

12-1-2009

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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

A MIXED METHOD STUDY OF FACTORS ASSOCIATED WITH THE
ACADEMIC ACHIEVEMENT OF LATINA/O COLLEGE STUDENTS
FROM PREDOMINANTLY MEXICAN AMERICAN
BACKGROUNDS: A STRENGTHS-BASED
APPROACH

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

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College of Education and Behavioral Sciences
School of Psychological Sciences
Educational Psychology

December, 2009

This Dissertation by: Laura G. Lara

Entitled: A Mixed Method Study of Factors Associated with the Academic Achievement of Latina/o College Students From Predominantly Mexican American Backgrounds: A Strengths-Based Approach

Has been approved as meeting the requirements for the Degree of Doctor of Philosophy in the College of Education and Behavioral Sciences in the School of Psychological Sciences, Program of Educational Psychology

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ABSTRACT

Lara, Laura G. *A Mixed Method Study of Factors Associated with the Academic Achievement of Latina/o College Students From Predominantly Mexican American Backgrounds: A Strengths-Based Approach*. Published Doctor of Philosophy dissertation, University of Northern Colorado, 2009.

Young adults from Latina/o backgrounds draw from cultural assets and wrestle with distinctive challenges as they enter into, study at, and graduate from institutions of higher education. In this investigation, I examined the perspectives of Latina/o college students with low and high academic achievement, focusing on their upbringing within families and their identification with their cultural heritage. A sequential mixed method study was implemented and the study was grounded in Margaret Spencer's PVEST framework (1995, 2006), the development of ethnic identity (Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004), and factors associated with the academic achievement of students from Latina/o backgrounds. Results suggest four factors related to the academic achievement of Latina/o college students: *Family, Religion, Support, and Motivation*. Furthermore, results from the Ethnic Identity Survey suggest that students in the low GPA group were categorized as *diffuse positive*, while students in the high GPA group were classified as *moratorium positive*. Qualitative results supported these findings, and added depth to how students viewed success, prepared academically, identified academic successes and challenges, accentuated sources of motivation, and highlighted the importance of academic support from parents and universities. Future research considerations are discussed as well as implications for education.

ACKNOWLEDGEMENTS

Writing this dissertation was a team effort, and although only one name appears on the cover, so many amazing people contributed to this success.

I would like to thank Dr Teresa McDevitt and Dra Genie Canales, who will always remain as fierce yet intelligent women that will continue to amaze me and inspire me to learn from. Thank you for never doubting my ability and for constantly keeping very high expectations.

For all the patience and support Cumbres has given me; in particular Linda Carbajal, for reminding me of the strength of a woman and the beauty of life. Cumbres students were a source of strength and support while writing this dissertation and I can only hope I have impacted their lives half as much as they have impacted mine.

For the support and intellectual challenge my peers, roommate, and teachers provided me, in particular my committee and Dr Riddle. Including those who I met during conferences and seminars and kept me sane and motivated. Thank you Joe and SF friends for ensuring I had a social life and a shoulder to lean on!

Mike, there are no words to describe how thankful I am. Your love, sacrifices, and daily ichats were a constant source of strength. Thank you for letting me live my dreams, and for making me a better person every day.

But most importantly, this dissertation is dedicated to my familia: Papa, Mama, Yady, Paolina, Gabriel, Cinthya, Santiago, Joaquin, Adelina, y Mike. Con tan solo su apoyo y por haber creído tanto en mí, este título es tan mío como de ustedes. Aun en la distancia lo hicimos!

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CHAPTER I

INTRODUCTION

School? Peer pressure? Job? Money? Religion? Extended family? Mom and dad? Or perhaps something below the radar that educators might not understand or miss? What is triggering a statistic that finds more than 87% of Latina and Latino young adults in the U.S. absent of a Bachelor's degree? Young adults from predominantly Mexican American backgrounds draw from cultural assets and wrestle with distinctive challenges as they enter into, study, and graduate from institutions of higher education. In this investigation, I examined the perspectives of Latina/o college students from predominantly Mexican American background, focusing on their upbringing within families and their identification with their cultural heritage. To verify the results of a preliminary study, and to further test the applicability of these results with students with low academic achievement, I specifically focused on students with low (2.50 GPA or lower) and high (3.20 GPA or higher) academic achievement, excluding those in the mid ranges. The investigation was a two-phase, sequential mixed method study that included the administration of a questionnaire, an ethnic identity measure, and a follow-up interview with a small sub-sample of students. The study was grounded in several research literatures, notably Margaret Spencer's phenomenological variant of ecological systems theory (Spencer, 1995, 2006); inquiries into the development of ethnic identity in

Latina/o children, adolescents, and young adults (Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004); and analyses of factors affecting the academic achievement of students from predominantly Mexican American backgrounds. Methodological decisions were guided, in part, by the desire to examine both the challenges and protective factors that affect predominantly Mexican American students as they pursue an undergraduate degree. Previous research and theory into Mexican American family origins, cultural experiences, and specific views of success, along with analyses on ethnic identity guided the initial quantitative portion of the study, while a phenomenological tradition guided the follow-up in-depth interviews with a few purposively selected college students (Creswell, 2003). The quantitative and the qualitative portions of the study were later integrated for a complete interpretation of the perspectives of predominantly Mexican American college students as they enter and progress through institutions of higher education.

Statement of the Problem

To date, more than 87% of Latinas/os in the U.S. do not hold a Bachelor's degree, and the rate at which they leave college (drop-out rate) is 2.5 times higher than that of African Americans and 3.5 higher than non-Latinas/os Anglo Americans (Congressional Hispanic Caucus Institute, 2007). The advantages of the completion of higher education include higher earnings, higher levels of employment, higher levels of civic participation, better individual health, and lower incarceration rates, among others, which collectively benefit both students and society as a whole (Baum & Payea, 2004). Latinas/os who do not complete college, and other students of minority backgrounds with limited education,

do not enjoy these benefits and, therefore, face greater challenges in the workplace and in their everyday lives.

The relatively low numbers of Latinas/os attending and graduating from higher education institutions have prompted researchers and educators to examine some of the factors that impede as well as propel students once enrolled in higher education. Previous research focusing on Latina/o students' academic achievement has examined three general factors: (a) student-related influences, (b) parental and family influences, and (c) school, community, and socioeconomic influences. Unfortunately, much of this research has been conducted from a deficit perspective, labeling certain Latina/o culture characteristics, identifying negative aspects, and deemphasizing numerous protective factors that encourage diverse youth to continue their education.

Among the few protective factors found are parental influences, which have been identified from a large body of research in the academic achievement realm as possibly fostering increased attendance and graduation rates in Latina/o students (Arellano & Padilla, 1996; Rosenzweig, 2000). Parents of Latina/o students appear to exert a strong influence on their school performance, more so than parents of Asian-American or African-American students (Steinberg, Dornbusch, & Brown, 1992). Yet, on average, Latina/o students present a greater proportion of poor school grades and school behaviors, possibly reflecting the complex dynamics of the cultural contexts in which students are expected to perform. Parenting continues to be important as Latina/o students progress through school levels. The relationship between parental influences and the academic achievement of young adults is significant, because of its impact on increased attendance and graduation rates, however, considerably less is known about the

influence of parenting in general and other factors, such as increased GPA and academic achievement, on the academic achievement of Latina/o college students (García Coll & Pachter, 2002; Steinberg, Dornbusch, & Brown, 1992).

Unfortunately, certain factors in the research on ethnic identity impede the generalization of numerous studies regarding the academic achievement of youth of color and include: (a) the overlooked structural, physical, historical, and social contexts in which diverse youth of color develop, (b) the use of a deficit perspective in research, and (c) the use of experiences of European Americans as a norm in descriptions for development (Spencer, 2006; Swanson et al., 2003). The inclusion of a model that allows for a developmental perspective and that is linked to contextual forces can help identify other protective factors related to the academic achievement of Latinos, specifically Mexican Americans, while carefully addressing the three factors previously mentioned (overlooked contexts, adherence to a deficit perspective, and use of non-applicable norms for development). This strength-based approach can allow researchers and educators to focus on aspects that are positively related to the increase in attainment of post-secondary education by students from Mexican American backgrounds, other Latino/as, and potentially by students from other minority backgrounds as well.

Phenomenological Variant of Ecological Systems Theory

Margaret Spencer's Phenomenological Variant of Ecological Systems Theory (PVEST) (Spencer, 1995, 2006) was employed as the primary theoretical framework for this research. The PVEST provided a developmental, process-oriented, and context-sensitive focus that emphasized an individual's own perception of the environment. This dynamic theoretical system values the understanding of (a) multiple layers of

environment, (b) normal human processes, (c) historical and social factors associated with conditions and social relations, and (d) cultural sensitivity to everyday experiences. The PVEST model was particularly appropriate because many marginalized youth (including many Mexican American college students) are able to cope and attain positive outcomes in the face of risks. In this investigation, all students have achieved a sufficient level to be in college, making a strengths-based framework appropriate. Furthermore, a comparison of students with low and high grade point averages made it possible to consider the experiences of risks and protective factors that students of varying achievement levels have in college. The PVEST model also helped to guide questions on the questionnaire and the analyses of data.

Ethnic Identity Scale

The concept of ethnic identity provided an additional, related theoretical lens for considering students' experiences in their families and culture. Literature was examined that investigated three dimensions of ethnic identity: (a) the degree to which individuals have explored their identity, (b) the degree to which they have identified the meaning of their ethnic identity and resolved any conflicts within that identification, and (c) the positive and negative effect associated with that resolution, all of which were measured through the Ethnic Identity Scale (Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004).

Phenomenology

To add depth to the emerging perspectives on students' views of their experiences, the study included a phenomenological approach. A phenomenological study focuses on describing the lived experiences of the participants individually, while also identifying their common features (Creswell, 1998; Ferguson, 2006; Moustakas,

1994). This approach involved studying a small number of participants through in-depth interviews and then developing patterns of meaning to understand the lived experiences of participants (Moustakas, 1994). Specifically, this approach allowed me to identify the “essence” of human experience concerning a phenomenon, as described by participants. In this case, the uniting trends were protective factors and risk factors related to the academic achievement of students in the Mexican American community.

Statement of Purpose

The goal of this study was to identify the academic successes and the challenges working against or thwarting that success encountered by predominantly Mexican American college students, through an investigation into the role of parents, emphasis of education at home, meaning and importance of success, the significance of religion, as well as participants’ ethnic identity. In this two-phase, sequential mixed methods study, I obtained quantitative results from a sample of Latina/o college students from a single university and then followed up with a few participants to explore results in more detail. In the first phase, quantitative research questions addressed how education and success were viewed among Latina/o students with high and low GPAs, and the relationship between previously found themes (parenting, success, education, and religion) and academic achievement from a preliminary study (Lara, 2007). The PVEST framework helped to guide the construction of the academic factor questionnaire and the selection of an ethnic identity questionnaire. In the second phase, I tapped into insights gained from interviews of a small sub-sample of students to elaborate on the factors related to the academic achievement of Latina/o college students.

According to a Pew Hispanic Center report by Fry (2002), between 1997 and 2000, almost half of Mexican-origin undergraduates attended a two-year school-- the highest percentage of any Latino national origin group, and 30% of high school graduates were enrolled in undergraduate, graduate, or professional schools. Mexican-origin students between the ages of 18 and 24 years enrolled in college at higher rates (503,459) than any other Latino group. Central or South American students enrolled at significantly lower rates (142,446), followed by Puerto Ricans (64,415) (Fry, 2002). Due to their increasing numbers in institutions of higher education and within the Latina/o community, the focus of this research was on Mexican American students.

Contributions of the Study

In view of the scarcity of research examining the protective factors that encourage predominantly Mexican American college students to attend and complete post-secondary education, and bearing in mind the limitations of research applicable to Latina/o college students in general as defined previously, the current study explored, in detail, protective factors and challenges affecting the attainment of a college degree from quantitative and qualitative perspectives. In this study, the combination of quantitative and qualitative methods introduced into the research an additional perspective on the factors that affect the academic achievement of Latina/o college students. Quantitative research focused on the factors associated with Latina/o students' academic achievement. In addition, a qualitative perspective captured a more complete picture of the risk factors and protective factors perceived by Latina/o students. Furthermore, this relatively balanced approach of quantitative and qualitative data allowed for the examination of

protective factors, a less explored area in the research about the academic achievement of Latina/o college students, specifically of predominantly Mexican American background.

Literature on the academic achievement of Mexican American college students provided insight into three general factors that relate to the academic achievement of this population: (1) student-related influences, (2) family influences, and (3) school/community and socioeconomic influences. However, research on the definition of academic achievement provided a myriad of interpretations of what academic achievement was and no study examined in detail the factors that promoted the academic achievement of Mexican American college students. This investigation added to the literature regarding how Mexican American college students, particularly those with high and low GPAs, conceptualize the importance of education and success, and how their families and communities contributed to their education. More importantly, the study directly addressed the factors that relate to the academic achievement of Mexican American college students.

Research Questions

Questions to be addressed by the quantitative analysis are:

- Q1 How are parenting, education, meaning of success, and religion associated with the academic achievement of predominantly Mexican American college students with low and high GPAs?
- Q2 How is ethnic identity associated with the academic achievement of predominantly Mexican American college students?

Questions to be addressed by the qualitative analysis are:

- Q3 How do predominantly Mexican American college students describe aspects of family, religion, meaning of success, and motivation in terms of being protective factors and risk factors in their academic achievement?

- Q4 Are there any additional protective or risk factors related to the academic achievement of predominantly Mexican American college students?

Research Assumptions

A major assumption underlying this research was that the academic development of Mexican American college students depends greatly on their perception of the perceived risk and protective factors in their family, environment, and cultural context. Determining the major risks and protective factors that students commonly face can aid educators and help researchers focus on what can be done to support the academic attainment among ethnically diverse youth. My use of the PVEST as a theoretical framework allowed for an in-depth investigation into both risk and protective factors that Mexican American students encountered while achieving academic success.

Limitations of the Study

In the current study, several limitations were foreseen and included: a) generalizability of results, b) survey validity, c) use of GPA, and d) limited contact with students in the qualitative phase. Although more than 500 students were contacted to participate in the study from a list of potential participants provided by the university, the research study focused on only one university, limiting the results to generalize mainly to students attending that university. Other Latina/o young adults, from predominantly Mexican American background, outside of this particular university were not contacted, limiting external validity to Mexican American students attending a 4-year university in the Rocky Mountain region of the United States. The second foreseen limitation was the validity of the Academic Factors Questionnaire. This questionnaire was developed from a previous study, and was designed to understand the relationship of the previous four factors found in the preliminary analysis (parenting, education, experience with success,

and religion) (Lara, 2007) and the academic achievement of the respective respondents. To increase the validity of this measure, I asked participants from the preliminary study to complete the questionnaire before I made final changes and administered the revised questionnaire to new participants. However, I could only reach one student, and she agreed to take the questionnaire; her responses were matched to the factors established. Another limitation was the usage of GPAs. Although GPA has been found to be a strong and reliable measure of academic achievement, the study employed a cautious use of GPAs since GPA is affected by students' personal circumstances and has been proven to be a measure of achievement that changes somewhat from time to time. The last foreseen limitation occurred in the qualitative phase of the study. Ten students (5 from the low GPA group and 5 from the high GPA group) were selected using purposeful sampling techniques for an in-depth interview. Furthermore, I did not conduct follow-up interviews or corroborating observations.

Definition of Terms

- Academic Achievement: the accomplishments of specific academic goals within the core subject areas (e.g., reading, writing, mathematics, science, and social sciences), and school performance as measured by standardized criteria (e.g., standardized test scores, grades, grade point average [GPA], teacher ratings, and orientation) (Rosenzweig, 2000);
- Authoritative parenting: One of the four main parenting styles that offers a careful balance of demandingness and responsiveness, across a particular ethnic, socioeconomic level, and family structure (Darling & Steinberg, 1993; Lee, Daniels, & Kissinger, 2006);

- Credibility: Clear establishment of the results of the qualitative research from the perspective of the participants in the research (Trochim, 2006);
- Ethnic Identity: The subjective sense of ethnic group membership that involves self-labeling, sense of belonging, preference for the group, positive evaluation of the ethnic group, ethnic knowledge, and involvement in ethnic group activities (Phinney, 1990, 1996);
- Ethnic Identity Scale (EIS): Assessment of three domains of ethnic identity formation, namely, (a) exploration, (b) resolution, and (c) affirmation (Umaña-Taylor, 2003; Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004);
- Ethnicity: A characterization of a group of people who see themselves and are seen by others as having a common ancestry and shared history, traditions, and cultural traits such as language, beliefs, values, music, dress, and food (Cokley, 2007);
- Epoché: the separation or ‘bracketing’ of the researcher’s prejudices and any preconceived ideas about the phenomenon being studied (Field & Morse, 1985; Stanghellini, 2005);
- Factorial Validity: a form of construct validity that is established through factor analysis (Hoyle & Smith, 1994);
- Familismo: A Latina/o cultural value emphasizing family loyalty and closeness (Miller, 1979; Sanchez, 2005; Vega, 1990);
- Grade point average (GPA): A measure of academic performance based on a 4.0 scale. Students with a 2.50 cumulative GPA or lower are considered as having

low academic achievement, whereas students with a 3.20 cumulative GPA or higher are considered as having high academic achievement;

- Generational Status: 1st generation: A student who was born in Mexico or any other Latin American country; 2nd generation: A student who was born in USA, either parent born in Mexico or any other Latin American country; 3rd Generation: A student who was born in USA, both parents born in USA and all grandparents born in Mexico or other Latin American country; 4th generation: A student who was born in USA and at least one grandparent was born in Mexico or any other Latin American country;
- Latina/o: Any person who was born in, raised in, or descended from a country of Latin America (e.g., Mexico, El Salvador, Cuba, Puerto Rico);
- Mexican American: Any person who was born in the country of Mexico or whose parents or grandparents were born in Mexico or are of Mexican ancestry;
- Parenting style: a relatively stable complex of attitudes and beliefs that form the context in which parenting behaviors occur (Darling & Steinberg, 1993).
Characteristic standards that parents use for raising their children include discipline and expression of warmth;
- Phenomenological variant of ecological systems theory (PVEST): A framework that integrates issues of context, coping, and identity in human development (Spencer, 1995, 2006). This framework also combines “the concern for culture as lived and experienced at multiple levels of the environment, and individuals’ own perceptions” (Spencer, 2006);

- Phenomenology: A qualitative tradition that focuses on describing the lived experiences of participants individually while also identifying their common features (Creswell, 1998; Ferguson, 2006; Moustakas, 1994);
- Protective factors: characteristics or variables associated with the family, community, and environment that are supportive of academic attainment for predominantly Mexican American college students;
- Psychosociocultural variables: Social support, acculturation level, satisfaction with the interpersonal environment, adjustment in college and academic persistence (Heiligenthal, 2005);
- Risk factors: characteristics or variables associated with students leaving college or other hindrances to academic achievement;
- Sequential-Explanatory design strategy: A research design that is conducted in two phases, (1) quantitative and (2) qualitative. This design gives equal priority to both quantitative and qualitative aspects of the research, and uses the qualitative perspective to assist in explaining and interpreting the findings of the quantitative phase. After data collection, the findings of these two phases are integrated for a complete interpretation (Tashakkori & Teddlie, 2003);
- Sociocultural factors: social factors and their cultural context that are related to learning and degree attainment; and
- Socioeconomic status: available family income and resources available in the neighborhood where family resides.

