, and the interaction term was entered in Step 3. The statistical significance of the change in R^2 for Step 3 (i.e., the addition of the interaction term) will be examined to determine whether YP participation moderates the relationship between risk status and academic achievement; that is, a significant change in R^2 would indicate that the slope of the association between risk status and academic achievement differs significantly between YP participants and comparison youth.

Significant interaction effects will be further examined by testing the statistical significance of the simple slopes of the regression lines at both levels of the moderator. The simple slope for the comparison youth is the regression coefficient obtained in the moderation analysis for the risk status composite score variable, which represents the relationship between risk status and academic achievement when YP participation equals zero (non-participation in YP). Based on the hypothesized moderator effect, it is expected that there will be less of a slope demonstrating the relationship between risk status and academic achievement among YP participants compared to non-participants, and that this slope may even be non-significant.

Hypothesis 2

Hypothesis 2 predicts that compared to the comparison group, YP participants will have more positive peers, greater resilience, and higher endorsement of YP core values. A two-tailed (effect size $p < .05$) analysis of covariance (ANCOVA) will be conducted to examine differences in these three mechanisms between the YP participants and comparison youth controlling for composite risk, gender, and acculturative stress.

Hypothesis 3

Hypothesis 3 predicts that each of the three proposed protective mechanisms (i.e. positive peer traits, resilient qualities, and endorsement of YP core values) will have direct positive effects on youth academic achievement. Three separate sequential regression analyses will be performed to test for the main effects of positive peers, resilience, and YP core values on academic achievement, controlling for youth risk status, gender, and acculturation. The following general regression equation will be used: $Y = b_0 + b_1(W) + b_2(X) + b_3(Z) + e$. As applied to this hypothesis, Y equals the 11th grade GPA, W equals the covariates, X equals the risk status composite score, and Z equals positive peer traits or resilient qualities or endorsement of YP core values.

Hypothesis 4

Building on Hypothesis 3, Hypothesis 4 predicted that the three proposed protective mechanisms would moderate the relationship between risk status and academic achievement so that each moderator would lessen the impact of risk on academic achievement. Three separate sequential regression analyses will be performed to test for these moderation effects. The following general regression equation will be used: $Y = b_0 + b_1(W) + b_2(X) + b_3(Z) + b_4(XZ) + e$. As applied to this hypothesis, Y equals the 11th grade GPA, W equals the covariate, X equals the risk status composite score, Z equals positive peer traits or resilient qualities or endorsement of YP core values and XZ represents the interaction term between risk status and positive peer traits or resilient qualities or endorsement of YP core values. The three interaction terms and the composite risk variable were all centered to reduce the likelihood of multicollinearity

(Robinson et al, 2009). Acculturation was included as a covariate in this model.

For each sequential regression, the acculturation and risk status composite score will be entered in Step 1, the protective mechanism will be entered in Step 2, and the interaction term will be entered in Step 3. The statistical significance of the change in R^2 for Step 3 (i.e., the addition of the interaction term) will be examined to determine whether positive peer traits or resilient qualities or endorsement of YP core values moderate the relationship between risk status and academic achievement; that is, a significant change in R^2 would indicate that the slope of the association between risk status and academic achievement differs significantly between youth with more vs. less positive peers, youth with more vs. less resilient qualities, and youth with higher vs. lower endorsement of YP core values in each of the three equations, respectively.

Based on the hypothesized moderator effect, it is expected that there will be less of a slope demonstrating the relationship between risk status and academic achievement in participants with more positive peers, resilience, and/or higher endorsement of YP core values, and that this slope may even be non-significant. It is also expected that the slope demonstrating the relationship between risk status and academic achievement is expected to be large in magnitude, negative, and significant.

Power Analysis

The main analyses for this project will focus on the moderating potential of three protective mechanisms – YP core values, positive peer, and resilient traits – on the relationship between risk and 11th grade GPA and the between-groups differences on these mechanisms. In order to examine these differences, separate between subject analyses of covariance (ANCOVA) will be used – one per protective mechanism. For each ANCOVA, group differences will be examined at the last time point at youths' 12th

grade. It is hypothesized that the two groups will exhibit significant differences in favor

of the YP group. We expect the statistical power of the current study to be at or above .80

for our ANCOVA research designs.

A priori power analyses were conducted in order to determine the likelihood of

finding significant ANCOVA results. For each protective mechanism, effect sizes of 0,

0.1, 0.2, 0.3, 0.4, and 0.5 were used to estimate power, given that previous studies have

found similar effects of school-based universal interventions on academic performance

implemented by non-school personnel (-0.19 – 0.43) (Durlak, Weissberg, Dymnicki,

Taylor, & Schellinger, 2011). For all the a priori analyses, alpha was set to .05. Results of

the power analyses are provided in Table 3.1. As previous research has not yet

demonstrated the effects of our three protective mechanisms – YP core values, resilience,

and positive peer traits – on academic achievement, a range of effect sizes and power

estimates were generated. As such, given our sample size, it is likely that medium effects

will be detected.

A post hoc power analysis with the program *PASW* was conducted to find out

whether our research design in Hypothesis Two, a 2X3 mixed ANCOVA design

(Christensen, Moran, Wiebe, Ehlers, & Lawnton, 2002), had enough power to detect

significant effects between youth in the YP and comparison groups. We identified the

power and effect sizes for our three protective mechanisms – YP core values, positive

peer traits, and resilient qualities. The post hoc power analysis revealed that on the basis

of the mean using an alpha of .05, the between-groups comparison effect size observed

for YP core values was .92 and the observed power score was .97; positive peer traits

yielded an effect size of .18 and an observed power score of .82; and finally, resilience.

Table 2.1. Composite Risk Variable Components

2010 YP Survey Items	
• I cut at least one class • I showed up for school late (unexcused). • I was sent out of class because I misbehaved. • My parents received a warning about my attendance, grades, or behavior. • I got into a physical fight with another student. • I was put on in-school suspension.	• I was given an out-of-school suspension. • Do you currently have children? • Are you expecting to have a child before the end of your 12th grade academic year? • Given (how seriously you have considered dropping out), what do you think the chances are that you actually will drop out of school?

Table 2.2. Youth Program Core Value Exploratory Factor Components

2010 YP Survey Items

Factor One
- Most teachers at school are interested in me.
- The teachers here respect me.
- People here notice when I'm good at something.
- There's at least one teacher or other adult in this school I can talk to if I have a problem.
- People here know I can do good work.

Factor Two
When you experience problems, stress, or anger, how often do you…
- Think of possible ways to deal with the problem?
- Make a plan and follow it through?
- Talk it over with a teacher, counselor or another adult?
- Figure out what to do and try hard to make things work?
- Ask for help from persons with the same kind of problem?
- Try to see the good side of the situation?

Factor Three
How well can you…
- Finish homework assignments on time?
- Study when there are other things to do?
- Focus on school subjects?
- Plan your school work?
- Find a place to study without distractions?
- Motivate yourself to do school work?

Factor Four
How well can you…
- Get a family member to help you with a problem?
- Get your parents to take part in school activities?
- Get a friend to help you with a problem?
- Get a teacher to help you when you get stuck on schoolwork?

Factor Five
- It is hard for someone like me to be accepted at this school. (Reverse Code)
- Sometimes I feel as if I don't belong at this school. (Reverse Code)
- People at this school are friendly to me.
- Other students here like me the way I am.

Factor Six
When you experience problems, stress, or anger, how often do you…
- Break or throw things? (Reverse Code)
- Scream or yell to let off steam? (Reverse Code)
- Tell myself that it's other peoples' fault?

Table 2.3. Resilience Scale Items

Wagnild RS-14 Survey Items

• I usually manage one way or another.	• I feel proud that I have accomplished things in life.
• I usually take things in stride.	• I am friends with myself
• I feel that I can handle many things at a time.	• I am determined.
• My life has meaning.	• I have self-discipline.
• I keep interested in things	• I can usually find something to laugh about.
• My belief in myself gets me through hard times.	• In an emergency, I'm someone people can generally rely on.
• I can get through difficult times because I've experienced difficulty before.	• When I'm in a difficult situation, I can usually find my way out of it.

Table 2.4. Positive Peer Traits Exploratory Factor Components

2010 YP Survey Items

Factor One	Factor Two
How many of the friends that you spend most of your time with…	*How often do the friends you spend most of your time with…*
• Do well in school?	• Let you know that they really care about you?
• Plan to go to college?	• Help you do something that's important to you?
• Like to discuss schoolwork or other intellectual things with you?	• Help you feel good about yourself?

CHAPTER 3

RESULTS

Descriptive statistics

The means and standard deviations of youth GPAs, protective mechanisms, and

the composite risk for the YP participants and comparison youth are shown in Table 2.6.

Independent samples t-tests indicated that there were no significant differences between

the YP youth and comparison groups in GPA, composite risk, or ninth grade endorsement

of Youth Program core values (i.e. academic self-efficacy, adaptive help seeking,

cognitive coping, sense of school membership) at either 9th or 11th grade academic years.

There were also no significant mean differences between groups in primary guardian

education, an indicator of socio-economic status.

Despite the difference in the number of youth within the YP and comparison

groups, the Levene's test of equality of error variances indicated that we have no reason

to believe that the overall variances between these two groups are significantly different.