CHAPTER II

REVIEW OF LITERATURE

The following literature review has been organized into five sections. The first section describes the selection process of studies included in the literature review. Definitions of academic achievement in the literature were explored in the second section, along with terminology, definitions, measures, and indicators, specific to degree attainment at the college level. The third section discusses variables that influence academic achievement, and it explores parenting as a major contributor to Latina/o's success in college. The fourth section summarizes a preliminary analysis of the variables that are associated with academic achievement of Latina/o college students. The last section is dedicated to ethnic identity and Margaret Spencer's PVEST (1995, 2006) model as a primary framework for the present study.

Academic Achievement

The average age for Latinas/os in the U.S. in 1982 was 23 years old, eight years younger than the non-Latina/o population (Quevedo-Garcia, 1987). In 2006, that number slightly increased to 26 years of age, 13 years younger than non-Latina/o Anglo American populations (U. S. Census Bureau, 2007). In 2004, the population of Latinas/os comprised 14.2% (40.5 million) of the entire U.S. population living in private households, making Latinas/os the second largest race/ethnic group by the year 2010. Furthermore, Gregory (2003) and Lane (2001) reported that by the year 2050, Latina/o

students will comprise one-fourth of all K-12 students and more than one-third of the U.S. population.

Latina/o youth are among the youngest and fastest growing populations in the United States, yet their levels of academic achievement are lower than those of many other minorities as well as their Anglo American counterparts (see Figure 1) (KewalRamani, Gilbertson, Fox, & Provasnik, 2007; U. S. Census Bureau, 2004, 2006). Unfortunately, Latina/o youth's participation in the educational system continues to remain low, despite the recent increase in college attendance (Sanchez, 2000; U. S. Census Bureau, 2007). Currently, almost 60% of Latinas/os age 25 or older hold a high school diploma and 13% hold a Bachelor's degree or more (U. S. Census Bureau, 2007).

The years 1993-2002 saw a slow increase in the number of Latinas/os who attended and graduated from colleges and other postsecondary institutions (Kominski & Adams, 1994; U. S. Census Bureau, 2007). In 1993, only 9% of Latinas/os age 25 or older had attained a bachelor's degree or higher, in comparison to 16% of Latinas/os in 2002 who were between the ages of 25-29 years (Kominski & Adams, 1994; U. S. Census Bureau, 2007). Furthermore, in 2002, 27% of African American students and 31% of Anglo American students age 25 or older attained a bachelor's degree (see Figure 1). Latinas/os may relate this slow increase in educational attainment to a different view of success, due to the importance of family and friends in the Latina/o culture. To date, more than 87% of Latinas/os do not hold a bachelor's degree, and their college drop-out rate is 2.5 times higher than that of African Americans and 3.5 times higher than that of non-Latina/o Anglo Americans (Congressional Hispanic Caucus Institute, 2007). In addition, a study published by the office of Media Relations at the University of

California, Los Angeles reported that even though 54 out of every 100 Latina/o students who start elementary school graduate from high school, only 11 of the 54 students will receive a bachelor's degree (Solorzano, Villalpando, & Oseguera, 2005; U. S. Census Bureau, 2007).

This relatively low number of college graduates among Latina/o students calls for an investigation into the factors that promote and hinder the academic success, as well as the meaning and views of success among Latina/o students, particularly of Mexican American background. Although there is a relationship between parental influences and the academic achievement of children and adolescents (Georgiou, 1999), less is known about the influence of parenting on the academic achievement of college students, particularly among students of color (Gonzalez, Cauce, Friedman, & Mason, 1996; Steinberg, Dornbusch, & Brown, 1992). To address this research gap, I selected Margaret Spencer's phenomenological variant of ecological systems theory (PVEST) as a tool to identify the factors that support and hinder the development of predominantly Mexican American college students (1995, 2006). In addition, I included a focus on ethnic identity to clarify the role that perceptions of ethnic traditions may play in students' academic experiences and their interpretations of their families' influences on them.

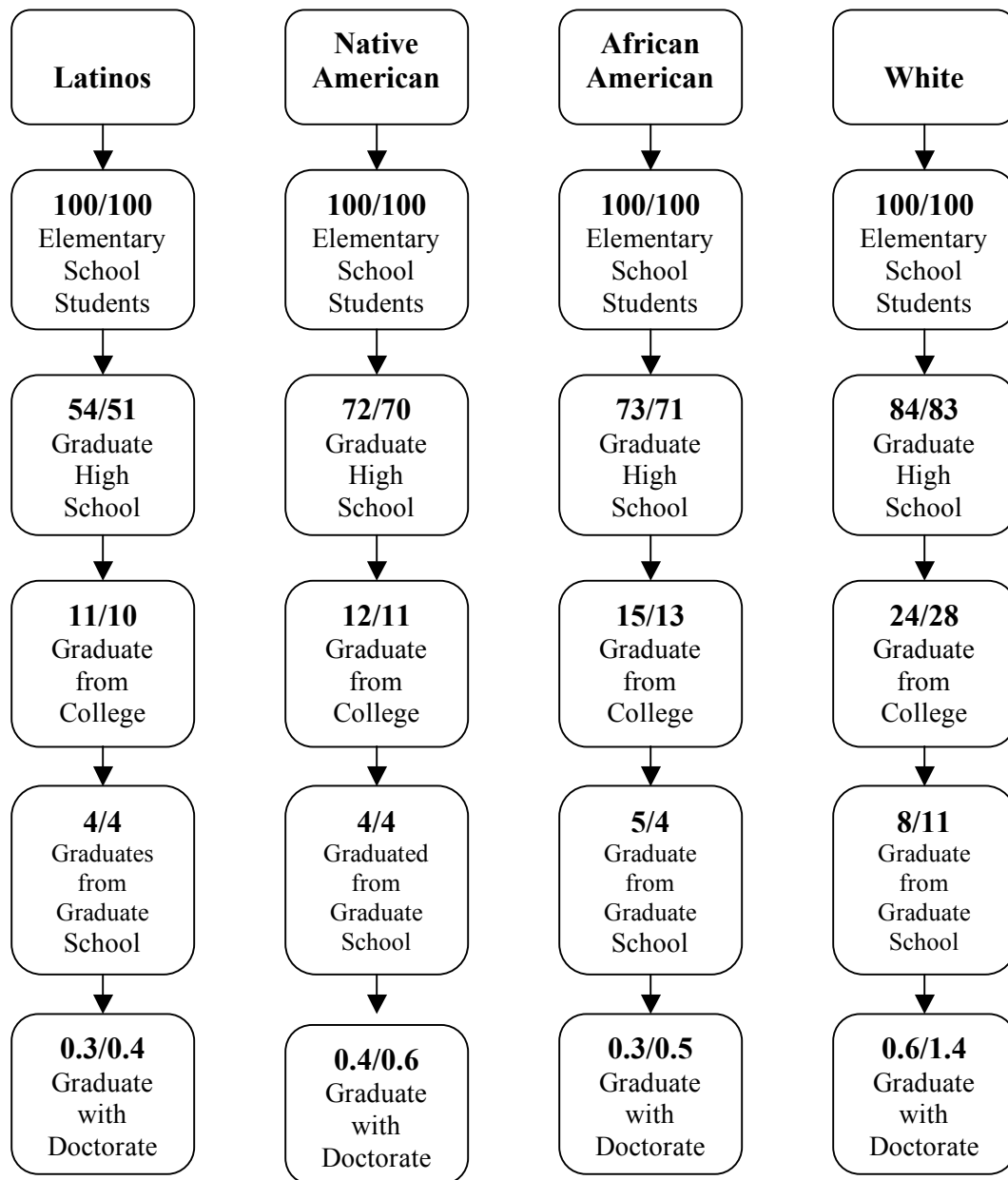


Figure 1. Educational Attainment by Ethnicity and Gender in 2000 Note. First number represents educational attainment by women. Second number represents educational attainment by men. Adapted from Chicano Studies Research Center & Graduate School of Education and Information Studies. (2006, March). *Falling Through the Cracks: Critical Transitions in the Latina/o Educational Pipeline*. Paper presented at the Latina/o Education Summit, Los Angeles, CA.

Literature Review

The literature review focused on factors associated with the academic achievement of Latina/o students in general in the U.S. This section will detail how the literature review was conducted, including information on the methods used for data collection, definitions of academic achievement found in the literature, influences on academic achievement, conclusions, and implications for future research.

Method

Materials that were assembled for this review of literature consisted of: (a) quantitative, qualitative, and mixed method studies; (b) meta-analyses; (c) reports (d) books; (e) conference presentations; and (e) dissertations. The literature review began with broad searches through online databases (e.g., PsycINFO; Fuente Academica; Humanities International Complete; Social Sciences Abstracts; Dissertation Abstracts International [DAI]; ERIC; WilsonWeb; Multicultural Educational Abstracts; Academic Search Premier; Google Scholar; and PsycArticles), as well as visits to the university library. Research conducted at the university library focused on the identification of books, reports, and dissertations that were housed at, or easily accessible through that library. String searches used in databases included a combination of academic achievement terms (e.g., academic attainment, academic achievement, school achievement, school success, and achievement) and parenting terms (e.g., parents, parenting, parental), which were narrowed down by ethnicity (e.g. Latina/o, Hispanic, or Mexican American). Once a relevant article was found, its bibliography was examined for any additional references. Research articles regarding all Latina/o subgroups in the

U.S. were included in the research. Whenever possible, the context of particular groups of Latina/o students was described.

The total number of periodicals included in the literature review, based on the previous criteria, was 82. These included: (a) 41 journal articles (37 peer reviewed journals and 4 non-peer reviewed journals), (b) 3 dissertations, (c) 11 reports, (d) 1 unpublished manuscript, (e) 1 magazine, (f) 6 conference presentations, and (g) 19 books. One meta-analysis dissertation, which included the K-12 population, was included in the review because of the academic achievement indicator variables presented. In all other cases, publications focused on college students.

When relevant sources were identified based on the previous criteria, a careful analysis of the methods and research findings was conducted. As information from periodicals was collected, an inductive process was used to develop categories to group the literature thematically. Themes that emerged were: (a) definition, (b) measures, (c) impact of academic achievement in life, and (d) factors and variables related to academic achievement. Themes, factors, and variables were further broken down into: (a) internal influences, (b) parental influences, (c) external influences, and (d) negative influences, which are further discussed in this chapter. The present literature review was arranged according to the emergent themes in order to explore the theories and origins of each concept. The deficits viewed in the literature are presented throughout this chapter and guide future research direction in the area of academic achievement.

Definitions and Measures of Academic Achievement

Before factors related to the academic success of students can be reviewed, it is important to describe the concept of academic achievement and its historical antecedents.

In the literature, there was no consistent agreement on the definition of academic achievement. The general term of achievement was broadly defined by Darling-Hammond and Wise (1985) to include the accomplishments of the goals, processes, and outcomes of education. Another frequent definition of academic achievement, presented by Mandara (2006), included “those outcomes related empirically or conceptually to school achievement (grades, academic motivation, and behavioral problems)” (p. 207). However, a more focused definition of achievement was presented in Rosenzweig’s (2001) meta-analysis of parenting and school success. Rosenzweig specified that achievement consists of “accomplishments of academic goals within the core subject areas (reading, writing, mathematics, science, and social sciences) and school performance outcomes as measured by standardized tests, grades, grade point average, teacher tests and ratings, and orientation towards school” (p. 2). Rosenzweig’s definition included a collection of accomplishments and criteria as derived by the student, teachers, and standardized measures, capturing a more complete view of what exactly academic achievement is. Accomplishments within core subject areas and overall teacher ratings were overlooked in the definitions by both Darling-Hammond and Mandara. Although there is no clear consensus on the definition of academic achievement in the literature, the definition used in this literature review is based on Rosenzweig’s meta-analysis (2000).

Consistent with Rosenzweig’s definition, the measurement of academic achievement can be divided into two sections, learner-specific measures and comprehensive measures. Learner-specific measures are focused on the term “student success” and provide a holistic perspective in regard to students’ achievement. For

example, student success is sometimes defined in terms of credit hours earned in consecutive terms, indicating overall progress made toward graduation. Kuh et al., (2007) defined student success in a broader context to include: (a) academic achievement, (b) skills and competencies, (c) engagement in educationally purposeful activities, (d) knowledge satisfaction, (e) enrollment in graduate school and employment, and (f) the attainment of educational objectives. Although learner-specific views are focused on “student achievement,” they encapsulate aspects that are difficult to measure and quantify (for example, satisfaction of knowledge).

A second way to examine academic achievement has been to investigate comprehensive measures. Comprehensive measures center on academic grades and have been referred to in the literature as academic success, school success, and school achievement. Examples include: (a) standardized test scores, (b) grade point average (GPA), (c) degree attainment, and (d) class grades. In a meta-analysis of academic achievement conducted by Fan and Chen (2001), comprehensive measures, such as school GPA, postsecondary attainment, and standardized test scores in a specific academic area, defined academic success among students. Other comprehensive measures focused on accomplishments at school. Primarily, school success was focused on students’ grades, GPA, and scores on standardized achievement tests (Baker & Stevenson, 1986; Bright, 1992). Another term, which has been related to the assessment of comprehensive measures, was school achievement. Operationally, Georgiou (1999) defined school achievement as the grades assigned to students by teachers of core academic subjects (e.g., mathematics, writing, and reading). Measuring academic

achievement through a combination of standardized test scores, GPA, degree attainment, and class grades provides a composite view of students' academic performance.

Even though comprehensive measures provide a global perspective on how students do academically, they do not take into consideration other factors related to academic achievement, such as: (a) available resources for learning and previous learning experiences (Rosenzweig, 2000); (b) motivation (Rosenzweig, 2000), (c) academic orientation (Rosenzweig, 2000), and (d) encouragement from family members and faculty (Ceballo, 2004). In this investigation, GPA was selected as the primary indicator of academic achievement because GPA is viewed as a comprehensive indicator, providing a composite view of students' general achievement, as opposed to a learner-specific measure (Fan & Chen, 2001). In addition, measures from standardized tests, such as Scholastic Aptitude Test (SAT) and the American College Testing (ACT), prove to be reliable predictors of college success.

When GPA and degree attainment are viewed as measures of academic achievement, researchers must look at the set benchmarks within GPA scores. According to Swail, Cabrera, Lee, and Williams (2005), GPA between 2.50-3.19 increases the probability of school completion by 47% for Latina/o and 42% for Anglo American high school students. Furthermore, GPA between 3.20- 4.00 increases the probability of school completion by 62% for Latina/o and 45% for Anglo American high school students. Because of these patterns, Gándara (2005) categorized students as low achievers if their GPA fell below 2.0 and high achievers if students had a GPA of 3.5 or higher. For the purpose of this study, students with a GPA of 3.20 or higher were classified as high academic achievers, while students with a GPA of 2.50 or lower were classified as low

academic achievers. Although the literature suggests using 2.0 as a benchmark for ‘low achievers,’ students with a GPA of 2.5 or below were included in this study due to the need to increase the population sample in the low academic achievement group. Both groups of students were included in this study to allow a comparison of the perceived risks and protective factors that these students encounter while achieving academic success in college. Another reason for this inclusion was to verify the themes that emerged in the preliminary analysis and their generalizability to students with other GPAs.

The inconsistency in the definitions of academic achievement has led researchers to use a variety of terms that can be categorized into school-centered measures (e.g., comprehensive indicators, Ceballo, 2004; Rosenzweig, 2000) or student-centered measures (e.g., learner-specific) (Barker & Stevenson, 1986; Fan & Chen, 2001; Georgiou, 1999; Kuh et al., 2007). However, GPA has been found to be the strongest and most reliable measure to quantify academic achievement among students (Fan & Chen, 2001). Therefore, GPA was used in this study as a measure of academic achievement, with the knowledge that GPA is affected by students’ personal circumstances and changes somewhat from time to time.

Influences on Academic Achievement

In examining how students achieve academically, it was necessary to look at the factors that negatively and positively affect students’ educational attainment. From the review of the literature, three categories emerged as having the most influence on students’ academic success. These three categories, which included: (a) student-related

influences, (b) family influences, and (c) school/community and socioeconomic influences, are discussed in turn.

Student-Related Influences

Student-related influences are processes within the learner that affect his or her academic achievement. Student influences were found to contribute to the academic achievement of young adults and included: (a) ethnicity and socioeconomic status (Rosenzweig, 2000); (b) drug and alcohol use (KewalRamani et al., 2007); (c) confidence and educational aspirations (Kuh et al., 2007; Rendón, 1995); and (d) participation in after-school activities (KewalRamani et al., 2007) (see Table 1).

Ethnicity. In regards to ethnicity, there are indications of both the positive and the negative influences of a student's background on his or her academic achievement. In regards to ethnicity, Rosenzweig (2000) challenged the idea that ethnicity has no effect on student achievement and parenting practices. In Rosenzweig's meta-analysis, 34 primary quantitative studies with 438 independent findings were evaluated; all had correlations between parenting and students' academic outcomes. The analyzed studies ranged from journal articles, books, and dissertations to research/ government reports. The criteria used for the selection of studies were: (a) primary studies with experimental, causal-comparative, correlational, or combined research designs; (b) studies derived from U.S. sources and written in English; (c) investigations with sample size greater than or equal to 25; (d) studies with a K-12 target population in the U.S. and that included all ethnic groups; (e) parenting and school success as the primary focus of the studies; (f) the time frame being from 1979-1999; and (g) statistical relationships reported as r scores, t scores, or F scores that could be converted to r indexes.

Table 1
Student-Related Correlates of Academic Achievement

Student Influences	Examples
Ethnicity (Rosenzweig, 2000)	Compared with their Anglo American peers, minority students are often faced with challenging circumstances that may prevent them from being able to take advantage of educational opportunities (Kuh, et al., 2007).
Drug and alcohol use (Bryant, Schulenberg, O'Malley, Bachman, & Johnston, 2003; KewalRamani et al., 2007)	Students who use alcohol, cigarettes, and drugs are more likely to experience low academic achievement.
Confidence and aspirations	Feeling cared about as a student and as a person (Kuh, et al., 2007; Rendón, 1995), believing in one's capacity to perform in college and as a learner (Kuh, et al., 2007; Quevedo-Garcia, 1987), being excited about learning (Kuh, et al., 2007), and students' educational aspirations (Kuh, et al., 2007) are factors that relate positively to students' success.
Participation in after school activities (KewalRamani et al., 2007)	Participation in sports or school music groups is positively linked to academic achievement.

Among her findings, Rosenzweig reported that ethnicity acted as a moderating factor and had an interaction effect on students' achievement. In particular, students of Asian American and Latina/o American backgrounds showed different traditions and views of success. Furthermore, the parenting styles in which they were brought up differed from those of traditional Western families (Okagaki & Frensch, 1998; Rosenzweig, 2000). *Parenting styles* refer to the characteristic ways in which parents care for their children, and in particular typical types of discipline and means of expressing

warmth. Although single studies do not report any significant findings concerning ethnicity, Rosenzweig found ethnicity to be strong correlate of academic achievement. Further, Rosenzweig reported that ethnicity was linked to parenting practices and showed different effects on students of Latin, Asian, and African American backgrounds.

In addition to ethnicity being linked to parenting, ethnicity may prevent minority students from taking advantage of opportunities due to their different coping mechanisms. Similar findings to Rosenzweig's on the role of ethnicity were reported by Kuh et al. (2007), who added that compared with their Anglo American peers, minority students are faced with notable circumstances that may prevent them from being able to take advantage of educational opportunities, especially at predominately White institutions. Although studies show that students of different ethnic and racial background engage in similar effective educational practices, students of Latino descent tend to be most satisfied with their college experience (Kuh et al., 2007). Also student-peers and off-campus family members play a role in the psychological well being of Latina/o first-year college students. Furthermore, views of success among Asian Americans and Latina/o Americans might depend on the acculturation and assimilation levels of the students and the priority of the family in the culture. Views of success from Asian American and Latina/o American students were not reported.

Drug and alcohol use. In a recent publication on the trends in the education of racial and ethnic minorities, it was reported that students who used alcohol, cigarettes, and drugs were more likely to experience low academic achievement (Bryant et al., 2003; KewalRamani et al., 2007). Specifically, good conduct, interest in school, effort in school, and parental involvement with schools were negatively associated with substance

use in a longitudinal study (Bryant et al.). In the Monitoring the Future project, Johnston, O'Malley, and Bachman (2002) surveyed 12th grade students from across the U.S. starting in 1975. Since 1991, students in grades 8 and 10 were included. The sample for this study consisted of 1,897 students in the 1991 and 1992 cohorts; for ethnicity: (a) 64% were Anglo American, (b) 11% were African American, (c) 9% were Latina/o, and (d) 15% were from other minority backgrounds. On average, participants reported that their parents' highest level of education was "some college" (p. 370). Two levels of measures, a repeated measure (substance use), and factors that varied between the individuals (demographic, psychosocial background, motivation, and contextual factors), were utilized in this study. The data were collected through a classroom questionnaire focused on: (a) parental education, (b) academic achievement (as measured by average grade), (c) school misbehavior, (d) loneliness, (e) interest in school, (f) perceived difficulty in school, (g) effort, (h) student-school bonding, (i) college plans, (j) parental school support, and (k) status of academic success at school. Results suggested that school misbehavior and peer encouragement of misbehavior were positively associated with the use of alcohol, cigarettes, and marijuana at age 14. School bonding, interest in school, effort, academic achievement, and parental help with school were negatively associated with drug and alcohol use. Some protective factors that surfaced were having high aspirations to attend college and having high grades in high school. These factors were protective only for students with low misbehavior.

Confidence and aspirations. According to the literature, additional influences on academic achievement were: (a) feeling cared about as a student and as a person (Kuh et al., 2007; Rendón, 1995), (b) believing in one's ability to perform in college (Kuh et al.,

2007; Quevedo-Garcia, 1987), (c) believing in one's capacity as a learner (Kuh et al., 2007), (d) excitement about learning (Kuh et al., 2007), and (e) the presence of personal educational aspirations, especially for Latina/o students.

As in the information referenced above, research conducted by Kuh et al. (2007) focused on social, economic, cultural, and educator factors fostering success in higher education. Factors that related to student success in college included students' background and experiences, postsecondary activities, and supportive postsecondary institutional conditions. Kuh et al. defined student success with the use of the following criteria: (a) attainment of academic goals, (b) retention and success in courses, (c) success in subsequent coursework, (d) semester to semester persistence, (e) time to attain degree, (f) completion of degree, (g) enrollment in graduate school and/or employment, (h) transfer rate to other universities and graduation, (i) employer assessment of students, (j) academic value added, (k) student satisfaction, (l) student professional growth and development, (m) student involvement, and (n) citizenship and development. However, out of these mentioned criteria only five factors were found to contribute to high academic success: feeling cared about as a student and as a person, belief in one's ability to perform in college, belief in one's capacity as a learner, excitement about learning, and the presence of personal educational aspirations (Eamon, 2005; Kuh et al., 2007). The psychological perspectives examined in this literature included expectancy theory, self-efficacy theory, and motivational theory. These perspectives have powerful implications for minority students who often have doubts about their abilities.

The academic development of Latina/o college students is not only influenced by the previously mentioned psychological perspectives, but also by the understanding and

appreciation of their experiences on college campuses. Quevedo-Garcia (1987) identified factors that encouraged the development of Latina/o college students. The author reported numerous factors that contributed to the lack of higher education degree attainment of Latinas/os. Specifically, Quevedo-Garcia pointed out that, in order for Latina/o students to develop their full potential as individuals, educators must “fully understand and appreciate the various cultural, economic, social, and political backgrounds that these students bring with them to our campuses” (p. 50). Additionally, Quevedo-Garcia asserted that, in order for Latina/o students to compete in Anglo American dominated colleges, they generally need to arrive with “highly developed assertiveness skills” (p. 56) to participate in class. Such self-assertion is contradictory to traditional Latina/o culture, since children are taught to respect their elders, and many do not voice their disagreement with others.

Participation in after-school activities. In regard to school-related behaviors, KewalRamani, et al. (2007) examined national trends and changes in the education of students from different ethnic groups (e.g., Anglos, Africans, Latinas/os, Asian, American Indian/Alaska Native, and Native Hawaiian/other Pacific Islander) in the U.S. over the past decades. The report included indicators of: (a) educational status, (b) latest trends in persistence, (c) student behaviors, (d) outcomes of education, and (e) achievement. One of the major findings indicated that adolescents’ participation in after-school activities, particularly in sports and school music groups, was positively linked to higher academic achievement. Students, particularly high school juniors and seniors, who participated in after-school activities were more likely to attend college. Although gender differences were not addressed as part of this literature review, it is important to add that

the correlates of participation in after-school activities differed between young men and women, and between students who did and did not hold jobs while in school (KewalRamani et al., 2007).

Family/Parental Influences

A main component of Latina/o culture is the role of the family, and Mexican families are no exception (Sy, 2006). Looking at Latina/o families and focusing on the Mexican population, certain cultural values that have a great influence on parenting styles are omitted or overlooked in the general parenting literature. Examples of these values according to Diaz-Guerrero and Szalay (1991) are the common essential Mexican family ideals of solidarity, family loyalty, and friendship, which are fostered by the parenting strategies within the culture.

Another cultural value among Latina/o families that affects parenting is the sense of “familismo.” Latinas/os have long been characterized by a strong sense of “familismo”-- a cultural value emphasizing family loyalty and closeness (Miller, 1979; Sanchez, 2005; Vega, 1990). Members of Latina/o families view their family as a crucial unit of organization, which comes before any personal need (Miller, 1979). The focus of this family unit is mainly geared towards caring for elderly parents or other family members from previous generations, before caring for oneself (Miller, 1979). Mexican families, which represent the largest group among Latinas/os in the U.S. (U. S. Census Bureau, 2007), have unique values and ideas that are important aspects to consider while doing research with Latina/o populations.

To provide information on possible interventions that parents can implement for the academic benefit of their adolescents, researchers have focused on the interactions

that take place at home and are associated with the academic lives of young adults (Shute, Hansen, & Underwood, n.d.). Parental influences were referred to as a critical component in students' academic success (Arellano & Padilla, 1996; Okagaki & Frensch, 1998; Rosenzweig, 2000; Steinberg, Lamborn, Dornbusch, & Darling, 1992). Presented in Table 2 are parents' demographics factors, such as: (a) parents' highest education; (b) parents' completion of college; (c) mother's age at childbearing (Davis-Kean, 2005; Eamon, 2005; Halle, Kurtz-Costes, & Mahoney, 1997; KewalRamani et al., 2007; Kuh, et al., 2007); (d) specific parenting practices (Rosenzweig, 2000); (e) school-oriented parenting practices (Ceballo, 2004; Georgiou, 1999; Joshi, Otto, Ferris, & Regan, 2003; Kuh et al., 2007; Lynch, 2006; Rosenzweig, 2000; Steinberg, Dornbusch, & Brown, 1992); (f) authoritative parenting style (parenting that offers a careful balance of demandingness and responsiveness, considering ethnicity, socioeconomic status, and family structure) (Darling & Steinberg, 1993; Lee et al., 2006; Mandara, 2006; Maton et al., 1998; Steinberg, Lamborn, Dornbusch, & Darling, 1992); and (g) adverse parenting practices (Rosenzweig, 2000).

Table 2
Family Influences on Academic Achievement

Family Influences	Examples
Parents' demographic variables	<ul style="list-style-type: none"> • Mother's highest education (Halle, et al., 1997) • Parental education (Davis-Kean, 2005; KewalRamani et al., 2007; Kuh, et al., 2007) • Parent's completion of college (Kuh, et al., 2007) • Mother's age at childbearing (Eamon, 2005)
Parenting Practices	<ul style="list-style-type: none"> • Aspiration and expectations for educational attainment • Engagement • Authoritative parenting • Autonomy support • Emotional support and warmth • Provision of resources and learning experiences • Parent participation in school (Rosenzweig, 2000)
School-oriented parenting	<ul style="list-style-type: none"> • Array of non-verbal expressions of support (Ceballo, 2004) • Parental grade expectations (Kuh, et al., 2007; Rosenzweig, 2000) • Parental knowledge of academic procedures (Joshi, 2003) • Parental encouragement (Ong, Phinney, & Dennis, 2006; Steinberg, Lamborn, Dornbusch, & Darling, 1992)
Parenting style	<ul style="list-style-type: none"> • Authoritative parenting (Joshi, 2003; Mandara, 2006; Maton et al., 1998; Steinberg, Lamborn, Dornbusch, & Darling, 1992)
Adverse parenting variables	<ul style="list-style-type: none"> • Restriction for unsatisfactory grades • External rewards • Negative control • Homework surveillance • Disengagement in traditional rules • Permissiveness • Excessive control on youngsters' behaviors (Rosenzweig, 2000)

Parents' demographic variables. Numerous parents' demographic characteristics have been found to be associated with diverse students' achievement, intellectual development, and English abilities. Consistent correlates include: (a) parents' highest education (Davis-Kean, 2005; KewalRamani et al., 2007; Kuh et al., 2007); (b) parents' completion of college (Kuh et al., 2007); and (c) mother's age at childbearing (Eamon, 2005). In one investigation, Davis-Kean (2005) examined the influence of parent education and family income on student achievement. The data for this study were taken from the longitudinal data set, the Panel Study of Income Dynamics, Child Development Supplement (PSID-CDS), initiated in 1968 and inclusive of approximately 8,000 families. The sample consisted of 868 children between 8-12 years of age; 49% were Anglo, and 47% were African American. Academic achievement was measured by the use of two age standardized achievement scores from the Woodcock-Johnson-Revised Test of Achievement (Woodcock, McGrew, & Mather, 2001). Four subscales were combined to develop a broad reading and mathematics variable. Among the findings, it was reported that parents' education influenced students' achievement indirectly by having a stimulating home environment and by holding particular beliefs about their children's academic achievement (Davis-Kean, 2005). However, having a stimulating home environment and a positive attitude toward their youngsters' relationships with achievement differed for the two ethnic groups in the study specifically in: (a) reading, (b) parental warmth, (c) parents' educational expectations, and (d) family income. It was also found that parents' highest education completed was not only associated with adolescents' academic achievement but also with parents' completion of college.

Parents' completion of college. Eamon (2005) examined data collected from the National Longitudinal Survey of Youth on Latina/o Adolescents to identify the multiple social-demographic, school, and neighborhood influences that predict academic achievement for these youth. Scores received on the reading comprehension and the mathematics subscales of the Peabody Individual Achievement Test (PIAT) (Klinge, Harper, & Vaziri, 1974) were used to define academic achievement. Eamon focused on several maternal characteristics: (a) age at child's birth, (b) years of education completed, (c) acculturation, and (d) usage of English. Other family characteristics studied were: (a) average adult-to-child ratio, (b) involvement of fathers, and (c) parenting practices. The two dependent variables for this study were: reading achievement, as measured by the PIAT Reading Comprehension subscale, and mathematics achievement, as measured by the PIAT Mathematics subscale. Eamon found that mother's age at childbearing had an expected association with students' achievement. Specifically, students' whose mothers began childrearing at older ages: (a) had more advanced intellectual abilities and reported fewer problems speaking English, (b) had higher academic achievement scores, and (c) received more educational support from parents.

Specific parenting practices. Although Rosenzweig's (2000) results compare to Eamon's (2005) results, Rosenzweig's meta-analysis identified six of the strongest parental practices that have a direct impact on academic achievement. The findings from this meta-analysis of parenting and school success helped to clarify literature related to parenting and academic achievement. In her meta-analysis, Rosenzweig used Reynolds and Gill's (1994) definition of parenting practices as specific actions, such as parental encouragement and parental school involvement. For the criteria used for this section of

studies, please refer to the earlier *Student-Related Influences* section. Among her results, Rosenzweig (2000) reported that 20 specific parenting practices accounted for one-fourth of the variance in student achievement outcomes, and 7 practices were strongly related to student achievement. Specifically, a combination of 7 parenting practices accounted for approximately one-sixth of the variance in student achievement. These parenting practices were: (a) educational aspirations and expectations, (b) engagement, (c) authoritative parenting style (high demandingness and high responsiveness), (d) support of autonomy, (e) emotional support and warmth, (f) provision of resources and learning experiences, and (g) specific types of participation in school (see Table 3). Authoritative parenting was defined as a careful balance of nurturance, discipline, and respect, with values of firm control and recognition of the child's individual interests and special ways (Baumrind, 1966). Furthermore, parents' high aspirations and favorable expectations for grades were closely associated with students' achievement. Ethnicity emerged as a moderating factor in the analysis with an interaction effect on the relationship between student achievement and parenting practices.

Of the 7 positive parenting practices, 5 parenting practices strongly predicted achievement of children from Asian American families and Latina/o American families. These parenting practices included: (a) engagement, (b) authoritative parenting, (c) parent participation in school, (d) parental aspirations, and (e) the provision of resources and learning experiences. Parental aspirations and involvement in the education of students were closely associated with school achievement, including in Latina/o families.