The skewness of the data indicates that the values of all variables (save for composite risk

and acculturation) lie to the right of the mean. This suggests that the current sample

benefits from relatively high GPAs throughout their high school careers and protective

mechanisms, that there were more female than male participants, and that the YP group

was larger than the comparison group. The kurtosis of the data indicates that none of the

variables of interest (save for gender) had an absolute value greater than 2 or less than -2, suggesting there were no major deviations from a normal distribution. The mean level of composite risk was 12.53 ($SD = 3.15$) and these scores ranged from 3 to 24. The entire sample experienced some form of risk, so even youth identified as low-risk reported multiple academic challenges. We also found that the mean level of YP core values was 3.21 ($SD = .47$) and these scores ranged from 1.88 to 4.22. The mean level of resilience was 5.38 ($SD = 1.13$) and these scores ranged from 1.14 to 7.00. The mean level of positive peer traits was 3.65 ($SD = .79$) and these scores ranged from 1.00 to 5.00. Finally, the mean level of 11th grade GPA was 2.48 ($SD = .77$) and these GPAs ranged from 1.03 to 4.31. These estimates and score ranges are provided in Table 3.3.

Within the YP intervention group ($n = 103$), there were slightly more male youth ($n = 56$) than female youth ($n = 47$). Within the comparison group ($n = 63$), there was an equal number of male youth ($n = 32$) and female youth ($n = 31$). Across the full sample, male youth had higher 9th grade GPAs and reported higher endorsement of YP core values than female youth during both 9th grade and 12th grades. Males also reported having more positive peers and resilient qualities. Overall, female youth reported higher composite risk than male youth at 12th grade (see Table 2.6).

At 12th grade, the majority of the sample was comprised of second generation U.S. citizens ($n = 100$). The next largest generation represented by this sample was first generation ($n = 49$). Third generation youth comprised 9% of the entire sample ($n = 14$); see Figure 3.1. The BASH scale revealed that the current sample is relatively comfortable with the English language. An overwhelming amount of youth reported using English only or more than Spanish to read ($n = 88$), think ($n = 116$), and communicate with their

friends (n = 123), however many youth also reported they continue to use Spanish only or more than English at home (n = 79). See Figures 3.2 through 3.5 for graphic representations of this data.

Bivariate zero-order correlations were mostly in the expected direction (see Table 3.4). The higher youth risk, the lower their GPAs, YP core values, positive peer traits, and resilient qualities. Moreover, youth 11th grade GPA was significantly associated with YP values and resilient qualities. Contrary to what was expected, GPA was not associated with positive peer traits. Moreover, both participation in YP and acculturation were negatively correlated with YP core value endorsement, and female gender status was positively associated with risk.

Hypothesis One: The Moderation Effects of Youth Program

A sequential multiple regression was conducted to determine whether participation in Youth Program moderated the impact of youth risk on academic achievement. Acculturation and gender were initially entered as covariates in the model, but because these variables yielded non-significant results (ΔR^2 = .00) they were removed from the final set of analyses. The main effects of risk status and YP participation were entered in Step 1. In Step 2 the cross-product of risk status X YP participation was entered as the interaction term. A main effect for risk was found so that the higher the risk, the lower the GPA ($F(1, 151)$ = 15.806, ΔR^2 = .09). However, controlling for risk, the GPA of YP participants did not differ from non-participants ($F(1, 150)$ = .005, ΔR^2 = .00).

When the interaction term, risk status X YP participation, was added in Step 2, the R^2 change of .02 reached statistical significance. The significant increase in the multiple R^2 following the entry of the interaction term into the model indicated there were

69

moderation effects of YP participation on academic achievement. Parameter estimates indicated the effect of risk status on 11th grade GPA is greater for the comparison group than the YP group, $\beta = .073$, $t(153) = 2.001$, $p = .04$, supporting our initial predictions. Results for the first, third and fourth hypotheses are provided in Table 3.5.

A plot of the predicted values of 11th grade GPA by levels of risk for both YP participation and the comparison group show that YP was particularly effective at lessening the impact of risk on academic achievement for youth who were less at-risk. Roughly 37% of youth ($n = 61$) were in this category. YP participants who were at the higher levels of risk among this at-risk group of youth had similar GPAs as youth in the comparison group; see Figure 3.6.

Hypothesis Two: Comparing Groups on Protective Mechanisms

A series of Analysis of Covariance (ANCOVA) models were used to test the a-priori hypothesis that youth participating in the Youth Program (YP) intervention would report higher levels of positive peer traits, resilient qualities, and YP core values than youth in the comparison group. Risk status was entered as a covariate to ensure that both groups were evenly matched on risk factors that might influence youth access to these protective mechanisms (see Table 3.6). Due to the originally expected greater likelihood that girls and more acculturated youth would display higher levels of protective mechanisms than boys or less acculturated youth (Sørlie & Ogden, 2007; Vieno, Nation, Perkins, & Santinello, 2007), all analyses initially included gender and acculturation as covariates. However, these covariates were removed from the final set of models for lack of significant findings.

Controlling for risk status, results indicated that there were significant differences in YP core values ($F(1, 162) = 4.947$, $p = .02$) between the YP intervention and the

70

comparison groups. Contrary to our hypothesis, the YP group endorsed fewer YP core values ($M = 3.15$, $SD = .49$) than did the youth in the comparison group ($M = 3.30$, $SD = .43$). Results indicated that YP core values had a Cohen's *d* of -0.32. There were no significant differences in positive peer traits or resilience between YP youth and the comparison group.

Hypothesis Three: Effects of Protective Mechanisms on Academic Achievement

It was hypothesized that the three proposed protective mechanisms would yield main effects on adolescents' 11th grade GPA. Three separate sequential multiple regression models were conducted to test for main effects of positive peer traits, resilient qualities, and YP core values, respectively. Risk status, gender, and acculturation were entered as covariates in all models. However, acculturation and gender were removed from the final model because they did not significantly improve model fit ($\Delta R^2 = .00$).

Positive peer traits. We conducted sequential multiple regression analysis to determine whether positive peer traits predicted academic achievement controlling for risk status. Results indicated positive peer traits was not significantly related to 11th grade GPA, $F(1, 153) = 3.52$, $p = .06$. That is, there was no significant linear relationship between 11th grade GPA and the number of positive peer traits.

Resilient Qualities. We conducted sequential multiple regression analysis to determine whether resilient qualities predicted academic achievement controlling for composite risk status. A significant main effect of resilient qualities on 11th grade GPA, $F(1, 153) = 10.677$, $p = .00$ indicated there was a significant linear relationship between 11th grade GPA and the number of resilient qualities.

Youth Program Core Values. We conducted sequential multiple regression analysis to determine whether endorsement of YP core values predicted

academic achievement controlling for composite risk status. A significant main effect of YP core values on 11th grade GPA, $F(1, 153) = 8.308$, $p = .00$ indicated there was a significant linear relationship between 11th grade GPA and the number of endorsed YP core values.

Hypothesis Four: The Moderation Effects of Protective Mechanisms

To address the fourth and final hypothesis, we added our interaction terms to each of the three sequential regression models used to examine Hypothesis 3. Specifically, we examined the potential for each of the three proposed protective mechanisms to moderate the relation between risk and academic achievement; see Table 3.5. Although acculturation and gender were initially entered as covariates in each of the models, they were removed from the final models because they did not significantly improve model fit.

Risk X Positive Peer Trait Moderation Analysis. We conducted sequential multiple regression analysis to determine whether positive peers moderated the impact of youth risk on academic achievement. In Step 1, risk status and positive peer traits were entered as main effects in the two-step model. In Step 2, the cross-product of risk status X positive peer traits was entered as the interaction term. The lack of a significant increase in the multiple R^2 following the entry of the interaction term into the model indicated positive peer traits did not moderate the effect of risk on youth academic achievement (Cohen & Cohen, 1983). In contrast to our hypothesis, an association with positive peers did not lessen the deleterious effects of risk on 11th grade GPA, $F(1, 152) = .97$, $p = .32$.

Risk x Resilience Moderation Analysis. We conducted sequential multiple regression analysis to determine whether self-report of resilient qualities moderated the impact of youth risk on academic achievement. In Step 1, risk status and resilient qualities were entered as main effects in the two-step model. In Step 2, the cross-product

of risk status X resilient qualities was entered as the interaction term. The lack of a significant increase in the multiple R^2 following the entry of the interaction term into the model indicated resilience did not moderate the effect of risk on youth academic achievement (Cohen et al, 1983). In contrast to our hypothesis, youth resilience did not lessen the deleterious effects of risk on youth academic achievement, $F(1, 152) = .01$, $p = .89$).

Risk x YP Core Value Moderation Analysis. We conducted sequential multiple regression analysis to determine whether endorsement of key YP core values (i.e. academic self-efficacy, adaptive help seeking, cognitive coping, sense of school membership) moderated the impact of youth risk on academic achievement. In Step 1, risk status and youths' 12th grade YP core values were entered as main effects in the two-step model. In Step 2, the cross-product of risk status X 12th grade YP core values was entered as the interaction term. The lack of a significant increase in the multiple R^2 following the entry of the interaction term into the model indicated YP core values did not moderate the effect of risk on youth academic achievement (Cohen et al, 1983). Contrary to what was hypothesized, endorsing YP core values did not lessen the deleterious effects of risk on youth academic achievement, $F(1, 152) = .24$, $p = .61$.