Table 3
Parenting Practices

Parenting Practices	Strongest predictors of student achievement
Time spent with child	Educational aspirations
Parent efficacy	Engagement*
Provision of a place to study	Authoritative parenting style*
Goals	Autonomy support
Parent participation in school*	Emotional support and warmth
Emotional support	Provision of resources for learning
Positive reinforcement	Very specific types of participation in school
Reading and language reinforcement	
Autonomy support	
Communication with teachers	
Authoritative parenting	
Homework supervision	
Positive educational values	
Participation in school activities	
Monitoring school progress	
Parent engagement and involvement	
Aspirations for educational attainment and grade expectations*	
Strategies for school problems	
Provision of resources for learning experiences*	
Academic support and advice	

* Strong predictors of academic achievement for children of Latina/o American families

Note. Based on Rosenzweig, 2000.

School-oriented parenting practices. Four other school-oriented parenting practices have been found to be positively associated with student achievement for Latinas/os. These were: (a) parents' provision of nonverbal expressions of support (Ceballo, 2004); (b) parental encouragement and involvement (Jones & Velez, 1997; Kuh et al., 2007; Rahman, 2001); (c) knowledge of academic procedures (Joshi et al., 2003); and (d) parental expectations (Steinberg, Lamborn, Dornbusch, & Darling, 1992).

Among first-generation Latina/o students, the literature suggests that parental support and parental commitment to education encourages students to continue with their

education and to graduate (Ceballo, 2004; Jones & Velez, 1997; Joshi et al., 2003; Kuh et al., 2007). Facilitation of the child's autonomy, strong parental commitment, and the communication of nonverbal expressions of support were identified by Ceballo as parental characteristics associated with academic achievement. Ceballo's study included first-generation Latina/o college students at a prestigious Ivy League university. Although this setting raises questions, specifically about the generalizability of the results, Ceballo reported that a strong parental commitment to education, parental facilitation of their child's autonomy, an array of nonverbal parental expressions of support, and the presence of supportive faculty mentors and role models were strongly associated with the scholarly achievement of college students. However, the presence of an array of nonverbal expressions of support seemed to compensate for parents' lack of knowledge of academic procedures. The presence of nonverbal expressions of support allowed students to focus on their academic duties as well as acquire an appreciation for the value of education.

As previously discussed, the research conducted by Kuh et al. (2007) on influences on students, summarizes key findings in the academic achievement literature specifically pertaining to student success. However, only a few key findings were applicable to Latinas/os. One key result was that parental expectations were the strongest predictor of college attendance for students of Anglo American descent. Parents who visualized education as a primary vehicle for social and economic mobility for their children and expected their children to go to college may have had a positive impact on their children's attendance at college by communicating their high expectations. However,

there were other equally important options, such as getting a job, that Latina/o families may have seen as a vehicle for social and economic mobility for the entire family.

Furthermore, involvement of Latina/o parents in the education of their children, specifically through setting clear expectations, encouraging their youngsters to make plans for the future, and maintaining regular contact with the school, was associated with academic achievement. In a conference presentation by Jones and Velez (1997) on the effects of Latina/o parent involvement in academic achievement, the authors challenged the passive actions of Latina/o parents by focusing on parents' perceptions of school involvement. The data for this research were collected through a semi-structured interview of 20 parents and a survey of 110 high school students. It is important to note that the children of the interviewed parents were not included in the study. Although the researchers did not provide a definition of academic achievement or academic success, parental reports of the academic achievement of their adolescents served as the measure of academic achievement. The correlation of the results from both the interview with parents and the survey of students indicated that time devoted to academic work, educational expectations, and parental engagement in supervision and monitoring had similar results across both the questionnaire and the interview data sets. This similarity not only pointed to the important correlates of academic achievement, but it also highlighted the similarities between parents' and adolescents' views on what affects academic achievement. It also was reported that the practices of these Latina/o parents matched the parental practices in the literature, which were related to high academic achievement. These practices were identified as: (a) encouraged and made known their expectations for schooling; (b)

maintained regular verbal interaction with their children in regard to school issues, personal behavior, and plans for the future; and (c) engaged in a variety of emotional nurturance activities and maintained regular contact with the school that their adolescents attended (Jones & Velez, 1997).

To further clarify the dynamics between parenting styles and students' achievement, Joshi, et al. (2003) followed Jones and Velez's (1997) study and investigated college students. The purpose was to investigate the relationship between parenting styles and college achievement among 199 college students (43% Anglo American, 32% Latina/o, and 24% Asian), ages 21-30, from one urban university and two smaller colleges. Participants were asked to report their current GPA and respond to the Parenting Style Index (Steinberg, Lamborn, Mounts, & Dornbusch, 1991) so as to categorize students into one of the four parenting style groups originally defined by Baumrind (1978). Results indicated that parenting style and college students' academic achievement depended at least on parental knowledge of academic procedures. Parental knowledge of the educational system and how their youngsters were achieving academically was associated with students' academic achievement. The authors recommended that more theory-driven research should be conducted on the topic of ethnic differences to clarify the mechanisms of influence between parenting styles and students' academic achievement. Other variables, such as parents' supervision at home (Fan & Chen, 2001) and parents' grade expectations (Rosenzweig, 2000), were found to be positively associated with educational attainment.

In addition to parental encouragement, other factors related to the academic achievement of students were family and ethnic identity (Ong, Phinney, & Dennis, 2006).

In a longitudinal study conducted by Ong et al. (2006), 123 Latina/o college students were surveyed over three consecutive years to explore the protective aspects of: (a) parental support, (b) family interdependency, and (c) ethnic identity. These Latina/o participants included students of: (a) Mexican American background ($n = 101$), (b) Central American backgrounds ($n = 14$), and (c) a combination of both Mexican and Central American background ($n = 8$). Participants were 18-19 years old at the time of the first survey, and over one-half (55%) came from low socioeconomic backgrounds. As a compensation for participation, the researchers offered \$75 dollars for the completion of the first survey and \$100 for the completion of any subsequent survey. Academic achievement in this study was measured eight times, which included the GPA obtained in high school as well as in each quarter that the students took part in the research study. Participants were assessed each year for: (a) parental support of education, (b) family interdependency, and (c) ethnic identity. The results suggested that parental support moderated the effects of low socioeconomic status on academic achievement, and students who reported higher levels of ethnic identity reported higher academic achievement. Furthermore, students who reported greater psychological and family resources showed higher GPAs over time. It is important to note that the results were based on the students' perception of received parental support, not necessarily on the amount of support actually provided by parents. Furthermore, because fewer men ($n = 39$ men vs. $n = 84$ women) participated, Ong et al. (2006) suggested that future researchers should determine whether the influence of parental support and ethnic identity is perceived similarly by young men and women.

Authoritative parenting. Although parenting style remains a topic for researchers, its influence on minority populations is still debated. According to Glasgow, Dornbusch, Troyer, Steinberg, and Ritter (1997), parenting style is defined as patterns of parental: (a) attitudes, (b) practices, and (c) nonverbal expressions. Studies of authoritative parenting have demonstrated mixed results on students' academic achievement (Mandara, 2006; Maton et al., 1998; Steinberg, Lamborn, Dornbusch, & Darling, 1992). Authoritative parenting has been reported in the literature as a positive influence on Anglo American students' academic achievement, according to several researchers (Gonzalez et al., 1996; Maton et al., 1998; Steinberg, Elmen, & Mounts, 1989; Steinberg, Lamborn, Dornbusch, & Darling, 1992). However, there are indications that there is a stronger or weaker influence of authoritative parenting on academic achievement for high school students depending on their ethnic background (Mandara, 2006; Steinberg, Lamborn, Dornbusch, & Darling, 1992; Stewart & Bond, 2002). One possible reason for the fluctuation in results is that the academic performance of students of color might be influenced by their peers (Steinberg, Lamborn, Dornbusch, & Darling, 1992), or it may be seen as a motivation. It is important to clarify that the research conducted by Steinberg, et al. was focused on the adolescents' self-reported perception of parental involvement in regard to: (a) education, (b) parental encouragement, and (c) authoritative parenting. Furthermore, the participants in this study included a diverse group of students (e.g., African American, Asian American, Latin American, and Anglo American) who attended Grades 9-12, and 70% percent of their parents had some college experience or beyond. Further research on effects of authoritative parenting on students of various ethnic backgrounds is needed to identify the components that are applicable to all students.

Another variable that has been found to be associated with students' academic achievement is parental encouragement in school (Ong et al., 2006; Steinberg, Lamborn, Dornbusch, & Darling, 1992). Steinberg et al. examined the impact of authoritative parenting, parental involvement in schooling, and parental encouragement on approximately 6,400 15-18 year old youth in 1987 and again in 1988. The students were assessed with the use of several instruments of their perceptions of parents' care-giving styles: (a) an authoritative parenting measure, (b) a parental involvement measure, and (c) parental encouragement measure. Students also completed a battery of academic outcomes focused on their: (a) GPA; (b) time spent on homework per week (e.g., subjects were English, mathematics, social studies, and science); (c) classroom engagement, as measured by effort, concentration, attention, and frequency of mind-wandering during class; (d) relationships with teacher; (e) school orientation (e.g., value and commitment to school); (f) academic competence (e.g., self-perception of intelligence, ability to complete homework quickly, and capability in classroom); and (g) educational expectations. Among the key findings were that parental authoritativeness and encouragement were positively associated with academic achievement, but associations were different for students from diverse backgrounds. Specifically, parental authoritativeness was not a good predictor of academic achievement in African American youth, and educational engagement was strongly linked to parental encouragement and parental authoritativeness among Latina/o students. For Asian students, parental encouragement was strongly tied to their academic achievement (Steinberg, Lamborn, Dornbusch, & Darling, 1992). Possible explanations for the differences among ethnic groups were the moderating influences of peers or different perceptions of authoritative

parenting among students from different ethnic groups, but evidence for these explanations was not examined. It is also important to note that this study was based on students' responses to self-report inventories with no observations of actual parenting to substantiate students' perceptions.

Adverse parenting. Researchers have explored the positive impact of parenting on the academic achievement of students, however there are also certain parenting practices that have been found to be negatively associated with the academic achievement of students. In the meta-analysis conducted by Rosenzweig (2000), eight parental practices were identified that were negatively associated with student achievement (see Table 4). The eight negative parental practices accounted for as much as 31.9% of students' lack of school success and were: (a) restrictions for unsatisfactory grades, (b) external rewards, (c) negative control, (d) homework surveillance, (e) disengagement, (f) encouragement of conformity, (g) permissiveness, and (h) excessive levels or minimal control. These parenting practices were characteristic of parents who either exercised over-controlling behaviors or were too permissive and provided their children with minimal guidance about academic activities.

Table 4
Inconsistent Influences on Academic Achievement

Influence	Components
Authoritativeness (Mandara, 2006; Maton et al., 1998; Steinberg, Lamborn, Dornbusch, & Darling, 1992)*	
Parenting variables (Rosenzweig, 2000)	Restriction for unsatisfactory grades External rewards Negative control Homework surveillance Disengagement Encouragement of conformity Permissiveness Excessive or minimal control on youngsters' behaviors
Drug and alcohol use by students (KewalRamani et al., 2007)	

* Inconsistent findings for students of Asian and Latina/o descent

School/Community and Socioeconomic Influences

Influences outside of the home, which affect the academic achievement of students, are referred to in this study as school/community and socioeconomic influences. Influences outside of the home can support parental practices that encourage the academic achievement of students, particularly in higher education. Research has found links between academic achievement and three other factors: (a) positive school and social environments (Eamon, 2005); (b) presence of supportive faculty and role models (Alva, 1991; Ceballo, 2004; Kuh et al., 2007); and (c) low poverty levels, supportive neighborhoods, and high quality schools (Eamon, 2005; Fry, 2004; Rosenzweig, 2000) (see Table 5).

Table 5
School/Community Influences on Academic Achievement

Influences
School social environment (Alva, 1991; Eamon, 2005; Heiligenthal, 2005)
Presence of supportive faculty and role models (Ceballo, 2004; Kuh, et al., 2007)
Poverty level, neighborhood, and schools (Eamon, 2005; Fry, 2004; Rosenzweig, 2000)

The definition of socioeconomic status encompasses a variety of components, including available resources (e.g., such as education, income, and wealth) and social status. Staff of the Center for Research on Education, Diversity and Excellence (CREDE) at the University of California, Berkeley (Huber, Huidor, Malagón, Sánchez, & Solórzano, 2006) have defined socioeconomic status as the measure of an individual's place within a social group based on various factors, including income and education. The definition of socioeconomic status used for this paper centers on the available income of a family.

School social environment. Outside the home, students spend the majority of their time at school where they may encounter barriers to their academic achievement. In a paper presented at the New Mexico Institute, Rendón (1995) identified some of the barriers encountered at school by traditional Latina/o students, particularly first generation students, that they must overcome in order for them to obtain a college degree. Many Latina/o students in the study felt as if they: (a) must change identities, (b) were perceived as different, (c) must break family codes of unity and loyalty, and (d) lived between two worlds. In addition, other forms of barriers encountered by students in college included: (a) the presence of a Eurocentric curriculum, (b) the experience of a

campus climate perceived as racist or indifferent, and (c) lack of faculty involvement with students.

In a more positive light, in Heiligenthal's (2005) dissertation, it was reported that social support, acculturation levels, and satisfaction with the interpersonal environment influenced college adjustment and academic persistence decisions. Heiligenthal administered a survey to 125 Latina/o students in two colleges. One college had a predominantly Anglo American student body, whereas the second college had a very diverse student body. The survey assessed: (a) social support (e.g., perceived support, satisfaction with support, family support, and school support); (b) environmental fitness (e.g., satisfaction with the university environment); (c) acculturation levels; (d) college adjustment levels; and (e) persistence decisions. Among the results, it was found that social support, satisfaction with the university environment, college environment, and academic persistence were significantly interrelated, indicating that the college experience of Latina/o students was influenced by psycho-sociocultural variables (acculturation level, satisfaction with interpersonal environment, and adjustment in college).

In addition to the support received from the university, support from teachers and staff also influenced college adjustment and academic persistence. According to Alva (1991) and Eamon (2005), a positive school social environment fostered academic achievement through supportive relationships among students and teachers. Specifically, the perception of faculty and staff as supportive and encouraging could supply students with the motivation needed to excel and graduate from college even if, sometimes, this motivation was not experienced at home. Alva and Eamon measured academic

achievement, respectively, in terms of school retention and the reading and mathematical ability of students.

Faculty and role models. The presence of supportive faculty members and role models was another beneficial factor in the academic achievement of Latina/o college students. In a qualitative study, Ceballo (2004) examined the possible role of parenting styles on the academic success of young adults with 10 Latina/o undergraduate students from impoverished, immigrant families at Yale University. Academic achievement was defined as being enrolled at a prestigious university and being the first person in their family to attend college. The participants in Ceballo's study were U.S. born, first-generation college students and were recruited through several Latina/o student organizations as well as informal advertising. After the recruitment of 10 participants (5 men and 5 women) for the study, Ceballo interviewed students individually in regard to parental involvement in academics and their participation in extracurricular activities. Also, the participants completed a demographic questionnaire that explored parental occupation and attendance at public schools. Ceballo found that one of the highest contributors to the high academic achievement of Latinas/os was the presence and the impact of supportive faculty and role models, specifically teachers who challenged students intellectually, helped to involve them in extracurricular activities, and assisted them after graduation. This finding supported those of earlier researchers (Alva, 1991; Kuh et al., 2007). As discussed previously, it can be difficult for parents who did not attend college and have limited knowledge of academic procedures to guide their sons and daughters through college. The presence of supportive faculty and role models can

provide the needed support and guidance to encourage these students to attend and graduate from college.

Poverty level, neighborhoods, and schools. Other external factors that affected the academic achievement of Latina/o college students were embedded in socioeconomic factors. In a longitudinal study by Eamon (2005) introduced earlier, three socioeconomic factors were identified that were associated with academic achievement: (a) poverty level, (b) quality of neighborhood, and (c) quality of school attended (Table 6). The study focused on the social-demographic, school, neighborhood, and parental correlates of Latina/o adolescents' academic achievement. Results suggested that poverty and residence in better quality neighborhoods were related only to reading achievement; achievement in mathematics was not affected by poverty or neighborhoods. Furthermore, attendance at higher-rated schools was associated with both higher reading and mathematics scores. Poverty was related to the quality of neighborhood in which the students lived, as well as the quality of schools attended. Low socioeconomic status had an adverse effect on the adolescent period, since poverty intertwined with the quality of neighborhood and the type of school attended. Impoverished environments were related to lower levels of academic achievement through decreased motivation and opportunity.

Table 6
Socioeconomic Status Influences on Academic Achievement

Influence	Components
Socioeconomic status	Poverty level (Eamon, 2005)
	Quality of neighborhood (Eamon, 2005)
	Quality of schools attended (Eamon, 2005)

Furthermore, Rosenzweig (2000) found that socioeconomic status was a stronger predictor of college attendance among students from high and low socioeconomic backgrounds than for students from middle socioeconomic backgrounds. Results were related to the quality of schools that students attended and the academic preparation students received. The only parenting practice reported with an interaction effect on students from middle class families was parent engagement. The relationship between socioeconomic background and ethnicity is still being explored to identify specific effects on academic achievement.