Table 3.1. Estimated Effect Sizes

Alpha Level	Effect Size					
	0	0.1	0.2	0.3	0.4	0.5
.05	.05	.09	.25	.48	.72	.89
.10	.10	.16	.36	.61	.82	.94

Table 3.2. Descriptive Samples, Chi Square, Means and Standard Deviations for 9th Grade GPA and Risk Status

	YP Intervention Group	Comparison Group	Total Sample	χ^2
Guardian Ed Level				
5+ yrs post-sec educ	8	3	11	.472
1-4 years of post-sec educ	36	22	58	
6-12th Grade	52	31	83	
No response	7	7	14	
Gender				
Female	47	31	78	.644
Male	56	32	88	
Total	103	63	166	

	Intervention Group – Females (*n* = 47)	Intervention Group – Males (*n* = 56)	Intervention Group – Total Sample (*n* = 103)	Comparison Group – Females (*n* = 31)	Comparison Group – Males (*n* = 32)	Comparison Group – Total Sample (*n* = 63)
9th Grade GPA	2.53 (.95)	2.75 (.89)	2.65 (.92)	2.29 (.97)	2.80 (1.04)	2.54 (1.03)
Ave Composite Risk	13.38 (3.11)	11.72 (2.59)	12.48 (2.94)	13.19 (3.22)	12.18 (3.80)	12.68 (3.54)
11th Grade GPA	2.19 (.75)	2.76 (.72)	2.47 (.78)	2.40 (.73)	2.59 (.76)	2.50 (.75)
Acculturation	2.71 (.64)	2.69 (.58)	2.70 (.61)	2.67 (.52)	2.75 (.70)	2.71 (.61)

*p < .05   **p < .01

Table 3.3. Descriptive Statistics for all Variables of Interest

Variable	Range of Scores	Mean(SD)	Skewness	Kurtosis	Cohen's d
Composite Risk Status	3.00 – 24.00	12.53(3.15)	.47	1.49	-0.06
YP/Comparison Group Status	0 – 1	.67(.47)	-.73	-1.46	–
YP Core Values	1.88 – 3.21	3.21(.47)	-.31	-.06	-0.31
Positive Peer Traits	1.00 – 5.00	3.65(.79)	-.51	.77	-0.08
Resilience	1.14 – 7.00	5.38(1.13)	-.67	.10	-0.28
2010 GPA	1.03 – 4.31	2.48(.77)	.23	-.72	-0.04
2007 GPA	0 – 4.00	2.29(1.14)	-.41	-.41	-0.08
Gender	1 – 2	1.50(.50)	-.01	-2.01	-0.01
Acculturation	1.25 – 4.50	2.70(.60)	.04	.43	-0.02

Table 3.4 Pearson correlations

	1	2	3	4	5	6	7	8
Predictor Variable								
1. Composite Risk Status	-							
Moderating Variables								
2. YP/Comparison Group Status	-.03	-						
3. 2010 YP Core Values	-.28**	-.15*	-					
4. Positive Peer Traits	-.25**	-.03	.61**	-				
5. Resilience	-.17*	-.13	.57**	.47**	-			
Outcome Variable								
6. 2010 GPA	-.30**	-.02	.29**	.21**	.29**	-		
Covariates								
7. 2007 GPA	-.16*	-.03	.19**	.15*	.25**	.74**	-	
8. Gender	.22**	-.04	-.09	-.17*	-.06	-.28**	-.21**	
9. Acculturation	-.02	-.00	-.18*	-.07	.04	-.05	-.08	-.01

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

Table 3.5 Hierarchical Regression Analysis of the Composite Risk Measure and YP Protective Factors with 11th Grade GPA

Step and Predictors	β	R^2	ΔR^2
YP Enrollment			
1. Composite Risk Status	-.073**	.09	.09
2. YP/Comparison Group	-.008	.09	.00
3. Interaction Term	-.073*	.11	.02
YP Core Values			
1. Composite Risk Status	-.073**	.09	.09
2. 2010 YP Core Values	.369**	.13	.04
3. Interaction Term	-.017	.14	.00
Positive Peer Traits			
1. Composite Risk Status	-.073**	.09	.09
2. Positive Peer Traits	.141	.11	.02
3. Interaction Term	.02	.11	.00
Resilience			
1. Composite Risk Status	-.073**	.09	.09
2. Resilience	.169**	.15	.05
3. Interaction Term	.002	.15	.00

*p < .05   **p < .01

Table 3.6. YP/Comparison Group Means, Standard Deviations and ANOVA Results for Protective Factors

| Protective Factor	YP Group	Comparison Group	Females	Males	Degrees of Freedom	F Value
12th Grade YP Core Values	3.15 (.49)	3.30 (.43)			1, 167	4.09*
Positive Peer Traits	3.63 (.77)	3.69 (.84)			1, 163	.22
Resilience	5.25 (1.16)	5.57 (1.05)			1, 163	3.09
12th Grade YP Core Values			3.15 (.47)	3.25 (.48)	1, 167	1.06
Positive Peer Traits			3.50 (.82)	3.79 (.76)	1, 163	5.20
Resilience			5.30 (1.12)	5.44 (1.13)	1, 163	.62

*$p < .05$

80

Figure 3.1. Generational Status Findings
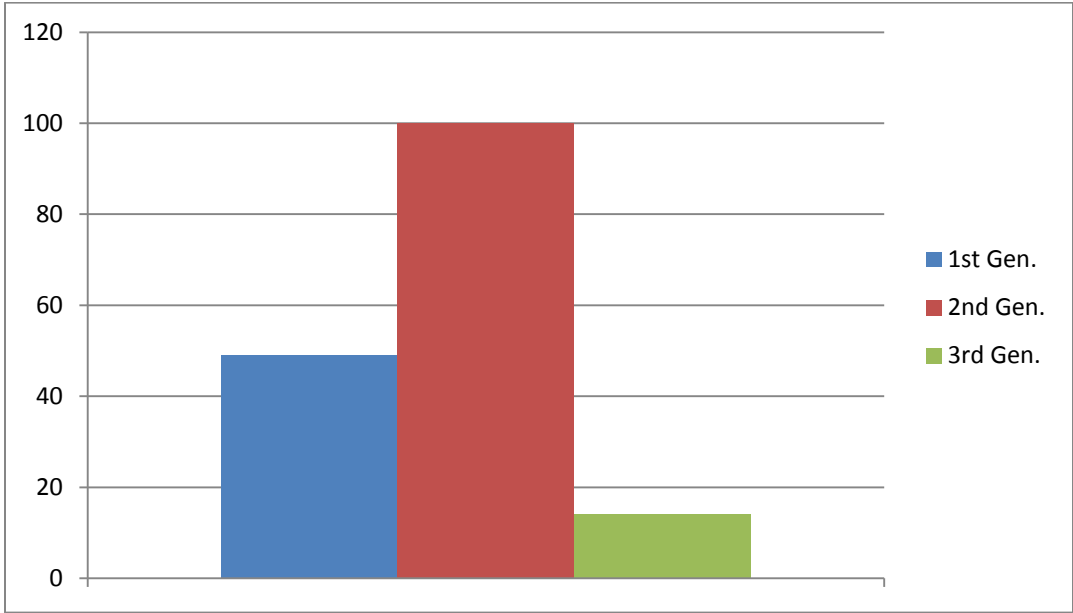
Figure 3.2. Language Use Subscale Findings – Read and speak?

Figure 3.3. Language Use Subscale Findings – Speak at home?

Legend:
- Only Spanish
- More Spanish than English
- Both Equally
- More English than Spanish
- Only English
- Other Language
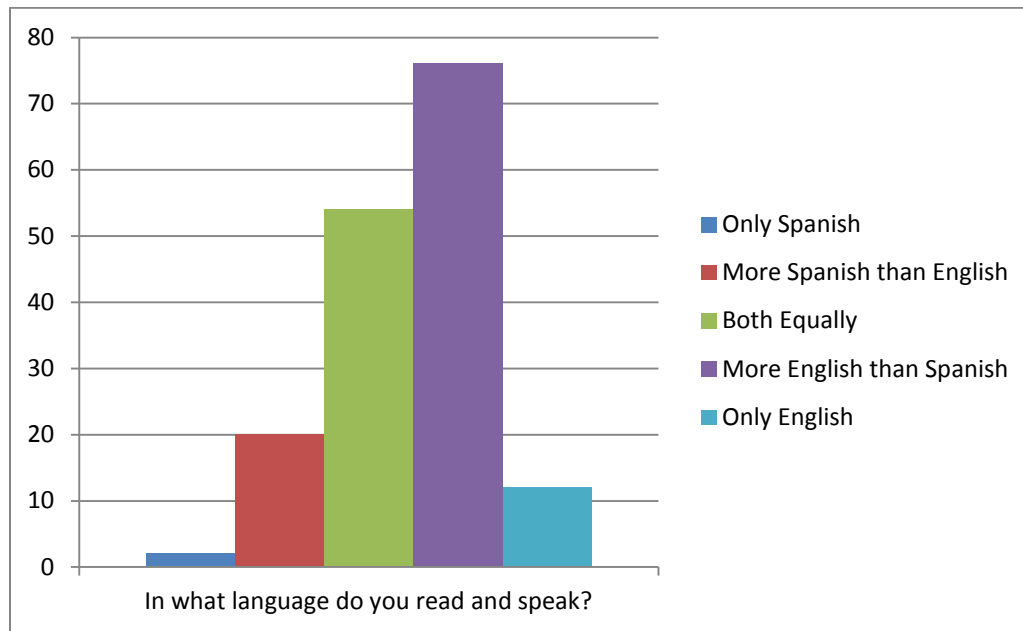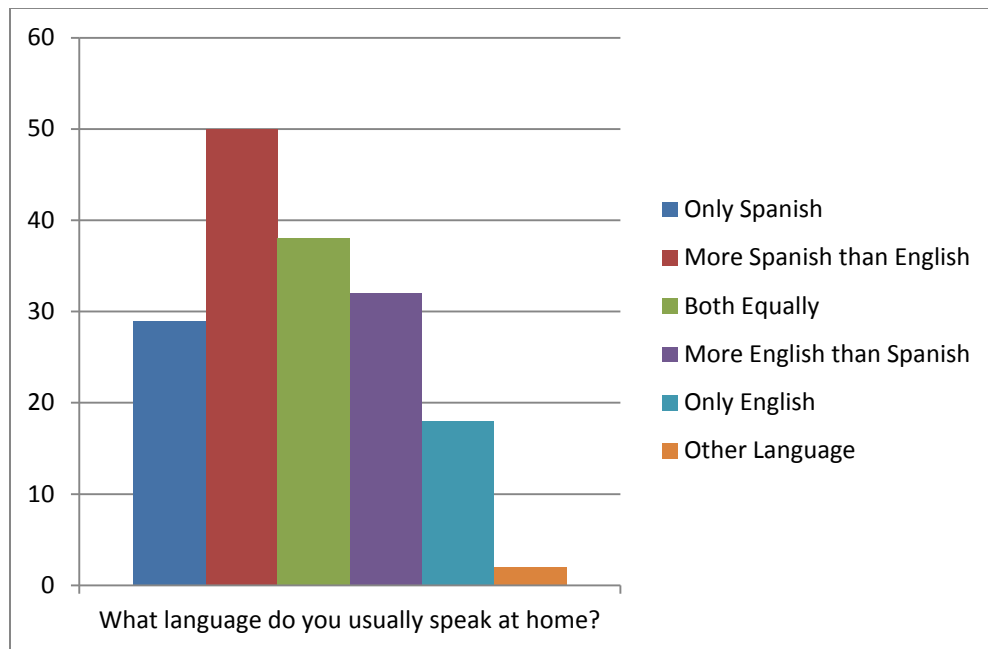
What language do you usually speak at home?

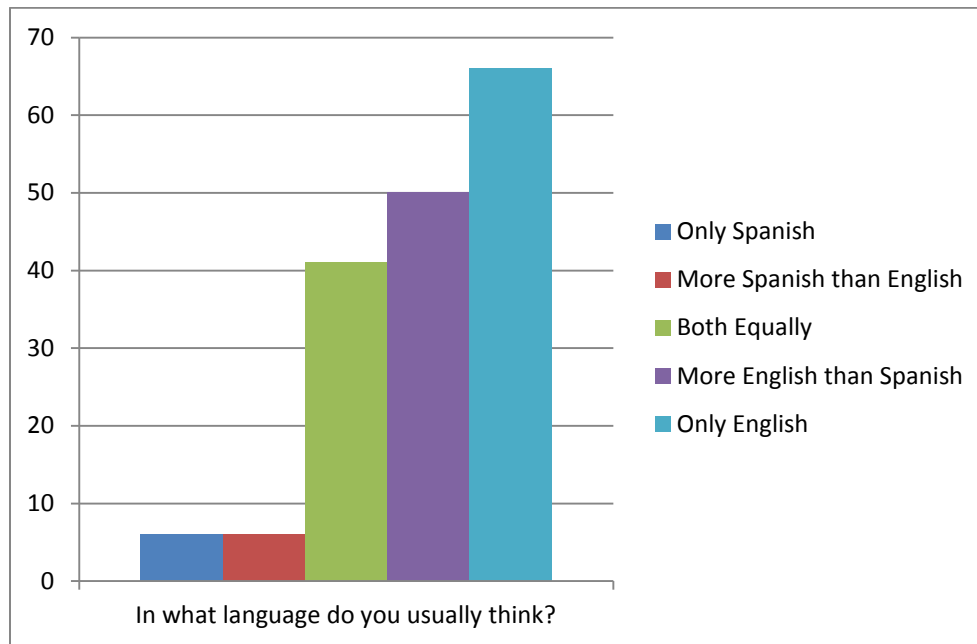Figure 3.4. Language Use Subscale Findings – Thinking?

Figure 3.5. Language Use Subscale Findings – Speak with your friends?
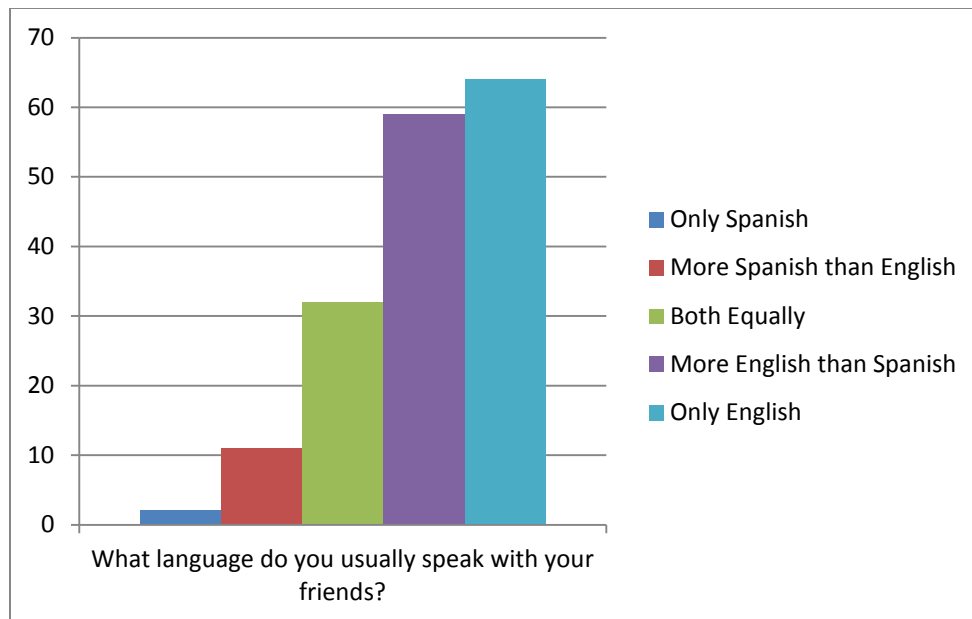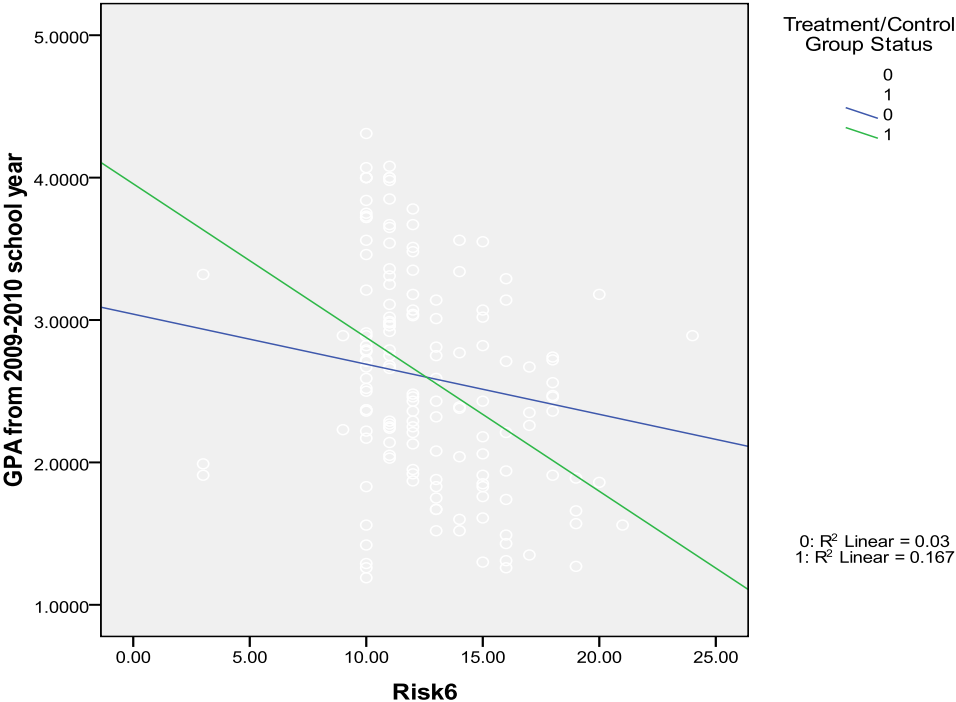
Figure 3.6. Hypothesis 1 Results

CHAPTER 4

DISCUSSION

There is clear evidence that many Latino youth experience barriers that preclude academic success (Fryer et al, 2006; Fry et al, 2003; Devos et al, 2007). Elevated high school dropout rates, below-average standardized test scores, and negative internalized stereotypes paint a portrait of low academic functioning for at-risk Latino youth across the country. Given the imperfect circumstances and risk factors associated with their educational trajectories, many Latino youth have demonstrated tremendous educational resilience. The present study sought to explore how resources gained through participation in the YP intervention might promote educational resilience for one particular group of low-income youth in an urban under-resourced school environment. Guided by the Positive Youth Development and Self-Determination paradigms, we hypothesized that participating in the social-motivational intervention would promote positive educational outcomes through facilitating key assets (protective mechanisms) in youth. Three protective mechanisms (i.e. positive peer traits, resilience, YP core values) that have been found to predict high academic achievement in previous research (Hanushek et al, 2003; Hartley et al, 2011; Hackett et al, 1992; Wang et al, 2010; Karabenick et al, 2004; Solomon et al, 1992) were conceptualized as the mechanisms by which YP met the three basic psychosocial needs posited by SDT: to be connected, to be self-directed, and to feel capable (Grolnick et al, 2007). Gender and acculturation-related

factors (i.e. generational status, English proficiency) were also considered to better understand how culture impacts academic achievement among Latino youth.

We found partial support for our hypotheses. Our findings indicated that the YP intervention had a significant effect on youth academic achievement (with participating youth having higher GPAs than comparison youth); effect sizes were medium. Further examination of the moderation effects indicated YP had a positive effect on the academic standing of youth, although this varied by the extent of youth risk. Although all youth in the current study experienced multiple academic challenges, results indicated that among this at-risk group, there was still variation in the extent to which youth were at risk, with some having greater cumulative risk across indices than others. While not all youth reported simultaneous school misconduct, pregnancy, and the intent to drop out of high school, most reported experiencing more than one contextual risk factor. Despite this, participating in YP still buffered the impacts of risk on their academic achievement.