Another influence on the attainment of bachelor degrees is the academic preparation received by students. Fry's (2004) report for the Pew Hispanic Center noted that the attainment of bachelor degrees for Latinas/os could be increased if well-prepared Latinas/os attended and graduated from the same kind of selective colleges as well-prepared Anglo American students. In this case, a selective college refers to 4-year universities with high admissions requirements. Specifically, Latinas/os who attended nonselective and selective institutions graduated at higher rates than Latinas/os who attended *open door* institutions (e.g., community colleges). Furthermore, some of the notable influences that affected Latina/o attendance at postsecondary institutions were: (a) cost of tuition (77%), (b) need to work (77%), (c) poor high school education (58%), (d) lack of need for a college degree to be successful (48%), (e) experiences of discrimination (40%), and (f) proximity to family members (33%).

Conclusions

Despite the increase in the Latina/o population in the U.S., the disparity in educational attainment rates among Latinas/os, other minorities, and their Anglo

American counterparts continues to widen (Hurtado & Saenz, 2006; Nora & Crisp, 2006; Quevedo-Garcia, 1987; U. S. Census Bureau, 2007). One group that has increased in population but has not kept up in graduation rates are students of Latina/o background (U. S. Census Bureau, 1996, 2007). Given the high rates of immigration and the fact that Latinas/os have become the fastest growing demographic group in the U.S., it is important to learn more about the factors that positively and negatively influence their academic achievement.

Although there is no agreement in the literature in regard to the definition of academic achievement, the research that has been conducted on academic achievement can be divided into comprehensive indicators and learner-specific indicators. Comprehensive indicators include measures such as GPA and standardized test scores; learner-specific indicators refer to internal and external factors related to the student such as motivation and satisfaction of desired knowledge. The combination of both components provided a broad assessment of academic achievement. However, GPA has the advantage of offering a fairly dependable view of general school achievement (Fan & Chen, 2001).

Also, the literature on the factors that affect academic achievement can be divided for better understanding into three categories: (a) student influences, (b) family/parental influences, and (c) school/community and socioeconomic influences. Student influences are focused on: (a) internal views of ethnicity and socioeconomic status (Rosenzweig, 2000); (b) drug and alcohol use (Bryant et al., 2003; KewalRamani et al., 2007); (c) learning and aspirations (Eamon, 2005; Kuh et al., 2007; Rendón, 1995); and (d) after-school activities (KewalRamani et al., 2007). Family/parental influences were strongly

related to students' achievement and included: (a) parents' demographic characteristics (Davis-Kean, 2005; Eamon, 2005; Halle et al., 1997; KewalRamani et al., 2007; Kuh et al., 2007); (b) parenting practices (Rosenzweig, 2000); (c) school-oriented parenting (Ceballo, 2004; Georgiou, 1999; Joshi et al., 2003; Kuh et al., 2007; Lynch, 2006; Rosenzweig, 2000; Steinberg, Lamborn, Dornbusch, & Darling, 1992); (d) authoritative parenting style (Mandara, 2006; Maton et al., 1998; Steinberg, Lamborn, Dornbusch, & Darling, 1992); (e) adverse parenting practices (Rosenzweig, 2000); as well as other family factors (Ceballo, 2004; Fan & Chen, 2001). The third major influence that was found to be related to students' academic achievement was school and community influences and included: (a) social environment (Alva, 1991; Eamon, 2005) and (b) the presence of supportive faculty and role models (Ceballo, 2004). Within the last factor, socioeconomic influences related to academic achievement and included poverty level (Eamon, 2005), quality of neighborhood, and quality of schools attended.

Implications for Research

Although research conducted on the influences of college students' academic achievement has largely identified factors related to the academic achievement of students, only a few of these factors have been found to be applicable to students of color, specifically Mexican American students. The inconsistency in factors related to academic achievement specific to Latinas/os is a serious limitation. This inconsistency in the literature is not due to the uniqueness of the Mexican American community, but rather to the lack of studies that have been conducted with this population. Further research is needed to examine how the identified factors play a role in the academic achievement of predominantly Mexican American students.

Current inconsistencies in factors related to the academic achievement of Latinas/os, specifically Mexican Americans, can be examined through a mixed methods approach to capture and identify the key components related to academic achievement within the Mexican American culture. Factors that emerge from within this culture should guide the future academic achievement literature regarding the Mexican American population. Also, further investigation into how college is viewed, as well as definitions and perceptions of success among predominantly Mexican American cultures, can shed some light on how college attendance and graduation are perceived by this population.

Preliminary Analysis

Based on the information gathered from the literature review, a preliminary study was conducted to learn more about perceptions of Mexican American college students' families. The following section describes the preliminary study. Information on participants, methods, results, and discussion is presented.

Preliminary Study

The primary goal of the study was to look at the family dynamics that fostered academic success from students' perspectives. In this preliminary study, I interviewed five first-generation, high-achieving, upper classmen, predominantly Mexican American college students (2 men and 3 women) and conducted a preliminary analysis of perceptions of causal contributions to personal achievement. Participants had a cumulative GPA of 3.30 or higher, were college juniors or seniors, were of Mexican descent, and were the first person in their family to attend a 4-year university. It is important to note that although participants were first-generation students, the number of years they have lived in the U.S varied. After participants completed a short demographic

questionnaire, they participated in a brief 10-question interview. Interview questions lasted approximately 40 minutes and explored the following themes: parental involvement, family emphasis on education, religiosity, parenting behaviors related to education, role models and societal norms, and parental definitions of success. The interview's purpose was to find values and practices related to education at home that participants perceived as supporting academic achievement, as well as any other specific behavior participants' parents practiced that might have encouraged the attainment of a higher level of education.

After transcribing all interviews, my research advisor and I conducted a content analysis for triangulation (Campbell & Fiske, 1959; Creswell, 1998, p. 202). The content analysis included both coding and theme analysis. Coding of the data consisted of using a color scheme to categorize the content of the responses elicited by participants and arrange them in terms of frequency and theme. I conducted a thematic analysis to analyze all components in participants' interviews to form a comprehensive picture of students' experiences. As a continuation of the content analysis, my research advisor and I separately conducted the theme exploration to ensure uniformity and validity of the results. Once patterns were established, we compared results and combined all the identified patterns into themes.

Three themes emerged from the analysis of the data: a) the influence of and respect for parents, b) the emphasis placed on education, and c) the meaning and importance of success. Although all participants mentioned religion as an element affecting their academic success under all themes, religion did not surface as a separate factor but was added in the final analysis.

Parenting: The Influence of and Respect for Parents was one of the strongest themes that was articulated by every participant. Participants mentioned the strong unity and sense of “familismo” they felt with their families, a finding that is consistent with other literature (Sanchez, 2005; Vega, 1990). The following subcategories were included in this theme: support given towards attending school, parent involvement in education, approachability of parents, rewards and punishments, and view of role models. As the literature suggests, parents who support children in varied ways (modeling literacy, allowing study time, and making personal sacrifices to financially assist with their children’s education, among others), appear to play a significant beneficial role in their children’s adult educational aspirations (Arellano & Padilla, 1996; Ceballo, 2004).

The second theme, *Emphasis Placed on Education at Home*, related to how participants did not feel pressured by their families to continue their education and attend college. Yet every participant felt the need to attend and graduate from college. Participants’ parents would acknowledge good grades and completion of academic years, but for the most part did not apply any pressure to attend college. An excerpt from the interviews explains how participants viewed education:

Researcher: What was the pressure your parents put into education? Did they put any pressure on education?

Participant: There was never any pressure, but they always acknowledged when we [me and my brothers] did well. They [parents] went to school functions and they were really proud of us and would let us know that they liked it when we got good grades (Lara, 2007, p. 17).

Another participant further explained how education was emphasized at home:

Researcher: What emphasis was given to education at home?

Participant: It was a really big emphasis. They always supported things that we had to do, like if we had to stay late for school they would never, you know, get mad at us for it. They would never take us on vacation when it required us to be

out of school a lot, which I know a lot of families do. Anything that we needed for school, whether it was supplies or just anything, they would make sure that we had them (Lara, 2007, p. 18).

Parents did not pressure students explicitly to attain a college degree, yet it was seen as advancement for the entire family (Zalaquett, 2005).

The third theme, *Meaning and Importance of Success*, shed light on issues regarding the holistic views of success and happiness in participants and their families. As Baumrind (1991) suggested, individual parents communicate demandingness and responsiveness differently, and parents of Mexican origin may use distinct cultural styles of communication, affection, and control. Participants talked about success as being an internal attribute that was not measured by money. Having their parents' approval of their decisions and being pleased with how participants were doing meant being successful and happy. A participant explained, "So I would say success is being content with where you are, but always still having some sort of drive forward." During the interviews, results showed that families: a) provided students with support in alternative ways, b) viewed academic success as success for the entire family, and c) had views of success that encompassed more than just academic achievement.

All participants mentioned religion as an important aspect of becoming successful in all themes presented. One participant alluded to her religion and her culture as the reason why she became so determined in academics. Another participant saw Jesus as his role model and as the main person who helped him become successful:

Participant: My role model? I once again have to say Jesus because he is the one who taught me to trust in him even when things are hard. He taught me to not give up and to have faith (Lara, 2007, pg 20).

A similar result was reported by Gasman, Hirschfeld, and Vultaggio (2008) in which African American graduate students reported using their faith to get a sense of determination and to avoid dropping out of school. Participants' views of their parents' participation in education had religion as a premise for all the actions. Furthermore, all participants reported attending religious services every week as a way to interact with their family, and bringing their family closer together. However, religion was an intertwined theme that related to the previous themes of *Parenting: The Influence of and Respect for Parents, Emphasis Placed on Education at Home, and Meaning and Importance of Success*.

Results from this preliminary analysis showed the impact that parenting had on the educational success and persistence of participants. As results suggested, parental support toward education included expectations of educational attainment, particularly regarding the attainment of a college degree, as opposed to completing education with only a high school diploma. Not feeling pressured to continue with their education, but seeing the need for advancement for students and their families, was a main motivator for students to continue with their college careers. Based on the results gathered from this research, the themes identified (parenting, emphasis given to education, and success) supported the unique views that parents in Mexican American families exhibit (Rueda-Alvarez, 2000; Sanchez, 2005).

The active participation of parents in shaping and supporting their children at early stages in their education appeared to have an impact on perceptions of the importance of successfully and competitively completing college. Support from parents towards students' attainment of a college degree was structured around the family and its

views on the importance of education as advancement for the entire family unit, as opposed to its benefits for individuals alone.

Although participants mainly referred to their parents, family life, and religion as support systems in this research, future research should consider examining both protective and risk factors encountered while achieving a college degree. Identification of these factors should be a primary step in understanding some of the major challenges faced, the means by which students balance both protective and risk factors, and the strategies students use to deal with risk factors that hinder their education. A theoretical model that can aid in understanding how these factors relate to the academic achievement of predominantly Mexican American college students is Margaret Spencer's PVEST model.

Theoretical Influence and Ethnic Identity

Results from the preliminary analysis suggested that influence of and respect for parents, emphasis placed on education at home, and meaning and importance of success are associated with the academic achievement of predominantly Mexican American college students. Taking in consideration these results, I sought a model that would explore the supports and challenges encountered by youth of color. Based on the literature review and the preliminary analysis, I decided to employ the PVEST model as the theoretical framework for the current study. This section describes the PVEST framework and its applicability to the Mexican American population as well as its connection to ethnic identity.

PVEST as a Theoretical Model

Operating from the assumption that students' academic achievement consists of a careful balance of protective and risk factors in their family and cultural contexts, I sought a theoretical model that would guide an investigation into the academic achievement of Latina/o college students. A few researchers have endeavored to create developmental models that incorporate ecological contributions that can be used with ethnically diverse populations. However only two developmental models were found that addressed both the challenges and the strengths of minority populations: García Coll and colleagues' integrative model for the study of developmental competencies in minority children (García Coll et al., 1996) and Margaret Spencer's phenomenological variant of ecological systems theory (PVEST) (Spencer, 1995, 2006). Both models have as a basis an emphasis on the unique ecological circumstances that ethnically diverse populations face and require, along with a balanced conceptualization of both the strengths and weaknesses of ethnically diverse populations. However, Margaret Spencer's PVEST model is a contextual, process-oriented approach that highlights individual differences and considers both obstacles encountered and coping styles developed throughout the life span (Spencer, 1995, 2006). In comparison, García Coll and colleagues focused more on children and emphasized racism, prejudice, discrimination, oppression, and segregation. Spencer additionally highlights the positive or protective factors surrounding the development of young people of color. Spencer's model has been previously applied to the educational experiences of ethnically diverse youth (Connell, Spencer, & Aber, 1994; Mikulsky, 2006), particularly African American youth (Spencer, 1995; Spencer, Dupree,

Cunnunghan, Harpalani, & Munoz-Miller, 2003). The model's application to the academic achievement of Latina/o college students has impressive possibilities.

Although the PVEST framework can be applicable to diverse groups of people, the importance of individual differences is key to understanding the foundational processes of diverse youth. PVEST serves as a model to examine the normative developmental process of youth of all ethnicities and links context and experience with the individual's experience, perception, and meaning making. The PVEST framework takes into account individuals' identity, lived cultural experiences, experience with racism, White privilege, and meaning making. In doing so, it allows multiple levels of context to be studied, contributing to an understanding of experiences, perceptions, and coping with risk factors.

The supporting theory under the PVEST framework is anchored in the identity-focused cultural-ecological perspective (ICE) and is a variation of Bronfenbrenner's (1979) ecological systems theory (Spencer, 1995, 2006). The ICE perspective specifies "psychosocial processes," such as behavioral outcomes and coping skills, as principal predictors of specific coping products (Cicchetti & Toth, 1996). Bronfenbrenner's ecological systems theory suggests that multiple layers in the environment reciprocally influence development. Specifically, Bronfenbrenner described five nested environmental systems with bi-directional influences: microsystem, mesosystem, exosystem, macrosystem, and chronosystem. This theory focuses on the quality, context, and complexity of the environment and its interacting effects on cognitive structures and growth. A variation of the Bronfenbrenner's ecological systems theory (1979), the PVEST framework underlines the importance of multiple levels of contexts on human

development. Combining the ICE perspective and Bronfenbrenner's theory, along with issues of culture, social/ historical context, and normative development, the PVEST framework encompasses a nature-nurture interaction in human development and allows for an analysis of the meaning-making processes that underlie identity development.

The PVEST framework is composed of five distinct components that accentuate individuals' personal perceptions of an experience (Figure 2). The first component, *Net Vulnerability*, relates to the individual, family, and community characteristics that can serve as risk or protective factors in the development of an individual. It is important to note that the persistent use of the word "risk" does not equate to Spencer's labeling of racial minority youth as "at risk". Rather, "risk factors" are described by Spencer and colleagues as micro-level elements that predispose individuals to adverse outcomes due to their psychosocial stressors (Spencer et al., 2003). These risk factors may be associated with sex, race, and socioeconomic status (Youngblood & Spencer, 2002). The balance between such risk factors and accessible protective factors as privileged group membership, skin color, intellectual superiority, family background, and family ties, defines an individual's net vulnerability in a specific developmental period. In this study, the concept of *Net Vulnerability* was applied by analyzing the perceived risks and protective factors related to the academic success of Latina/o college students. Specifically, the perception of the contexts and the characteristics that potentially posed a challenge in the academic achievement of Latina/o college students, and the protective resources that were available to them, were considered.

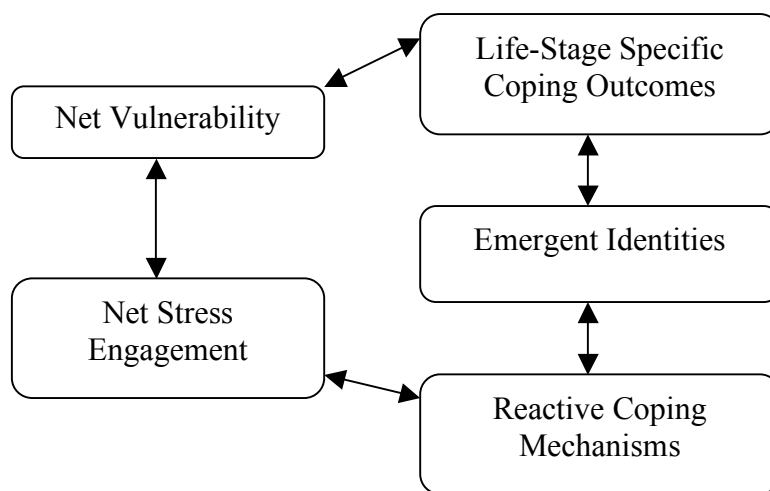


Figure 2. Phenomenological Variant of Ecological Systems Theory (Spencer, 1995). Adapted from Spencer, M. B. (1995). Old Issues and New Theorizing about African American Youth: A Phenomenological Variant of Ecological Systems Theory. In R.L. Taylor (Ed.), Black Youth: Perspectives on their Status in the United States (pp. 37-70). Westport, CT: Praeger.

The second component in the PVEST framework, *Net Stressor Engagement*, refers to the actual challenges and supports that influence an individual's well-being. *Net Stressor Engagement* refers to the actual risks that individuals experience as specific challenges on a daily basis. Although this component has been used to describe negative experiences such as violence, racial discrimination, and social stigma in part due to the unique experiences of minority youth, research conducted by Steele (1997) and Steele and Aronson (1995), on the inferred meaning of stigma, suggested that negative effects can be nullified or diluted depending on available social supports. In addition, *Net Stress Engagement* is also affected by the recursive links with the first component, *Net Vulnerability*, as it impacts the ability to maintain protective factors and the individual

adopts reactive coping strategies. The accessible supports that balance these challenges are transformed protective factors from the first component, *Net Vulnerability*.