In some ways, these findings comport with other achievement-based intervention studies that have found similar treatment effects. Rimm-Kaufman, Fan, Chiu, and You (2007) conducted a quasi-experimental research design to explain how participation in the Responsive Classroom positive youth development program contributes to academic achievement. This PYD intervention is guided by seven foundational principles to guide teachers' classroom management and practices, including setting "Morning Meetings", establishing "Rules and Logical Consequences", and shifting teacher language from 'praise' to 'encouragement'.

The sample for this study was collected from an urban school district in the

Northeast ($N = 2,790$); over half the youth were ethnic minority (53.6%) and over a third

were eligible for free- or reduced-price lunch (35.3%). Results indicated small between-

group effect sizes comparing academic achievement between comparison group and

youth who received one year of the Responsive Classroom intervention (Cohen's *d* for

Degrees of Reading Power was .07 and .06 for Connecticut Mastery Test). Oyserman and

colleagues (2006) developed a school-based intervention to forge links between Black,

White and Latino youths' "academic possible selves" and strategies for navigating the

school setting that are not innate to the youth. Study participants were recruited from

three southeastern Michigan middle schools and many were identified as low-income as

evidenced by socioeconomic markers like school stability and census tracts. Although

academic performance (GPA) did improve for youth participating in the intervention, the

researchers concluded these effect sizes were small (Oyserman, Bybee, & Terry, 2006).

Similar to the current study, these two PYD programs were developed to enhance

educational resilience among at-risk youth and achieved significant results, albeit with

small effect sizes. However, neither of these school-based interventions targeted high

school-aged youth, nor did they include a completely Latino sample.

Furthermore, only a small number of interventions have demonstrated

sustainability over time, regardless of treatment effects achieved during the

demonstration period (Ayotte, Saucier, Bowen, Laurendeau, Fournier, & Blais, 2003;

Whaley & McQueen, 2004; Durlak & DuPre, 2008; Rogers, 2003). What makes our YP

participation findings so noteworthy is that we found positive effects on GPA which were

still evident two years after youth completed their initial 12-month YP experience. Over

time other influences may eventually undermine the effects of YP without continuous reinforcement of YP resources and values through their high school careers, however our findings indicated that some assets that YP provides during youths' 9th grade year may be sustained for years after youths' initial exposure to the program.

This study also examined the impact several protective mechanisms had on the educational resilience of urban, low-income Latino youth. In particular, YP core values and resilience emerged as important contributions to academic achievement that can inform future PYD interventions. Our findings reflect previous research that suggest the restorative effects that resilience (Rajendran et al, 2006), cognitive coping skills (Neff et al., 2005), academic self-efficacy, and sense of school membership (Sánchez et al, 2005) may have on the academic performance for at-risk, ethnic minority youth. Aligned with Self-Determination principles, it was hypothesized that the YP program would facilitate YP core values and resilience in participating youth and, in turn, these mechanisms would moderate the relation between YP participation and academic achievement. (Ryan et al, 2009; Grolnick et al, 2007). However, YP participants did not score higher than the comparison group on any of the proposed protected mechanisms, nor did these mechanisms moderate the relation between YP and academic achievement. Previous research on PYD in the Latino community suggests that there are other possible culturally-relevant moderators at work. For example, accessibility and peer leader support have been shown to be two alternative components of PYD interventions that

significantly increase academic achievement among Latino youth (Borden et al, 2006; Diversi et al, 2005). Moreover, positive feedback and clear program structure, two additional hallmarks of PYD programming may also have positive impact on Latino academic achievement. These two hallmarks are offered by all PYD interventions created by the non-profit organization, including YP, but were unmeasured in the current study. Positive feedback encourages youth engagement in groups, and structuring PYD programs with clear goals and routines is likely to increase intrinsic motivation (Sharma, Wallace, Kosmala-Anderson, & Turner, 2012; Deci et al, 2000). Future researchers who evaluate PYD interventions created by the non-profit organization should consider examining to what extent positive feedback, clear program structure, accessibility, peer leader support, and other protective mechanisms contribute to academic treatment effects.

We initially proposed that YP participants would demonstrate higher academic achievement because of core values, resilience, and pro-social friendships facilitated by YP. Although YP core values was related to higher academic achievement, contrary to our hypotheses, comparison group youth reported more YP core values than YP youth. Given our measures have demonstrated adequate psychometric properties among minority, low-income youth, our findings lead to two important conclusions: 1) future academic programming for Latino youth should target more effective methods for instilling YP core values as a demonstrated protective mechanism for youth academic achievement, and; 2) other unmeasured mechanisms were responsible for the effects of YP on academic achievement, and will need to be explored in future research.

There are a number of possibilities for this unexpected finding. Vetter, et al (2010) reported that low statistical power contributed to contradictory findings in their evaluation of a school-based intervention designed to instill resilience. Power analyses indicated that the sample size in the present study was adequate to detect significant effects. Moreover, it is possible that poor implementation could have resulted in these unexpected findings, which suggests the need for process evaluation in future YP research among Latino youth. For example, Strayhorn (2009) evaluated martial arts programs and found that because these programs differed substantially by the program practitioner's style of teaching, their unexpected results could not be considered an accurate reflection of all martial arts PYD programs nationwide. Nation et al (2003) cited the morale of program staff as a possible source of implementation failure. These researchers warned that even high-quality, empirically-supported programs can produce disappointing results if there is high staff turnover. In the current study, the high school merge that occurred in Fall 2009 may have negatively impacted the program fidelity among the YP implementers. This merger was enacted because the middle school which fed into the original YP school site experienced population growth it was not built to accommodate. Thus, the YP high school was merged with another high school into a brand new central high school that all tenth- through twelfth-grade students in the city must attend, another facility was built to accommodate the city's ninth grade students, and the two older high school buildings were converted into middle schools. This merger increases the possibility of high turnover rates and decreased feelings of connectedness with students among YP-implementing staff in the original high school. Equally possible

is that the change in peers resulting from the merge could have increased youths' feelings of disconnect with their new school environment since their peer networks may not have remained intact after the school merger.

Since the YP and comparison groups both came from the same school it is also likely that important resources and social connections facilitated in YP youth were "cross-contaminated" with non-YP youth. This possibility leads to a more conservative estimate of the impact YP had on academic achievement. A similar, alternative hypothesis is that the social norms within this particular school (e.g. high school and classroom misconduct rates, prevalent intentions to drop out of high school) were not supportive and may have, over time, undermined the positive connections YP initially fostered in participating youth. Both hypotheses would explain our minimal findings related to positive peer traits, since both the YP and the comparison groups reported having a similar amount of positive peers as friends. Research also shows that positive peers can predict high academic achievement by modeling how to master challenging academic tasks (Altermatt et al, 2005), but we found this protective mechanism could not yield similar results in our study after controlling for risk. In fact, our findings are similar to those of Ream and Rumberger (2008), who found that Latino youth displayed shortfalls in the availability of friends who valued education (e.g. regular class attendance, studying, finishing high school). As Perreira and colleagues (2006) suggest, Latino youth tend to flourish in school environments where their peers take on leadership responsibilities. In a school context where pregnancy, misconduct, and low academic aspirations are chronic and shared by many in this community, it may be that there were

not enough peer leader exemplars in the school environment for YP youth. It is also possible that social engagement with the peer leaders promoting YP core values was less beneficial to youth than we originally hypothesized.

Some previous research has suggested that acculturation is related to academic achievement among Latino youth (Eamon et al, 2005; Kalogrides et al, 2009). However, acculturation did not play a significant role in the academic achievement of Latino youth in the present study. In the current sample, thirty percent of youth ($n = 49$) reported they were foreign-born, underscoring the notion that stressors like lost close relationships, altered family roles, and adjustment to the U.S. schooling experience are unique challenges faced by this at-risk population (Garza, Reyes, & Trueba, 2004; Zhou, 1997). However, over sixty percent reported they were born in the U.S. to foreign-born parents, and another nine percent reported that both they and their parents were native to the U.S. Overall, scores from the Language Use subscale further revealed a limited range of acculturation among the youth. The majority of youth reported they read, think, and speak with their friends in English even though they speak primarily in Spanish at home. Moreover, contrary to what was expected, we found that acculturation was negatively correlated with YP core values, suggesting that the further along the youth is in their acculturative process, the less likely they are to endorse traits like adaptive help seeking and cognitive coping. Tran (1995) and Nguyen, Clark, and Ruiz (2007) found similar inverse relations between cognitive coping and help-seeking and levels of bilingualism and acculturation among high school-aged, urban Latino youths.

While core values like these exemplify the kinds of positive assets YP researchers and others (Ojeda, Flores, & Navarro, 2011) have identified are necessary for successful

94

educational experiences, for underserved Latino youth, demonstration of these traits may come with a cost. There are several possibilities for this hypothesis. Castillo and Caver (2009) suggest that when some Latino youth espouse high academic goals, they are subsequently seen as "sell outs" in their community. "Selling out" reflects the possible stigma attached to seeking help among Latino youth, that is, aligning oneself with values and attitudes that are contrary to those promoted within their immediate community.. Ethnic minorities who sell out choose to emulate White Americans in speech and behavior in the belief that their chances of being accepted into mainstream society would be improved if they abandoned their cultural frames of reference (Ogbu, 2004). According to Ogbu, those who sell out are attempting to overcome the challenge of status problems, "collective problems which members of the subordinate group find difficult if not impossible to solve within the existing system of majority-minority relations" (p. 4). The youth in the current sample might be especially sensitive to avoiding the perception of "sell-outs", and this perhaps represents another reason for the inverse relationship found between acculturation and YP core values. Another major possibility is that acculturation may not be positive when Latino values are demonstrative of high academic engagement and function to protect youth from an under-resourced school culture that espouses little hope and support for academic achievement and poor peer influences. Among this underserved group, some aspects of acculturation may be detrimental.