Reactive Coping Mechanism is the third component in the PVEST framework and refers to the problem solving strategies that individuals use to cope with challenges. These strategies can be adaptive or maladaptive, depending on how the individual decides to correct the situation. For example, as Spencer (2006) explains, in response to decreased attention from parents, adolescents may engage in risk-taking behavior (a maladaptive response), or they may seek more interaction with other adults such as grandparents or teachers (an adaptive response). Individuals' views of themselves also affect how these strategies are taken and if they become maladaptive or adaptive.

The fourth component, *Emergent Identities*, defines how individuals view themselves in and between their surrounding contexts of development. As individuals begin to balance new challenges and incorporate reactive coping mechanisms, they form emergent identities. As these identity processes form, they become stable over time and lay the foundation for self-perceptions and self-appraisals and affect both positive and negative outcomes (Spencer & Markstrom-Adams, 1990; Youngblood & Spencer, 2002). However, challenges that arise in each stage require the development of stage-specific coping strategies, introducing the last component in the PVEST framework.

Life-stage Specific Coping Outcomes, the last component in Spencer's framework, is based on identity formation and behaviors that lead to specific coping responses with various stages of life. As individuals move through life stages, both productive and adverse outcomes arise based on individuals' reactive coping process. Outcomes previously experienced as positive or negative can influence future coping

behaviors. Productive outcomes can include increased school engagement, positive family relationships, and academic achievement, whereas adverse outcomes can include incarceration, teenage pregnancy, and dropping out of school. For example, a student who experiences improvements in school after being ready to drop out from school may become more resilient in subsequent years.

The ongoing recursive links among components in the PVEST model captures the dynamics that take place in each life stage. By examining risk factors, available supports and perceived challenges, reactive coping strategies, and emergent identities, the PVEST framework provides a comprehensive framework of individuals' experiences and their contexts. As individuals move through different environmental contexts, the implication of this model is that individuals navigate through numerous stage-specific challenges and develop a large variety of coping strategies. Furthermore, because the PVEST framework captures developmental processes and places them in broader social contexts, the PVEST model can be applicable to issues revolving around the development of diverse youth.

In my investigation, employing the PVEST framework allowed for the use of a phenomenological perspective to examine risk factors and coping strategies employed by academically struggling and academically successful Mexican American college students. As previously discussed, one of the weaknesses found in the literature concerning Latina/o students, specifically Mexican American students, is the view through a deficit lens (Spencer, 2006), that is, seeing students as the locus of the problem rather than examining the risks and protective factors that impact the academic achievement of Mexican American college students. Furthermore, including students' perspectives on their academic achievement allows for the understanding of the

foundational processes of diverse youth, a key component of the PVEST framework. By examining academically successful and non-academically successful Mexican American college students through the PVEST framework, theorists do not ignore the difficulties encountered while becoming academically successful and the successful coping mechanisms that predominantly Mexican American college students employ, thereby broadening the understanding of how predominantly Mexican American college students experience academic success.

Ethnic Identity

One of the focuses among researchers concerned with the development of minority youth has been on the relationship between ethnic identity and academic achievement. In the present study, ethnicity is defined as the characterization of a group of people who see themselves and are seen by others as having a common ancestry, shared history, shared traditions, and shared cultural traits such as language, beliefs, values, music, dress, and food (Cokley, 2007). In contrast, ethnic identity is the subjective sense of ethnic group membership that involves self-labeling, sense of belonging, preference for the group, positive evaluation of the ethnic group, ethnic knowledge, and involvement in ethnic group activities (Phinney, 1990, 1996). Some scholars see ethnic identity as a possible contribution to the persisting low academic achievement of Latina/o youth in the United States (Hurtado, Gonzalez, & Vega, 1996; Lopez & Stanton-Salazar, 2001).

The study of ethnic identity has been uniquely challenging due in part to the lack of a common conceptualization and psychometric issues involving its measurement (Cokley, 2005; Helms, 1996; Phinney, 1990). Since the 19th century, this socially

constructed concept has been influenced by changes in political climate, ethnic consciousness, and perceptions of physical beauty (Gould, 1994; Office of Management and Budget, 1995). Currently, views of ethnic identity include a subjective sense of ethnic group membership that involves self-labeling, sense of belonging, preference for the group, positive evaluation of the ethnic group, ethnic knowledge, and involvement in ethnic group activities (Phinney, 1990, 1996).

The development of measures of ethnic identity has been mainly led by two scales: Phinney's Multigroup Ethnic Identity Measure (MEIM) (Phinney, 1992), and the Ethnic Identity Scale developed by Umaña-Taylor, Yazedjian, & Bámaca-Gómez (2004). Both measures are informed by Erikson's (1968) identity formation theory and Marcia's (1980, 1994) operationalization of Erikson's theory, and both assume that ethnic identity is a phenomenon that is common across all ethnic groups. Erickson's (1968) identity formation theory proposes that identity development occurs after a process of exploration and commitment where individuals come to the resolution regarding a particular identity. Marcia's (1980, 1994) operationalization of this theory classifies individuals based on their level of exploration and commitment to a specific identity. Phinney's theoretical model views ethnic identity as a continuous variable, "ranging from the lack of exploration and commitment...to evidence of both exploration and commitment" (Phinney, 1992, p. 161). Specifically, the MIEM was developed with a diverse sample of high school and college students and measures three aspects of ethnic identity: a) affirmation, b) achievement, and c) behaviors (Phinney, 1992). Affirmation refers to the degree of positive feeling towards and sense of belonging to an ethnic group. The second aspect, achievement, refers to the degree of exploration and commitment to a specific

ethnic group. Exploration of one's ethnic identity refers to the level of understanding of a particular ethnic identity (i.e., cultural activities, traditions, and history). The last component, behavior, refers to the engagement of behaviors that are specific to an ethnic group.

Although the MEIM has been widely used, it has been criticized for its definition and assessment of ethnic identity. The criticisms of this measure have centered around the assessment of achieved ethnic identity, specifically since it applies to individuals who have committed to an ethnic identity after a period of exploration *and* have developed positive feelings toward their ethnic group (Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004). Although Phinney's definition of ethnic identity does not assume a positive response and commitment to one's ethnic identity, her theoretical model does, in that she classifies individuals with a positive commitment to their ethnic identity as having an achieved identity. Furthermore, the use of a total score as opposed to three different scores, confounds affirmation and achievement of one's identity. Some scholars question the MEIM, arguing that it does not measure ethnic identity but rather racial identity, since Phinney's definition of ethnic identity includes the interchangeable use of ethnicity and ethnic identity with race or racial identity (Cokley, 2007). Since the development of the MEIM, the definition of ethnic identity and its measurement have evolved, and scholars now examine ethnic identity cautiously and argue for the need to develop ethnic identity scales that capture the surrounding context and the unique experiences of individuals (Cokley, 2007).

Although the MEIM has been a dominant measure, a newer and similar measure of ethnic identity focuses on the degree and process of exploration of ethnic identity. The

Ethnic Identity Scale (EIS), developed by Umaña-Taylor, Yazedjian, and Bámaca-Gómez (2004), is also anchored in Erikson's (1968) identity formation theory and Marcia's (1980, 1994) operationalization of Erikson's theory. In addition, the EIS builds on Tajfel's (1981) idea that social identity development occurs from an individual sense of belonging to a particular ethnic group and any consequence accompanying that sense of group membership. The EIS measures three distinct components of ethnic identity: (a) exploration, (b) resolution, and (c) affirmation. Exploration refers to the degree to which individuals have explored their ethnicity. Resolution refers to the degree to which individuals have resolved what their ethnicity means to them. The last component, affirmation, refers to the positive or negative feelings that are associated with the resolution of one's identity. In an exploratory and confirmatory factor analysis, it was confirmed that the three different aspects of ethnic identity were distinct and not interrelated (Cokley, 2007). Furthermore, consistent with Marcia's (1980, 1994) four-part identity status (*diffuse*, *foreclosed*, *moratorium*, and *achieved*), Umaña-Taylor et al. propose a typology of eight different ethnic identity statuses: (a) *diffuse negative*, (b) *diffuse positive*, (c) *foreclosed negative*, (d) *foreclosed positive*, (e) *moratorium negative*, (f) *moratorium positive*, (g) *achieved negative*, and (h) *achieved positive*. The typology presented by Umaña-Taylor et al. allows for the examination of the surrounding context as well as the role it plays in ethnic identity development. More importantly, the EIS (2004) allows for a possible examination of the interactions between context, ethnic identity status, and outcomes for ethnically diverse populations.

The psychometric properties of the EIS were initially established in two studies. The first study examined, refined, and confirmed the factor structure of the EIS, and the

second study measured the reliability and validity with younger samples. The first study explored the factor structure of the EIS with 615 university students located in the Midwest and on the West Coast. Participants ranged from 18-56 years of age and were classified into six major ethnic groups: (a) White, (b) Latina/o, (c) Asian, (d) Black, (e) multi-ethnic/racial, and (f) other. Additional measures included in the study were Rosenberg's (1979) Self-esteem Scale and Umaña-Taylor's (2001) Familial Ethnic Socialization Measure. Results from the first study confirmed the three previously described subscales (exploration, affirmation, and resolution), narrowing down the 46-item measure to a 22-item measure, and setting cutoff values identified by using variations of a K-means cluster analysis. The internal consistency of each subscale was examined with coefficient alphas (Cronbach, 1951) and found to be adequate: .91 (exploration), .86 (affirmation), and .92 (resolution).

In line with the first study, the second investigation examined the methodological properties of each subscale with a sample of high school youth. The second study focused on validating the results of the first study with high school students and further examining the scores in the typology. Participants consisted of 231 high school students between the ages of 15-18 years. Participants were classified as White (28%), Latina/o (21%), Asian (11%), Black (20%), Native American (1%), multi-ethnic/ racial (8%), and other (3%). The final version that emerged from this study consisted of a 17-item scale that assessed the degree to which individuals (a) have explored their ethnicity, (b) have resolved any issues regarding their ethnicity, and (c) felt positively about their ethnicity (Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004). The final version of the EIS includes seven items that assessed exploration, four items that assessed resolution, and six items that

assessed affirmation (refer to Appendix C for a copy of the survey). Exploration was assessed by items that focused on the degree to which participants believed that a specific ethnic identity described them personally (e.g., “I have not participated in any activities that would teach me about my ethnicity” and “I have attended events that have helped me learn more about my ethnicity”). The second subscale, affirmation, assessed positive and negative feelings related to a specific ethnic identity (e.g., “I am not happy with my ethnicity” and “I wish I were of a different ethnicity”). Lastly, resolution was assessed by items focusing on the degree to which participants have resolved what their ethnicity means to them (e.g., “I am clear about what my ethnicity means to me” and “I understand how I feel about my ethnicity”). EIS subscales obtained moderately strong coefficient alphas ranging from 0.72 to 0.93 with geographically and ethnically diverse (Latina/o, Asian, Native American, African American, and multi-ethnic) high school and college students. Furthermore, alpha coefficients were examined to determine reliability and if the strong internal consistency found in the university sample was replicated with a high school sample. Results suggested moderately high alpha coefficients: .89 (exploration), .84 (resolution), and .89 (affirmation).

The evolution of conceptualizations of ethnic identity has introduced measures that assess its multifaceted nature. Although the MEIM (Phinney, 1992) continues to be used as the primary measure of ethnic identity, the EIS (2004) challenges current ways of measuring ethnic identity and proposes a new typology that examines the interactions among context, ethnic identity, and outcomes. The examination of ethnic identity can further our understanding of how students view and understand their ethnic identity and how it relates to other aspects of their environment, such as academic achievement.

Specifically, by including an ethnic identity measure in research involving the academic achievement of predominantly Mexican American students allowed for the examination of students' ethnic identity as an influential factor in school achievement and a potential moderator of family influences (Vigil, 1997).

Concluding Remarks

As the population of Latinas/os, who attend and graduate from postsecondary institution continues to be lower than those of many other minorities as well as their Anglo American counterparts, it is important to examine the factors that support and hinder the academic achievement of these college students. Although researchers attribute this disparity to numerous causes, influences in three areas were found in the literature regarding the education of predominantly Mexican American college students: student-related influences, family influences, and community and socioeconomic influences.

Student-related influences are processes within the learner that affect his or her academic development. These factors can include ethnicity, drug and alcohol use, and educational aspirations. Family influences, on the other hand, affect academic development outside of the learner within the home environment, specifically school-oriented parenting, parents' completion of college, and the mother's age at childbearing among others. Lastly, community and socioeconomic influences impact the academic development of students through the school's social environment, presence of supportive faculty and role models, and the low poverty levels in neighborhoods and schools.

Explicating how these influences affect the academic achievement of Mexican American college students can further our understanding of what enables students to

reach their academic potential. Specifically, understanding the foundational processes, such as everyday life experiences and the interaction of culture as lived and experienced at multiple layers of each student's environment, can aid in developing practices supportive to the academic achievement of Mexican American and other Latina/o college students. A theoretical framework that allows for an examination of development by clarifying the protective and risks factors in multiple layers of the environment, and places them in a broader social context to understand culture is, the PVEST model (Spencer, 1995, 2006). The PVEST model reinforces the need to integrate a phenomenological perspective in explanations of the supports and challenges encountered, the stage-specific outcomes, and the previously mentioned influences (student, family, community) on Latina/o college students.

To further understand the role of ethnicity and academic achievement in this study, I employed the ethnic identity survey (Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004). Researchers have used ethnic identity as an analytical construct, explaining that adolescents' ethnic label accurately measures their predisposition toward schooling and serves as a influential factor in school achievement (Vigil, 1997; Zarate, Bhimji, & Reese, 2005). Although there are a few measures of ethnic identity, the EIS was employed in this study due to its desirable conceptual features and its reliability and validity with Latina/o college students overall.

The following chapter details the sequential explanatory mixed-method design as a means for understanding the supports and challenges that predominantly Mexican American college students face while achieving their academic aspirations. Methods and analysis follow the PVEST framework as a theoretical model. Quantitative and

qualitative results are analyzed to understand the relationships among ethnic identity, supports and challenges encountered while reaching academic achievement, and the meaning of academic achievement in a broader social context.

CHAPTER III

METHODOLOGY

The purpose of this mixed method study is to identify the perceptions of predominantly Mexican American college students regarding their academic successes and challenges, with special attention to the role of parents, views of education, meaning of success, and the importance of religion. This chapter describes the quantitative procedure used to answer the following questions:

- Q1 How are parenting, education, meaning of success, and religion associated with the academic achievement of predominantly Mexican American college students with low and high GPAs?
- Q2 How is ethnic identity associated with the academic achievement of predominantly Mexican American college students?

This chapter also describes the qualitative procedure used to answer the following questions:

- Q3 How do predominantly Mexican American college students describe aspects of family, religion, meaning of success, and motivation in terms of being protective factors and risk factors in their academic achievement?
- Q4 Are there any additional protective or risk factors related to the academic achievement of predominantly Mexican American college students?

Both quantitative and qualitative research methods were employed to study the academic achievement of predominantly Mexican American college students. Although there are numerous types of mixed-method designs, I selected the Sequential Explanatory Design (Creswell, 2003; Tashakkori & Teddlie, 2003) due to its use of qualitative

research to explain and interpret quantitative findings. The Sequential Explanatory Design is characterized by the collection and analysis of quantitative data followed by the collection and analysis of qualitative data. In this design, qualitative data are used to expand and provide depth of meaning to the experiences of diverse populations (Merchant & Dupuy, 1996).

This chapter is divided into three sections. The first section describes the participants in this study, including the inclusion criteria and the sample demographics. The second section describes in more detail the instruments employed in this study: the Ethnic Identity Survey (EIS) and the Academic Factors Questionnaire. The last section breaks down the mixed method procedure in detail including methods for quantitative and qualitative data collection and ethical considerations.

Participants

Participants for this study were recruited through the office of Budget and Institutional Analysis at the University of Northern Colorado. A list was obtained of potential research candidates from the Office of Budget and Institutional Analysis, and 528 students were deemed eligible to participate in this study.

Inclusion Criteria

In order for participants to qualify for the study, students had to: a) be of Latina/o descent, b) between the ages of 17-24, and c) have a grade point average greater than 3.20 or lower than a 2.50. Students who met the criteria and attended school at least half-time were invited to participate. For the purpose of this research, a student of Latina/o descent was defined as any person who was born or raised in, or ascendant from, a country of Latin America and who attended the University of Northern Colorado.

However, the majority of students who participated in this study were of Mexican American descend. Although students who fell within the already mentioned GPAs were invited to participate, the demographic questionnaire (Appendix A) developed for this study was used to further screen students into two categories: high academic achievement (3.20 GPA or higher), and low academic achievement (2.50 GPA and lower). Other methods of contacting students such as Facebook, Myspace, and through introductory psychology classes were not considered due to the possibility of some students filling out the questionnaire more than one time.

The University of Northern Colorado, where the research took place, has a history focused primarily on the education of teachers. The University of Northern Colorado was built in 1890 and commenced operation under the name Colorado State Normal School. The original purpose of the university was to educate teachers in the northern Colorado region. However, after having three previous names, in 1970, the university changed its name to University of Northern Colorado to recognize the growth of programs beyond education alone. Currently the university offers baccalaureate degrees in numerous areas, as well as master's degrees and doctoral programs primarily in the field of education to more than 12,000 students. In the 2005-2006 academic year the university enrolled 62% female students and 38% male students, out of which 14% of students were of ethnic minority background. Students of minority background included Native American (8%), African American (19%), Asian American (20%), and Hispanic (53%) students.