Even in contexts with heavy ethnic minority representation like a predominantly Latino high school, it is still important to study acculturation because these academic institutions promote mainstream cultural values (Ojeda, Flores, & Navarro, 2011).

However, acculturation is a complex construct that includes more than just generational status and language use. Hsiao and Wittig (2008) used four acculturation-related outcomes (i.e. ethnic identity affirmation, outgroup orientation, ethnic identity exploration, and national identity) to better understand this process among a sample of Asian, Latino, and White youth. They also divided two ethnic groups into ethno-generational groups (e.g. U.S. native born Latino vs. immigrant Latino) and compared these ethno-generational groups against each other and White youth to examine between- and within-group differences in acculturation. Their results indicated that as U.S. native born Latino youth engage in activities to learn about Latino culture, so too does their sense of belongingness to the U.S. develop (Hsiao et al, 2008). Perhaps the youth in our study were reflecting this acculturative process: instead of embracing Western values from the YP curriculum, they sought to learn more about Latino culture and that quest helped them to ease their transition into U.S. culture most effectively. This theory would be supported by the significantly negative relationship we found between acculturation-related constructs like generational status and English language use and the YP core values of academic self-efficacy, adaptive help seeking, cognitive coping, and a sense of school membership.

Acculturation did not yield any significant findings in the current study. However, two protective mechanisms were identified that enhance the likelihood of educational resilience among Latino youth. The positive impacts YP core values and resilience had on 11th grade GPA respectively indicate that whether they are fostered by the PYD program, the supporting school, or Latino culture itself, youth in this ethnic community benefit from these two particular mechanisms. None of the previous research on YP

96

indicated these effects on youth academics (e.g. Johnson et al, 2009; School District of Philadelphia, 1995), but that may have been due to major differences in research design and study population.

Despite the main effects of YP core values and resilience on 11th grade GPA after accounting for risk, none of the measured mechanisms moderated the relationship between risk and academic achievement. However, in the present study, the effect of each mechanism was examined individually. It is likely that each of these mechanisms alone would not be powerful enough to lessen the impact of risk on youth achievement. Future analyses will look at the cumulative or synergistic (pattern-centered) effect of these resources. For example, a cumulative approach might create a summed score of how many of the protective factors are present in a youth's context similar to the method we created our composite risk index. A pattern-centered approach might also help illustrate the benefit YP core values and resilience might have for these at-risk, Latino youth that explores what combinations of resources are most effective for optimum academic functioning. Future analyses with the current study data could identify configurations of protective mechanisms and risk factors within the YP group to better understand how participation in this PYD intervention predicts academic achievement (e.g. Peck, Roeser, Zarrett, & Eccles, 2008; Perez, et al, 2009; Zarrett et al, 2009).

A previous study of the academic achievement of Latino youth using pattern-centered approach indicates particular combinations are more resilient than others. Perez and colleagues (2009) utilized cluster analyses to examine the interactive influences of both risk and protective mechanisms (e.g. extracurricular activity involvement, academically oriented peers) on academic outcomes (i.e. GPA, school awards, advanced

97

placement and honors courses). They included risk factors that negatively impacted the entire sample, including elevated sense of rejection due to undocumented status, low parental education, and high numbers of work hours during high school and siblings in the home.

First, Perez and colleagues (2009) tested the cumulative variables using regression analyses, and these results indicated that risk and the personal and environmental protective factors accounted for a significant amount of variance for GPA. Similar to our results, they found that resilience and protective mechanisms were salient for their entire study population. Next, the researchers conducted cluster analysis and identified three distinct Latino student profiles. The *high risk* group reported high levels of risk with low levels of protective factors and had an average GPA of 3.25. The *protected* group reported low levels of risk with high levels of protective factors and had an average GPA of 3.66. The *resilient* group reported high levels of risk and commensurate levels of protective factors and had an average GPA of 3.61. These student profiles raise a couple of noteworthy points about the resilience of Latino youth. First, regardless of level of risk, all three profiles managed a strong 'B' average. Second, the *high risk* and *resilient* profiles had commensurate levels of risk, and yet with the latter's endorsement of protective factors, their GPA was within a tenth of a point from the *protected* group's highest reported GPA. These findings should encourage researchers to further identify and examine protective factors in the Latino community and find ways to harness them in the pursuit of promoting educational resilience.

Suggestions for Enhancing Youth Program

Youth Program (YP) demonstrates several qualities that the educational policy initiative Pathways to College Network (Gullatt & Jan, 2003) and previous research suggests are imperative for academic positive youth development programs to be successful. For example, a meta-analysis on 213 positive youth development programs and their impacts on various developmental domains indicated that programs which sequenced their activities, emphasized active methods of learning, dedicated sufficient time to focus on program tasks, and made learning objectives explicit were the most effective in predicting significant gains in academic domains (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).

However, the current study indicates that YP, in its applied form, may not offer protective support that is adequate enough to overcome the challenges faced by the underserved urban Latino youth in the current study. For example, highly accessible mentors may be especially important for promoting academic achievement of Latino youth (Stanton-Salazar et al, 2001). Studies have shown Latino youth at risk reversed their developmental trajectories with the sudden new connection to an informal mentor. Results from a qualitative study of predominantly Latino college undergraduates identified a highly common theme across interviews where students expressed the desire for a comprehensive mentoring program with acceptable mentor to mentee ratios (Jones, Castellanos, & Cole, 2002), and other research indicates that Latino youth with such mentorship demonstrate higher college efficacy and better articulated academic goals than those without such resources (Santos & Reigadas, 2002). However, the average ratio between YP peer leaders and participants is 1:7. Perhaps this ratio is not adequate to

provide the direct, hands-on mentorship needed. The developers of YP might consider extending the mentorship component of the program into the three booster sessions youth receive during their sophomore year when implementing this PYD program among Latino youth. Given the especially beneficial impacts of mentorship for this ethnic group, it is possible that Latino youth participating in YP will demonstrate higher academic achievement despite a more robust effect of risk and for longer periods.

YP developers might also consider a tiered approach to implementing YP at future school sites. Using the Getting To Outcomes framework, this approach would begin with identifying specific goals and objectives for the YP program, after identifying the target population (Wiseman, Chinman, Ebener, Hunter, Imm, & Wandersman, 2007). Youth with similar levels of risk would be grouped together and receive different forms of YP based on their grouping: low-risk youth would participate in YP in its current form, youth with higher levels of risk would receive YP with an expanded mentorship component, and those youth with highest amounts of risk factors would participate in a YP that includes more family-based components. For Latino high school-aged youth in particular, additional family components of the intervention could be particularly helpful as previous research indicates that family encouragement is directly associated with staying in school and that school staff and family encouragement combined predicts greater academic success (Martinez, DeGarmo, & Eddy, 2004).

We also recommend that the re-structuring of the YP mentorship component also include peer leaders who coach 9th grade participants on the acculturative process. Castillo and Caver (2009) proposed addressing cultural variables like *familismo*, *marianismo*, and *machismo* when researching acculturation within the Latino ethnic

group. Peer leaders might be trained how to weave these concepts into weekly YP

activities and group conversations. Experiences like this would model how to honor

Latino culture while still embracing Westernized values that lead to academic success.

Another element of the YP protocol that may warrant further consideration is the

multi-component nature of this positive youth development program. YP hosts two

Family Night events per year to integrate youths' guardians into the program mission and

schedules one community service learning event for each program cohort. While some

research indicates that multi-component positive youth development programs are

effective in producing increases in academic performance, these programs are also more

likely to experience implementation problems mainly because of the extra effort required

to plan the family and community components (Durlak et al, 2011; Weisz et al, 2005).

Future research on YP should evaluate the extent to which these extra components add

additional value to the training conducted in YP physical health education classes and

whether these components are implemented correctly.

Research has also identified several potential sources of cultural mismatch

between the positive youth development program's validation group and the current

consumer group (Castro, Barrera, & Martinez, 2004). The findings of this evaluation

suggest that YP may have had only minimal effect on the multiple risk factors of the

current sample, due to the fact that the number and severity of risk factors of the youth in

which YP was validated upon in the 1970s pales in comparison to the adversity urban

adolescent Latinos in the 21st century face on a daily basis (Garcia, 2001). YP as it was

implemented for the current study maintained fidelity to the original curriculum created

in 1979, yet a more contemporary, culturally adapted version of YP might be the most helpful for at-risk Latino youth.

Bernal, Jiménez-Chafey, and Domenech-Rodríguez (2009) define cultural adaptation as the systematic alteration of evidence-based intervention practices to address culture and context so it becomes more compatible with the client's core values. Griner and Smith (2006) conducted a meta-analysis on culturally adapted treatments and found that the amount of adaptations made to an intervention was positively linked with the effectiveness of the intervention and that interventions tailored to specific ethnic groups were more effective than universal interventions. Efforts to tailor YP to Latino youth populations might borrow from the process outlined by Parra Cardona and colleagues (2012) who adapted an evidence-based parenting intervention to Latino adults: translating all YP curriculum materials into Spanish, building relationships with local community leaders at the outset to establish co-leadership responsibilities on all program objectives, and conducting qualitative research on Latino youth before implementation to better understand their unique experiences.

Another intervention designed to curb obesity in Latino adult populations addressed the cultural differences among Latino subcultures by acknowledging the various names for foods and integrating popular Latino activities into the intervention practices (e.g. dancing, soccer) (Corsino, Rocha-Goldberg, Batch, Ortiz-Melo, Bosworth, & Svetkey, 2012). These authors also suggest using Latino staff to further the goal of cultural adaptation. While all of these examples may not be feasible for incorporation into the YP curriculum, integrating one or two may help to increase academic gains for at-risk Latino youth.

Strengths and Limitations of the Current Study

This study benefited from several institutional collaborations and methodological features. First, the provision of baseline data from Rutgers University and the non-profit organization made it possible to ensure the YP and comparison groups were equally matched on socioeconomic status and academic achievement. The study design used random assignment procedures to allow us the ability to link any observed effects between YP and comparison youth to the effects of YP and to disregard the possibility such effects were due to preexisting differences between groups. Objective school records of grades were obtained and used as indices of academic performance instead of self-reported data. Official school records yield more reliable data as adolescents sometimes harbor negative self-perceptions about themselves that make it difficult for them to comfortably disclose certain facts, or they may be unintentionally inaccurate (Topor, Swenson, Liguori, Spirito, Lowenhaupt, & Hunt, 2011). The sample size was deemed large enough to ensure acceptable statistical power for the analyses we implemented, and the intervention protocol for YP was clearly specified. Certain risk indices have been criticized for neglecting to address risk factors relevant to ethnic minority communities when conducting research among communities of color (Miller, Webster, & MacIntosh, 2002). The current study avoided these mistakes by culturally tailoring the composite risk index to be sensitive to Latino youth. Finally, our study supports the practice of collecting informed consent multiple times in at-risk, Latino adolescent research.

Despite these strengths, the study had several limitations. First, attrition and missing data prevented researchers from being able to track the development of the full

sample through their high school matriculation. Limited resources exacerbated the attrition by preventing researchers from being able to provide incentives to youth to participate in the last wave of data collection, resulting in an even smaller sample size than expected. Despite this, the results are still considered a valid representation of the current sample based on the lack of significant difference in proxies for socioeconomic status (i.e. parental education), gender, and GPA from the first marking period of grade 9 between the YP and comparison groups. Second, some constructs of the present study were not measured at earlier waves. Therefore, while YP and non-YP youth were similar on key important measures related to academic achievement (e.g. socioeconomic status, composite risk) at the 9th grade, we know less about initial youth similarities and differences in the three examined protective mechanisms.

Moreover, we believe that YP reflects many of the suggestions that PYD researchers suggest are important for important for effective programming (Gullatt et al, 2003; Durlak et al, 2011). However, a major limitation of this study is that specifying the links between YP and these suggestions went beyond the scope of our investigation. Future YP researchers should be sure to include components of process evaluation to determine what extent this program demonstrates the suggested ingredients for effective programming.

The curriculum of YP was designed to address 11 mediating factors which influence positive youth development. We chose four constructs – academic self-efficacy, adaptive help seeking, cognitive coping, and sense of school membership – which represented the values most directly related to academic achievement. Across the entire sample, these four selected core values predicted academic achievement however YP

youth could not claim higher endorsement of these protective mechanisms than comparison group youth. These four constructs also failed to moderate the relationship between risk and 11th grade GPA. It is possible that other protective mechanisms YP offers in its curriculum (e.g. goal setting, resisting peer pressure) are better implemented and are more effective mechanisms of the YP program.

Similar to YP core values, the resilience construct predicted academic achievement among the entire sample and comparison group youth reported higher endorsement of this trait than YP youth. The Wagnild Resilience scale has been previously validated on Latino adolescent populations (Hunter et al, 1999), so we are confident of its appropriateness for the study population. However, the thrust of this resilience scale is focused solely on the individual and does not address the impact close relationships have on resilience. In Latino culture, relationships are considered extremely valuable (Flores et al, 2005; Harrison, Wilson, Pine, Chan, & Buriel, 1990). A resilience scale that asked how parents, mentors and friends contributed to one's resilience might have captured the resilience of Latino youth more effectively than the Wagnild Resilience scale. Currently, there is no resilience measure addressing these relationship components that has been validated across ethnic groups, and is an important next step for future research.

Another limitation of the current study is the lack of data on students who eventually chose to drop out of high school. Although research has shown GPA to be a strong predictor of school dropout (Suh, Suh, & Houston, 2007), examining GPA does not tell the full story of a youth's academic trajectory. For example, a Latino student with

a high GPA might still choose to drop out of high school if they become pregnant or if they are more motivated to have a job than be enrolled in school (Fry et al, 2003).

Having obtained a high school diploma, Generalized Equivalency Diploma (GED), or some other dichotomous outcome may have better captured these trajectories, but that data was not available. The National Center for Education Statistics reports that in 2007, 21.4% of Latino youth ages 16-24 were not currently enrolled in high school or had a high school credential (i.e. traditional diploma, GED, or completion of a state-approved education program) (Cataldi, Laird, & KewalRamani, 2009). This high school dropout rate was higher than those reported in Asian, Black, or White ethnic groups. It stands to reason that those youth still enrolled in school at the last wave of data collection (12th grade) should be considered at the lower end of the spectrum of contextual risk because many of their peers had already dropped out of school. The attrition data analyses suggest there were significantly more comparison youth at the 2010 follow-up than YP youth, so those youth in either group who were not accounted for may have reported levels of risk higher than what was documented here, but it would be difficult to make such an assertion without data on actual drop-out rates among this sample.

We believe that having access to dropout data on this sample would have significantly influenced our interpretation of the findings – particularly those relating to sense of school membership and positive peer traits. For example, research has shown that students who feel marginalized by their schools have higher dropout rates (Eccles et al, 2002). This relationship has been well documented in the Latino community (Stone & Han, 2005; Driscoll, 1999; Steinberg, Blinde, & Chan, 1984). Additionally, research conducted by Dishion and colleagues (1991, 1999) has shown the strong association

between antisocial peers and adjustment problems like school dropout. On the other hand, Wayman (2002) has found that positive peer traits like supportiveness and a commitment to education can protect Latino youth against risk of school dropout. It could be that positive peer traits and sense of school membership are stronger predictors for staying in school than GPA. Future studies may wish to investigate the relationships between these variables and high school dropout in the Latino community.

None of the models in the current study demonstrated the valuable benefits that previous research suggests positive peer traits have on academic performance. Significant to mention is that the current study represents the first attempt to validate the Positive Peer Traits items on a Latino sample. These items have previously been used to explain the link between extracurricular activity participation and youth adjustment (e.g. achievement) among Black and White youth (e.g. Simpkins et al, 2008). For example, Simpkins and colleagues (2008) found that positive peer traits significantly mediated the relationship between activity breadth and problem behavior for female youth only. Similar to Simpkins' sample, the current study sample had to contend with risk associated with minority status, as well as the additional risks associated with acculturation. We initially conceptualized positive peer traits like "encouraging friends to prioritize academics" and "showing them they care" would promote higher academic performance. Although positive peer traits were not predictive of academic achievement in the current study, descriptive statistics indicated that positive peer traits were correlated with the other two protective mechanisms and may be contributing to the impact of positive YP values and resilience. Mentorship may have been another important construct to measure the positive impacts social relationships have on academic achievement for this

107

population. Although school-based mentoring has not been as promising as expected for promoting academic achievement (Slicker et al, 1993), given the value placed on establishing positive social connections with adults within the Latino community, the mentorship that YP participation provides may be its biggest asset when serving Latino youth.

Future YP evaluation efforts that use the Mentor-Youth Alliance Scale (MYAS; Zand et al, 2008) may be able to tap into the positive traits of the 11th and 12th grade peer leaders YP provides to youth. The developers of this scale validated it on a multi-ethnic sample which included Latino youth and found that the MYAS predicted youth's scores in school bonding and life skills. There has yet to be any research that establishes the ability of the MYAS to predict academic achievement, nor has this scale been used in a primarily Latino sample. Future YP research should consider taking advantage of this two-pronged opportunity to bridge the gap in knowledge on Latino mentorship and academic achievement.

Gender also emerged as a unique construct in the current study. Results indicated that while all youth with high levels of YP core values and resilient qualities demonstrated higher 11th grade GPAs, being female was linked with low amounts of positive peers, 9th and 11th grade GPAs, and positively associated with composite risk. Moreover, previous YP research has shown that male youth who participated in YP were 18% more likely to complete high school in four years than males in the comparison group (Johnson et al, 2009), but there were no differences among participating and non-participating females. These findings were unexpected as most research indicates males are at higher academic risk than females and that females typically benefit more from

PYD program participation than do males (Sørlie et al, 2007). We suggest that more needs to be done for Latino female youth in future development and implementation of YP.

The researchers originally planned to include acculturative stress as part of the composite risk measure and explore its moderating potential on the relationship between risk and academic achievement. However, acculturative stress – measured in this study as low English proficiency and generational status – did not significantly correlate with the other risk factors nor did it produce any significant moderation effects. Descriptive analyses indicated that only a small amount of the current sample was noted as being of limited English proficiency, suggesting that language was not the optimal instrument for measuring acculturation and enculturation in this sample.

Moreover, Cokley (2007) warns against defining ethnicity too broadly or narrowly. Broad definitions often confuse ethnicity with race, and overly narrow definitions of ethnicity limit group membership to cultural characteristics. A group which self-identifies with a particular national origin and cultural characteristics is a definition for ethnicity that includes both dimensions. Selecting a fraction of these traits and labeling that as "Latino" would leave out some important aspect of this group's ethnicity. The Latino ethnic group in the U.S. is comprised mainly of Central Americans, Cubans, Mexicans, Puerto Ricans, and South Americans: clearly there is great heterogeneity of national origin within this group. The 2010 U.S. Census Bureau reported that in the northeastern New Jersey – New York metropolitan area, three in ten Latinos are Puerto Rican and two in ten are Dominican (Lopez et al, 2011). Mexicans, Salvadorans, Cubans, and Guatemalans are also heavily represented in the ethnic group

which contains approximately four million who self-identify as Latino in this urban vicinity. These Latino sub groups differ by nationality but also in motivations for the intent to drop out of high school. For example, Velez (1989) examined the effects of academic and cultural factors on dropout behavior among Cuban, Mexican, Puerto Rican, and White youth. Results indicated that espousing high academic goals decreased the intent to drop out for Mexican and Puerto Rican youth, but not for Cuban youth. Recent immigrant status decreased dropout behaviors for Cuban youth, but not for Mexican or Puerto Rican. High academic performance benefitted Cuban and Mexican youth, but these positive effects were not found among Puerto Rican youth (Velez, 1989).