Sample Size

During the 2007-2008 academic year, 528 students were eligible to participate in the study based on the inclusion criteria previously established. Based on minimum sample size recommendations for factor analysis, Mundfrom, Shaw, and Ke (2005), recommend under a .92 criterion, a total of 110 students (55 students in each category) is needed. In this study, 20 more participants were sought to ensure results, making the ideal number of participants 150 (75 students in the low GPA group and 75 students in the high GPA group).

Instruments

It is important to note that the quantitative component of this study was conducted through an online survey. The demographic questionnaire, Academic Factor Questionnaire, and the EIS were available to participants through an online survey directly from the University of Northern Colorado. This online survey was chosen to encourage participants to answer the questionnaire coming directly from their university, versus using other online surveys such as SurveyMonkey. Qualitative data collection was conducted in person after participants agreed to share their experiences with the researcher.

Demographic Questionnaire

Participants were asked to provide information regarding their age, gender, ethnicity, parental marital status, cumulative GPA, current educational year in undergraduate program, employment status, number of siblings, primary language spoken at home, and parents' highest education. Seventeen items were generated based on the preliminary study discussed in the previous chapter and on the proposed research

questions. Although all questions were translated into Spanish for students who felt more comfortable answering questions in Spanish, no students chose this option.

Two adjustments were made to the demographic questionnaire (both English and Spanish versions) in the family composition and head of household areas. Family composition was measured through item 10 “*Growing up, who lived in your house and what was their relationship to you?*” and item 11 “*Who was the head of household?*” Item 10 was made into an open-ended question to allow participants to list the number of people living in the same household and list their relationship. The same change was made in the Spanish version of the questionnaire. Item 11 was geared to find out if participants’ parents were the head of household or if another immediate family member had this responsibility.

Academic Factors Questionnaire

One of PVEST’s (Spencer, 1995, 2006) principles is to understand participants’ experiences as lived and experienced at multiple levels of their environment. For this reason, the academic achievement of predominantly Mexican American college students was studied through four different levels. Based on a preliminary study (Lara, 2007) and on the influences on academic achievement found in the literature, the academic factor questionnaire focused on four factors: parenting, education, meaning of success, and religion (See Appendix B). Parenting was directed to capture and record the interactions that took place within the family environment that supported or suppressed the academic achievement of students. The second factor, education, was intended to capture and record how participants valued and viewed education personally. Views and meaning of success were also investigated along with its relationship to academic achievement.

Religion was the last factor investigated. Religion was a theme that surfaced in the preliminary study, intertwined with the influence of and respect of parents, emphasis placed on education, and the meaning of success. Although religion did not surface in the literature review as an important factor, it was included in this study as a separate theme to understand its influence on the academic achievement of predominantly Mexican American college students.

Out of a total 31 questions, the importance and meaning of education and views of success were assessed through seven questions and six questions (respectively). These questions aimed to gather information on how important education was for each participant, how hard he or she worked to obtain high grades, how satisfied the participant was with his or her academic performance, meanings of success to him or her, how being of Mexican American descent affected the academic achievement of participants, and their value of education.

Interactions within the family environment were measured with an emphasis on parents' style of child rearing. Eleven questions focused on participants' families and how family members emphasized education, particularly college education. The family section aimed to gather information on parents' support in the education of the participant, importance of family, role models, family approachability, family involvement in educational activities, and family support in students' academic work.

Religion was the last theme explored in the questionnaire. Questions regarding religion aimed to capture the degree to which participants valued their faith, had used their faith as an academic support, and saw religion as integral to their academic success.

This concept was assessed with seven questions and was also further explored in the qualitative section of the study.

The Academic Factors Questionnaire primarily focused on capturing the factors that fostered academic achievement and took approximately 10 minutes to complete online. This questionnaire was grounded in the four factors related to the participants' academic success previously found in a preliminary study: a) influence of and respect for parents, b) emphasis placed on education at home, c) meaning of success, and d) importance of religion. Following the PVEST (Spencer, 1995, 2006) model, the Academic Factor Questionnaire aimed to answer the research questions based on participants' internal views of education, family environment, and religious environment. Specifically, questions were embedded in the PVEST framework components: net vulnerability level, net stress engagement, reactive coping methods, emergent identities, and stable coping strategies.

Net vulnerability, the first component, included questions that reflected the perceived risk and protective factors related to the academic achievement of participants. Statements in the Academic Factors questionnaire were presented in a multiple-choice format and included: *Being Latina/o pushes me to do better academically*, and *My parents have helped me succeed academically* (in a Likert scale format). Questions that addressed this component in the interview were: *What becomes a challenge when you are trying to prepare for a test or an important project?* And *how do your parents express support toward your education?*

The second component in the PVEST framework, net stress engagement, related to the specific actions that provided support or hindered the academic success of

participants. Statements in the Academic Factor questionnaire that fell under this category were presented in a Likert scale format and were directed at understanding the specific actions that enabled and inhibited the academic achievement of students. Examples are: *I have an approachable family*, and *My parents are involved in the work that I do*. Interview questions that fell under this component expanded on the questionnaire: *How aware and to what extent are your parents involved in your education?*

The third and fourth components in the PVEST model are reactive coping methods and emergent identities. Questions falling under these components focused on the problem-solving strategies employed to achieve academic success. Statements, presented in a Likert scale format in the Academic Factor questionnaire were: *When I have a difficult test or a very important project, I know I can get the support of my family*, and *I turn to religion when I am not doing good academically*. Interview questions that expanded on these sections included: *How does your environment help you succeed in school? Where do you get help when you have an important test or a big project?*

The last component in the PVEST framework, stable coping strategies, related to the outcomes generated by participants' coping strategies. Examples of questions (framed as Likert scale statements) in the Academic Factor questionnaire included: *I know where to get help with my homework*, and *I work very hard to get high grades in college*. Interview questions that further explored this component were: *How does obtaining a college degree fit with becoming successful* and *How do you know when to ask a teacher for academic help?*

Students who participated in the preliminary analysis (discussed in Chapter II) were contacted to assess the validity of the Academic Factor questionnaire through factorial analysis. Although all five participants were contacted via e-mail to answer the Academic Factor questionnaire, in actuality only one student answered the questionnaire. Her responses were used to compare the fit of the questionnaire to the four factors being measured (parenting, education, success, religion). Only a couple of changes were made to the wording of the items for clarity.

Ethnic Identity Survey (EIS)

The EIS (Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004), as described in the previous chapter, is a 17-item scale that captures three components of ethnic identity (exploration, resolution, and affirmation). This survey took approximately 10 minutes for candidates to complete. The EIS was based on two studies of high school and college students from six ethnic groups (White, Latina/o, Asian, Middle East, Black, and multi-racial). The EIS has been used and validated extensively with Latina/o populations and college students (Louis & Liem, 2005; Umaña-Taylor & Updegraff, 2007; Umaña-Taylor, Vargas-Chanes, Garcia, & Gonzales-Backen, 2008). One notable difference between the EIS and other measures of ethnic identity that assess specific cultural values or beliefs that an individual may hold is that the main focus of the EIS is to assess the process of defining the meaning of an individual's ethnic identity (Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004). This assessment was conducted through questions regarding participants' feelings about their ethnicity, participation or attendance in any activities related to their ethnicity, meaning of participants' ethnicity, current engagement in ethnic traditions, and feelings towards one's ethnicity.

Interview Protocol

Qualitative data were collected through a 27-question interview. Questions were based on a preliminary analysis (Lara, 2007), the literature review summarized in Chapter II, and results gathered from the quantitative analysis of the present study. The interview protocol was revised once quantitative data were analyzed to further explore participants' influences on academic achievement. The interview questions were divided into four major sections: success, academics, family life, and religion. To fit the PVEST framework, each section aimed to gather information on different levels of environment that supported or hindered the academic achievement of predominantly Mexican American college students.

Questions focused on participants' meaning of success, and academics sections were geared toward understanding how participants viewed education, how they prepared to become successful, and their meaning and value of success. Questions included: *What is success for you? Do you have friends/siblings that see success in a similar manner? How does obtaining a college degree fit with becoming successful? What motivates you to become successful?* and *How do you prepare to become successful?*

The sections relating to family life and religion aimed at investigating how experiences at home and the community affected the academic achievement of predominantly Mexican American college students. Specifically, these sections expanded the academic factor questionnaire by looking at the supports and challenges encountered at home, in the community, and with regard to their faith, while attending college. Questions included meaning of success for students' parents, emphasis given to education

at home, how students viewed themselves in their family and in their community, and what had contributed to students' success.

Participants' views and meaning of success, family life, and academic support given at home were explored during the interview. Interviews were directed at understanding the contextual factors surrounding participants' academic success, any protective factor students faced as they became academically successful, as well as capturing any differences between academically successful and non-academically successful students. A semi-structured format was followed, and I probed with questions for clarification and detail. Interviews lasted approximately 40-60 minutes and took place at a coffee shop across the street from the university. All interviews were recorded using a voice recorder and an external microphone. A Spanish version of the interview was available once the interview questions were finalized and the quantitative data were gathered and analyzed, but no students chose this version. For a copy of the intended interview questions in English and Spanish, please refer to Appendix D.

Design Procedure

Mixed Methodology

The need to include both a quantitative perspective and a qualitative perspective in research created a research design that integrates both approaches. By definition, mixed-method research focuses on collecting, analyzing, and interpreting both quantitative and qualitative data in a single study (Creswell, 2005; Tashakkori & Teddlie, 2003). The central premise of this design was that the combination of both perspectives provides a better understanding of the research problems than either approach alone (Creswell, 2005; Tashakkori & Teddlie, 2003). The mixing of quantitative and qualitative

data might be done within one study or among several studies focused on the same topic. Although much debate has occurred since this design was implemented, it has remained a strong choice for research in social and health sciences (Creswell, 2003).

Mixed-method research offers both advantages and disadvantages that need careful consideration. Among the benefits for implementing a mixed-method design is the support of quantitative results with qualitative analysis and vice versa (Frechtling, Sharp, & Westat, 1997). Researchers can use qualitative designs to clarify or to sharpen their understanding of quantitative research findings. However, a clear disadvantage of this design is the time needed to conduct a study that includes both quantitative and qualitative data. According to Creswell (2003), researchers have to be knowledgeable of both quantitative and qualitative designs for a clear implementation and design of the overall research. Although there are approximately forty different mixed-method designs reported in the literature (Tashakkori & Teddlie, 2003), only one design uses qualitative data to examine quantitative results in detail: Sequential Explanatory Design (Creswell, 2003).

The Sequential Explanatory Design (Creswell, 2003) allowed for the establishment of a theoretical order of relationships by the quantitative exploration of the factors tied to the academic achievement and non-achievement of predominantly Mexican American college students. I chose to seek further detail on how these factors played a role in the academic achievement of predominantly Mexican American college students by the use of qualitative data. The sequential explanatory design is characterized by its straightforwardness and simplicity. By allowing the study to be conducted in five steps, the researcher can focus on the quantitative and qualitative aspects separately until

both research approaches are combined for the interpretation of the entire analysis (Creswell, 2003). Collecting the quantitative data is the first step in the design, followed by the second step, data analysis. The third step is to collect the qualitative data, based on participants' answers that require further exploration, which is then followed by its analysis. The fifth and last step is the interpretation of the entire analysis (see Figure 3). In this study, the qualitative data collection was used to explain in more detail the results derived from the quantitative analysis. Integration of the two data types occurred in the interpretation of the entire analysis.

In the quantitative investigation, I endeavored to clarify how the four previously identified themes (parenting, education, success, and religion) related to the academic success of predominantly Mexican American college students. This initial approach also looked at the relationship among academic achievement and predominantly Mexican American students by focusing on the differences between students with high and low GPA. A qualitative approach added depth to the current understanding of the themes found, and also provided contextual details, and a range of knowledge and understanding as to why and how participants differed academically. This advancement was achieved by finalizing the interview questions after the quantitative data were gathered and analyzed to clarify and expand any themes found. Although no studies of academic achievement among college students were found to use a mixed method approach, the present study used quantitative and qualitative methods to investigate and provide insights into the factors affecting the academic achievement of predominantly Mexican American college students.

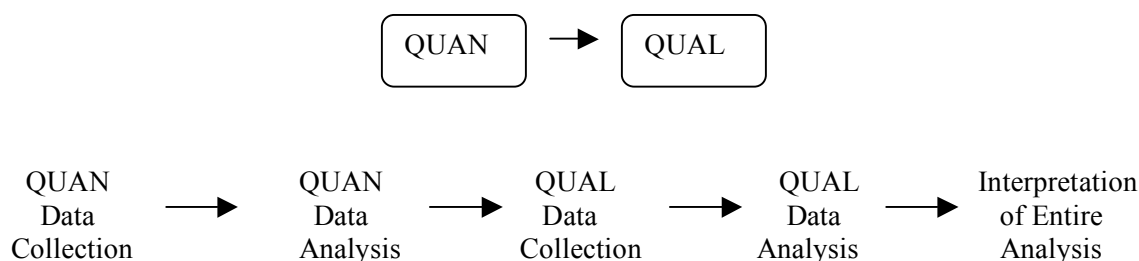


Figure 3. Visual Model and Procedure of the Sequential Explanatory Design (Creswell, 2003). Adapted from Creswell (2003). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Thousand Oaks, CA: Sage.

Quantitative Data Collection

The first phase of the study involved understanding participants' backgrounds, influences on academic achievement, and their level of Latina/o ethnic identity (exploration, resolution, affirmation). Potential participants received a link to complete the questionnaires via e-mail. After giving consent to participate in this study, participants were directed to the demographic questionnaire (Appendix A), Academic Factors Questionnaire (Appendix B), and the Ethnic Identity Scale (EIS) (Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004) (Appendix C) online. The completion of all three questionnaires took approximately 30-40 minutes. All participants were invited to share their academic achievement stories.

To protect participants' confidentiality, questionnaire responses were separated from qualitative interview responses, and a separate online form asked participants' age, place of birth, languages spoken, as well as five demographic questions (ethnicity, generation, gender, GPA, and socioeconomic status). Consent forms and questionnaires

were encrypted online and accessed only through a secure password by me, the lead researcher.

Data Analysis. Descriptive statistics and exploratory factor analysis were employed for the analysis of quantitative data. Data gathered from the Ethnic Identity Survey were analyzed using a *t* test and following the author's cut off values. Data gathered from the Academic Factor Questionnaire were analyzed using descriptive statistics, specifically the cross tabulation method, and an exploratory factor analysis. Descriptive statistics organized and summarized a set of numerical data for better understanding (Gall, Gall, & Borg, 2003). One common tabular summary of data of multiple variables is cross tabulation. Cross tabulation technique calculates frequency counts and accumulations for responses in each independent variable. Cross tabulation has been used in a limited number of studies pertaining to the academic achievement of Latina/o students in high school (Buriel & Cardoza, 1988; Crosnoe, 2005; Hernandez, 2007). Variables included GPA, scores received in the Academic Factor Questionnaire, and scores received in the Ethnic Identity Scale. Reliability test was conducted for both, the Academic Factor Questionnaire and the Ethnic Identity Survey.

The second analysis of the data was performed using exploratory factor analysis. Since there is no previous theory relating the academic achievement of Mexican American college students and the four factors as suggested in this study, a confirmatory factor analysis was not needed. The goal of exploratory factor analysis is to summarize and reduce patterns of correlations into small numbers to understand the underlying structure of the problem (Henson & Roberts, 2006; Tabachnick & Fidell, 2000). In this study, exploratory factor analysis was employed to examine the number of factors related

to the academic achievement of predominantly Mexican American /o college students. Due to the different approaches available in which to conduct an exploratory factor analysis, decisions concerning matrix of associations, method of factor extraction, factor retention rules and factor rotation and coefficient interpretation were carefully considered and reported in each step of the data analysis in Chapter IV. Principal component analysis was used to explain the variance in the data and reveal the structure behind it.

Qualitative Data Collection

Participants who completed the questionnaires were asked to provide their contact information for a follow-up interview. Students who gave consent to participate in a follow-up interview were selected based on gender, ethnicity, and GPA. Interviews took approximately 40-60 minutes and explored issues of family life, views of success, motivation, and support given at home that impacted the academic achievement of predominantly Mexican American college students, as well as other factors related to participants' academic success. All participants were allowed to select a pseudonym or their own name during the interview. However, none chose a pseudonym.

Epoché. In order to understand the phenomenon exactly as participants experience it, the concept of epoché became central. Epoché evolves from the Greek word 'check.' Originated by Husserl, the epoché is the separation or 'bracketing' of the researcher's biases, prejudices, and any preconceived ideas about the phenomenon being studied (Field & Morse, 1985; Stanghellini, 2005). The epoché allowed for each participant's experience to be considered as a single entity in and of itself. This perception of the phenomenon thus calls for looking, watching, and becoming aware without importing the researcher's judgment (Moustakas, 1994). As suggested by Moustakas (1994),

researchers should engage in the epoché process before conducting each interview to minimize any biases. In this study, every attempt was made to bracket any prejudices and biases of the researcher, by noting them in a journal along with any expectations prior to and subsequent to each interview. For example, before each interview I would briefly describe my expectations and any other ideas I had on my mind, such as having an expectation for students in the high GPA group to be more strongly supported by their families than were students in the low GPA group. By confronting my expectations, I tried to minimize their influences as I listened to and interpreted what the participants said.

Selecting interview participants. The goal of purposeful sampling is to understand a specific phenomenon, not to represent a population, by selecting information-rich cases for research (Creswell, 2003). Studying information-rich cases yields in-depth understanding of the phenomenon that gives insight into questions under study (Patton, 2002). One strategy of purposeful sampling that captures variations between cases studied is stratified purposeful sampling. Stratified purposeful sampling illustrates characteristics of specific subgroups to facilitate comparisons by selecting participants based on key dimensions (Patton, 1990). Potential cases are then divided into ‘strata’ containing variations of the phenomenon. In this study, ‘strata’ to be researched were participants’ GPA. Ten participants (five students in each group) were chosen for follow up interviews based on purposeful sampling of their GPAs.