Our own findings might have been significantly different if we had also split our sample along sub-group lines. Additionally, even though many individuals from each of these subgroups speak the Spanish language, the way this language is spoken depends largely on the nationality of the person speaking it (Umana-Taylor, Diversi, & Fine, 2002). For the purposes of the current study we defined Latino ethnic group membership as the self-identification with one of these subgroups and at least partial Spanish fluency, understanding that this self-identification may differ based on nationality. However, it is clear that future YP research efforts would benefit from examining distinct Latino subgroups to better understand the specific impacts of ethnicity on academic achievement.

Hsiao and Wittig (2008) used items from Jean Phinney's (1992) Multigroup Ethnic Identity Measure (MEIM) to measure acculturation in their multi-ethnic sample. Measuring attitudes related to ethnic identity affirmation and outgroup orientation gives

acculturation researchers two benefits. First, the data is likely to reveal nuances in the acculturative process that language use and generational status are unable to provide and second, MEIM items are not limited to any one ethnic group. The extreme heterogeneity of the U.S. Latino population requires an instrument as multi-faceted as they are when describing acculturation. Furthermore, there is support for the theory that ethnic identity formation and gender can significantly moderate the relationship between risk and academic adjustment for certain Latino groups (Umaña-Taylor, Wong, Gonzales, & Dumka, 2012). The exploration of other key moderators of the relationship between risk and academic achievement for Latino youth is imperative.

Public Policy and Positive Youth Development

Positive youth development programs and the adolescents they serve need specific policy attention not only because they have proliferated in recent years, but also because PYD program can assist youth with the challenge of navigating the many life decisions characteristic of adolescence and help set them on positive developmental trajectories (Naudeau, Cunningham, Lundberg, & McGinnis, 2008). Having a positive connection with one's peer group is a valuable resource that at-risk youth need to ensure this journey is a smooth one. Yet research indicates that many Latino youth are more likely to have social networks with peers who have oppositional traits that frown upon behaviors that promote academic engagement (Kuperminc, Blatt, Shahar, Henrich, & Leadbetter, 2004). Ream and Rumberger (2008) examined social bonding patterns among Mexican American youth and found that the number of friends who had dropped out of school significantly predicted high school dropout rates among youth, and our results

111

support that: the intent to drop out emerged as a salient risk factor that many in our sample endorsed. The need for PYD programs designed to enhance these social networks that are tailored to high risk groups has never been greater.

Indeed, the current study reflects the policy needs for the U.S. Latino population set forth by the Pew Hispanic Center. Swail, Cabrera, and Lee (2004) identified broad social programming for all youth and comprehensive education reform efforts for low-income youth from Kindergarten to college as policy initiatives that would benefit large amounts of Latino youth. These scholars implore researchers to "focus more rigorously on the academic pipeline issues for Latino youth".

YP represents a step in the right direction toward meeting these public policy needs. This PYD program eases 9th grade students into the high school environment and for some youth, the positive benefits of YP participation can be seen at the end of their high school experiences. Legislative support for YP and PYD programs like it would provide the financial resources necessary for tailoring the curriculum to benefit youth who experience higher levels of risk (e.g., sustained support throughout high school career). Aos and colleagues (2011) provided policy makers with "bottom-line" cost-benefit estimates for evidence-based intervention programs. For example, general prevention interventions like YP that offer youth mentoring cost approximately $4700 for each participant. However, for each participant, taxpayers receive $6700 in monetary benefits including reduced juvenile crime and increased labor market and health care benefits due to the intervention participant's increased likelihood of graduating from high school. Similarly, decreases in individuals victimized by youth who are now engaged in the PYD intervention save approximately $18100. Savings like these highlight the

importance of legislation focused on promoting the PYD movement. Policy support might also enable YP to culturally adapt their currently implemented programs in urban areas to other youth of color who need the resources PYD programs provide to help combat negative influences and academic challenges. PYD programs that are infused with cultural variables make programs more relevant to youths' experiences and ensure long-term implementation.

The current study also has public policy implications for the ongoing debate on immigration. Recently, President Barack Obama voiced his support for the Development, Relief, and Education for Alien Minors (DREAM) Act in allowing foreign-born youth the opportunity to earn work visas and avoid deportation (Vargas, 2012). A significant number of Latino youth in the current study would be eligible for the DREAM Act, given their first-generation status in the U.S. This policy has the potential to change the whole process of acculturation for many immigrant youth by detaching the stigma of being undocumented in the U.S. Perhaps the DREAM Act will increase academic aspirations among Latino youth and widen their expectations for success in this country. PYD programs like YP may be helpful in sending the message to ethnic minority youth that they too will be valuable, capable contributors to society. The PYD movement is doing its part to close the gap in academic achievement and occupational status in the 21st century.

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121

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APPENDIX A: RISK FACTOR, ACCULTURATION, POSITIVE PEER TRAIT, AND

EDUCATIONAL ACHIEVEMENT TEST ITEMS

1.) Do you currently have children?
      a. No
      b. Yes

2.) Are you expecting to have a child before the end of your 12th grade academic year?
      a. No
      b. Yes

3.) Have you ever been held back a grade?
      a. No
      b. Yes

4.) What is your current Grade Point Average (GPA)? _____

5.) What adult do you live with? _____ What is the last level of education this adult completed?
      a. 5+ years of college/university/technical college/vocational school
      b. 1-4 years of college/university/technical college/vocational school
      c. 6-12th grade

6.) What other adult do you live with? _____ What is the last level of education this other adult completed?
      a. 5+ years of college/university/technical college/vocational school.
      b. 1-4 years of college/university/technical college/vocational school
      c. 6-12th grade

7.) What countries were these adults born in?
      _____

8.) What country were you born in?
      _____

9.) In general, in what language do you read and speak?
Would you say…
    a. Only Spanish
    b. More Spanish than English
    c. Both equally
    d. More English than Spanish
    e. Only English
    f. Other Language

10.) What language do you usually speak at home?
Would you say…
    a. Only Spanish
    b. More Spanish than English
    c. Both equally
    d. More English than Spanish
    e. Only English
    f. Other Language

11.) In what language do you usually think?
Would you say…
    a. Only Spanish
    b. More Spanish than English
    c. Both equally
    d. More English than Spanish
    e. Only English
    f. Other Language

12.) What language do you usually speak with your friends?
Would you say…
    a. Only Spanish
    b. More Spanish than English
    c. Both equally
    d. More English than Spanish
    e. Only English
    f. Other Language

How many of the **friends that you spend most of your time with…**

13.)   do well in school?

None of Them	A Few of Them	About Half of Them	Most of Them	All of Them
(1)	(2)	(3)	(4)	(5)

14.)   plan to go to college?

None of Them	A Few of Them	About Half of Them	Most of Them	All of Them
(1)	(2)	(3)	(4)	(5)

15.)   like to discuss schoolwork or other intellectual things with you?

None of Them	A Few of Them	About Half of Them	Most of Them	All of Them
(1)	(2)	(3)	(4)	(5)

16.)   think that having brand name clothes is very important?

None of Them	A Few of Them	About Half of Them	Most of Them	All of Them
(1)	(2)	(3)	(4)	(5)

17.)   think working hard to get good grades is a waste of time?

None of Them	A Few of Them	About Half of Them	Most of Them	All of Them
(1)	(2)	(3)	(4)	(5)

How often do the **friends you spend most of your time with…**

18.)   let you know that they really care about you?

Almost Never	Once in a While	Sometimes	Often	Almost Always
(1)	(2)	(3)	(4)	(5)

19.)   help you do something that's important to you?

Almost Never	Once in a While	Sometimes	Often	Almost Always
(1)	(2)	(3)	(4)	(5)

20.)   help you feel good about yourself?

Almost Never	Once in a While	Sometimes	Often	Almost Always
(1)	(2)	(3)	(4)	(5)

21.)   If you could do exactly what you wanted, how far would you like to go in school?
   (1) 11th grade or less if I could have
   (2)   graduate from high school
   (3)   post high school vocational or technical training
   (4)   some college
   (5)   graduate from a business college or a two year college with associates degree
   (6)   graduate from a 4 year college
   (7)   get a masters degree or a teaching credential
   (8)   get a law degree, a Ph.D, or a medical doctor's degree

22.)   How seriously have you considered dropping out?

Not very seriously	somewhat seriously	very seriously	left school once and have re-enrolled
1	2	3	4

23.)   Given what you just said, what do you think the chances are that you actually will drop out of school?

Not very Good	Pretty good	Very good
1	2	3

24.)   This year I was absent from school…
   (1)   0-5 days
   (2)   6-10 days
   (3)   11-15 days
   (4)   16-20 days
   (5)   21-30 days
   (6)   More than 30 days

25.) What kind of grades did you make on your last report card?
        (1)   Mostly A's and B's
        (2)   Mostly B's and C's
        (3)   Mostly C's
        (4)   Mostly C's and D's
        (5)   Mostly D's and F's

26.)   How many D's or F's did you make on your last report card?
        ____ None   ___ One   ___ Two   ___ Three or more

27.)   Compared to other students in your classes, how would you describe
        your grades?
        (1)   Better than most
        (2)   About the same as most
        (3)   Worse than most