Phenomenology. Qualitative data were collected following a phenomenological tradition of inquiry, focusing on the essence of the phenomenon. In this case, the phenomena were the factors related to the academic achievement among predominantly

Mexican American college students. A phenomenological study was chosen because it focuses on describing the lived experiences of the participants individually while also identifying their common features (Creswell, 1998; Crotty, 1998; Ferguson, 2006; Moustakas, 1994). This approach allowed the researcher to gather as much information about the phenomenon as possible as experienced by participants (Creswell, 1998). The goal of this phenomenological research was not to explain the phenomenon under investigation (factors affecting the academic achievement of predominantly Mexican American college students), but to describe the phenomenon and find meaning in participants' actual experiences.

The analysis of phenomenological data as described by Moustakas (1994) included horizontalizing of the data, clustering common categories, and developing textural descriptions of the experience. Horizontalization refers to listing every 'horizon' or expression relevant to the experience and regarding them as having equal value. Important factors to which students attributed their academic success were listed and treated as equally important. Reoccurring concepts, events, and experiences served as key descriptions, which served as first-level codes (McMorris, 2002). The second step involved clustering the first-level codes or relevant expressions into common categories or themes without repetition. After first-level codes were clustered into categories, commonalities or trends in the data were examined for the development of major themes. These major themes enclosed the core themes of participants' academic achievement. An example of this process was recorded by Hull (2004). While analyzing the interviews of male rape victims, Hull identified seven thematic textures: assault characteristics, treatment and support received, effect of assault, disclosure, learning and life changes,

feelings towards assailants, effect on relationships. The last step in the analysis required the development of textural descriptions of the phenomenon for each participant. After themes were found and reflected on, an individual textural description was constructed for each participant in order to construct the essence of the experience (Creswell, 2007). An example included a description of a student in the Low GPA group who described feeling undermined. Some of the textural descriptions of her interview were “never had to work hard,” and “used to not feeling challenged, feels good.” Stones (1988) described this process as when “The researcher reflects on the imagined possibilities inherent in each central theme and discards those that do not withstand criticism” (p. 154). This last step in the analysis brought the themes identified into real life in order to understand participants’ experience as experienced in their context.

The importance of understanding the critical contributions of context quality, individual differences, and the role of culture reinforced the need to establish an integrative phenomenological perspective. The basic purpose of the phenomenological perspective is to reduce individual experiences to a description of the universal essence (Creswell, 2007). A phenomenological approach along with the PVEST (Spencer, 1995, 2006) framework allowed for the examination of the culture surrounding participants’ experiences as lived and experienced at multiple levels of their environment. This step was examined through questions from the Academic Factor Questionnaire and the interviews with the different levels of the PVEST framework: *vulnerability*, *net stress*, *reactive coping*, *emergent identities*, and *coping outcomes*.

Data analysis. Interview questions were aimed at expanding the responses gathered in the quantitative portion of the study, specifically responses gathered from the

Academic Factor Questionnaire. Interview questions were refined after the quantitative results were gathered (for a copy of the final interview questions please refer to Appendix D). Interviews took approximately 40-60 minutes at a coffee shop across the street from the university. All interviews were recorded using a voice recorder and an external microphone and were later uploaded to the researcher's computer. Views of success, family life, motivation, and support given at home were explored as a basis for the interview. The focus of the interviews was to understand the contextual factors surrounding participants' academic success, as well as the differences between academically successful and non-academically successful students. All of the questions were open-ended, and I probed participants for clarification and detail. For consistency, all participants were given the same interview questions. Interviews were administered in English (although a Spanish version was available).

Qualitative data were transcribed in a personal computer using the software HyperTRANSCRIBE. This software allowed for easy transcription of MP3 audio files into a Microsoft Word document. After all interviews were collected, they were stored in the researcher's computer and transferred into HyperTRANSCRIBE for transcription into a Word document. Another researcher with the expertise in educational psychology and I later conducted a content analysis of the interviews for triangulation (Campbell & Fiske, 1959; Creswell, 1998, p. 202). The content analysis included both coding and theme analysis (Moustakas, 1994). Coding of the data consisted of looking at the content of the responses elicited by participants and arranging them with a color scheme in terms of frequency/repetition and theme. A thematic analysis followed and it analyzed all components in participants' interviews to form a comprehensive picture of a collective

experience. As a continuation of the content analysis, the second educational psychology researcher and I separately conducted a thematic exploration to ensure uniformity and validity of the results. Once patterns were established, we compared results and developed all patterns into themes to finally compare them with the quantitative analysis.

In order to insure credibility of the findings, peer examination and triangulation were employed. Peer examination took place between the second educational psychology researcher and me and allowed checking for the interpretations and conclusions drawn from the data. Triangulation refers to collecting multiple sources of data to ensure explanatory insights from different sources (Merriam, 1988). Triangulation was also used between the second educational psychology researcher and me to strengthen reliability in this study (Merriam, 1988). Another step that was taken to ensure reliability was the provision of clear and detailed descriptions of the questionnaire responses and interview questions and responses to present readers with a solid composition of the results for comparison (Merriam, 1988).

Ethical Issues

Students who qualified to participate in this study did so voluntarily and had the right to withdraw at any time without penalty. There was no monetary compensation for participation, and there were no foreseen risks in participating in this study. However, participants may have felt self-conscious about their responses, particularly in the qualitative portion of the study, and therefore were advised that their responses were not going to be judged and were going to remain strictly confidential. Confidentiality was protected by replacing every participant's by the number of their questionnaire and the last four digits of their phone number (e.g. 01-0000). However, all participants chose to

use their first name for educational purposes. Data gathered from this research were kept strictly confidential in the researcher's computer protected by dual passwords.

CHAPTER IV

RESULTS

The purpose of this chapter is to examine the factors associated with the academic achievement of predominantly Mexican American college students as they relate to the research questions presented in Chapter I. In this chapter, I present descriptive statistics of the sample, a summary of the responses collected through the online questionnaires, a summary of the responses collected through the interview process, and a final analysis that merges both data sets.

Description of Sample

Data for this investigation were gathered through the administration of an online survey (previously described in Chapter II) that included the request for demographic information and two measures: AFQ and EIS. Each measure was reviewed and discussed in Chapters II and III. Students who completed the online survey were separated into two different groups, high GPA and low GPA. After three formal invitations to complete the questionnaire, 108 students completed it, indicating a response rate of 31.3%. From that group, a total of 10 students (5 students with high GPA, and 5 students with low GPA) were selected to participate in an in-depth interview. A total of 38 students had a 2.5 GPA or lower and 70 students had a 3.2 GPA or higher.

Table 7 presents the demographic information of all participants. Overall, women had an average GPA of 3.12, compared to men with a GPA of 2.90. Also, fourth generation students had a slightly higher GPA (3.19), compared with first-generation students (GPA 3.06), second-generation students (GPA 3.04), and third-generation students (GPA 2.99). Furthermore, students who reported speaking Spanish as their first language (GPA 3.21) and as a language they spoke at home (GPA 3.13) reported having a higher GPA than students who spoke English as their first language (GPA 3.04) and as their home language (GPA 3.07). Students who reported speaking both English and Spanish at home had an average GPA of 3.06.

Overall, high school was the average highest educational level completed by mothers of students whose average GPA was less than 3.0. In comparison, the average education completed by mothers of students whose average GPA was higher than 3.1 was college. Highest education completed by fathers of students whose GPA was below 3.0 was middle school; the level of education of fathers of students with an average GPA of 3.1 and higher was high school. Finally, students with an average GPA of 2.9 or lower had dinner with their families twice a week or not at all, compared to students with an average GPA of 3.0 and higher, who had dinner with their families an average of 4 times a week or more.

Table 7
Demographic Characteristics of Students with Low and High GPA (N = 108)

Variable	Total Sample		Low GPA Group		High GPA Group	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Average GPA	3.08	.72707	2.17	.29123	3.57	.27244
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender						
Female	85	78.7	27	71.1	58	82.9
Male	23	21.3	11	28.9	12	17.1
Generation						
1	17	15.7	7	18.4	10	14.3
2	25	23.1	9	23.7	16	22.9
3	16	14.8	7	18.4	9	12.9
4	31	28.7	8	21.1	23	32.9
Other	19	17.6	7	18.4	12	17.1
Number of Parents born in the U.S.						
Father	70	64.8	24	63.2	46	65.7
Mother	14	13	4	10.5	10	14.3
None	23	21.3	9	23.7	14	20
N/A	1	.9	1	2.6		
Birth Location						
Colorado	60	55.6	24	63.2	36	51.4
Other US States	31	28.7	10	26.3	22	29.9
Mexico	10	9.2	4	10.5	6	8.6
Spain	2	1.9			2	2.9
Colombia	2	1.9			2	2.9
Germany	2	1.9			2	2.9
Honduras	1	.9			1	1.4
Time in the U.S. in Years						
5-10	5	4.6	1	2.6	4	5.7
11-15	4	3.7	2	5.2	2	2.8
16-20	4	3.7	1	2.6	3	4.3
> 21	5	4.6			5	7.1
N/A	90	81.5	34	89.4	56	80
First Language						
Spanish	26	24.1	9	23.7	17	24.3
English	82	75.9	29	76.3	52	74.3
English and Spanish	1				1	1.4
Language spoken at home						
Spanish	17	15.7	6	15.8	11	15.7
English	61	56.5	21	55.3	40	57.1
English and Spanish	30	27.8	11	28.9	19	27.1

Variable	Total Sample		Low GPA Group		High GPA Group	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Mother's Highest Education						
Graduate School	11	10.2	4	10.5	7	10
College	26	24.1	6	15.8	20	28.6
High School	47	43.5	19	50	28	40
Middle School	9	8.3	4	10.5	5	7.1
Elementary School	11	10.2	3	7.9	8	11.4
No formal schooling	3	2.8	2	5.3	1	1.4
N/A	1	.9			1	1.4
Father's Highest Education						
Graduate School	15	13.9	3	7.9	12	17.1
College	15	13.9	5	13.2	10	14.3
High School	47	43.5	17	44.7	30	42.9
Middle School	15	13.9	9	23.7	6	8.6
Elementary School	10	9.3	2	5.3	8	11.4
No formal School	3	1.9	2	5.3	1	1.4
N/A	3	2.8			3	4.3
Possessions						
Car	99	91.7	32	84.2	67	95.7
House	73	67.6	26	68.4	47	67.1
None	4	3.7	3	7.9	1	1.4
Dinner with Family per Week						
Once a week	15	13.9	9	23.7	6	8.6
Twice a week	8	7.4	2	5.3	6	8.6
3-4 times a week	52	48.1	17	44.7	35	50
Everyday	25	23.1	8	21.1	17	24.3
None	6	5.6	2	5.3	4	5.7
N/A	2	1.9				
Residence While Attending College						
At home with family	30	27.8	10	26.3	20	28.6
At the dorms	35	32.4	13	34.2	22	31.4
With other relatives	1	.9			1	1.4
With friends	42	38.9	15	39.5	27	38.6
Hours Worked per Week						
1-10	9	8.3	1	2.6	8	11.4
11-20	37	34.3	5	13.2	24	34.3
21-30	30	24.1	6	15.7	18	25.7
31 or more	14	12.9	15	39.5	6	8.6
None	21	19.4	9	36.7	13	18.6
N/A	1	.9			1	1.4

Questionnaire Participants

Low GPA Group. The low GPA group comprised of 27 women and 11 men who completed the questionnaire. The average GPA among students in this group was 2.17. Twenty-three percent of students were second generation in the U.S., followed by 21% fourth generation, 18% first generation, 18% third generation, and 18% fifth generation or other. Close to 64% of students had a father born in the U.S., followed by 24% of students who had no parents born in the U.S., and only 11% of students reported that their mothers were born in the U.S. Furthermore, 34% of students had two grandparents born in the U.S., followed by 37% of students who had four grandparents or more born in the U.S., and only 11% had grandparents born outside the U.S.

Regarding birth location and time in the US, 89% of students were born in the U.S. with the majority of participants coming from Colorado, compared to only 11% of students who were born in Mexico. Students who were born outside of the U.S. reported having spent between 5 and 20 years in the U.S.

Also, the majority of students (76%) with a low GPA spoke English as their first language, and 24% of students in the low GPA group spoke Spanish as their first language. However, the language spoken at 55% of the homes was English, while 29% of students reported speaking both English and Spanish at home, and only 16% of students reported speaking only Spanish at home.

Another aspect of the questionnaire examined home environment. Ninety-seven percent of students reported growing up with both parents and siblings, versus one student who lived with no relatives. Furthermore, 92% of students reported living with no

grandparents or aunts and uncles in the same household while growing up. The decision maker of the house for 53% of students was the father; for 45% it was the mother.

In the low GPA group, parents' education ranged from no formal education to an earned master's degree. Fifty percent of students had a mother and 45% had a father both with high school as their highest education completed. Also, 16% of students reported having a mother who completed college as her highest level of education, in comparison to 13% of students' reports about their fathers. Additionally, 13% of students reported having mothers who completed elementary school or less as their highest education, compared to 11% of students' reports about their fathers who completed college. Only 5% of students reported having the head of household other than their mother or father complete high school as their highest education. Out of the low GPA group, only four mothers were reported to have completed graduate school (11%), versus three fathers (8%).

To determine socioeconomic status (SES) and family closeness, I included questions about the possession of students' parents while students were growing up and their frequency of family dinners. Eighty-four percent of students reported their parents owning a car while growing up, and 68% of students reported their parents owning a home while growing up. As for family closeness, the questionnaire included a question designed to investigate the number of times per week that students ate dinner with their families. Fifty-eight percent of students reported having dinner with their families at least 3-4 times a week, followed by 23% of students who reported eating dinner with their families once a week. However, one student specified that while eating dinner with the family, the family "only sat scattered in a room and seldom discussed personal matters."

In response to a question about their living environment in college, 40% of students reported living with friends, 34% of students reported living at the dorm, and only 26% of students reported living with their families. Lastly, 34% of students reported working 15 hours or less while attending school, whereas 44% of students reported working between 20-40+ hours per week. About 8% of students reported working at the university, and one student reported working picking crops.

The picture presented in this group of students in particular, showed the average student in this group possessed an average GPA of 2.17, was second generation with a father born in the U.S., spoke English as the first language, and had both parents with high school as their highest level of education. The majority of students in this group had dinners with their families 3-4 times a week. Lastly, students worked at paid jobs an average of 31 or more hours per week while attending college.

High-GPA Group. The high GPA group consisted of 70 respondents, of which 58 were women and 12 were men. The average GPA among students in this group was 3.57. Most students were fourth generation (32%), followed by second generation (23%), and other (17%). Sixty-five percent of students had a father born in the U.S., only 14% had a mother born in the U.S., and 20% had no parents born in the U.S. As for grandparents, 39% of students had three or more grandparents born in the U.S., whereas 27% of students reported having no grandparents or one grandparent born in the U.S.

Regarding birth location and time residing in the US, only 7% of students were born outside the U.S. in countries including Colombia, Honduras, and Mexico. Students who were born outside of the U.S. had been living in the U.S. between 8 and 30 years.

In regards to first language, 74% of students reported speaking English as their first language, 24% spoke Spanish as their first language, and one student spoke both English and Spanish. However, currently 57% of students reported speaking English in their home, 27% reported speaking both English and Spanish at home, and 16% reported speaking Spanish only.

Another consideration measured in the questionnaire was home environment. Ninety-seven percent of students reported living with parents and siblings while growing up, and 91% reported living with no grandparents at home or with any other extended family members. The decision maker of the house for 56% of students was the father, for 40% was the mother, and for 4% was a grandparent.

Parents' education in this group was similar to that of the low GPA group. Students responded that 40% of mothers had a high school diploma as the highest education attained, followed by mothers who had graduated from college (28%). However, 13% of students reported no education or elementary school education as the highest level of education completed by their mothers. Forty-three percent of the fathers in this group had a high school diploma as the highest education attained. Eleven percent of students reported their fathers had an elementary school education as the highest level of education attained, and 14% had attained a college education. Only six students reported that the head of household, other than their parents, had completed high school or below as their highest education.

Socioeconomic status and family closeness were another set of variables explored in this study. Most students reported growing up with their parents possessing a car (95%) and/or a house (67%). As for family closeness, almost 70% of students reported

having dinner with their family at least 3-4 times a week. Thirty-nine percent of students who attended college reported living with friends, and 29% of students reported living at home with family.

Eighty-two percent of students reported working a job. Out of those students who worked, 5% of students worked for the university. Forty-six percent of students reported working less than 20 hours a week, whereas 34% worked between 21-40 or more hours a week.

The picture presented in this group shows a typical student maintaining an average GPA of 3.57, being fourth generation, having a father born in the U.S., speaking English as his or her first language, and having both parents with high school as their highest education. However, more students in this group reported having mothers who had completed college (28% vs. 16%) and graduate school (7 mothers versus 4 mothers in the low GPA group). A student in this group was also more likely than a low GPA student to work at their respective universities, have dinners at least 3-4 times a week with their families, while enrolled in college, to live with their parents while attending college.

Interview Participants

Low GPA Group. Out of this group, 5 students (2 women and 3 men) shared their academic success stories in detail. Interview participants had an average of 2.10 GPA (ranging from 1.5 -2.4), and were comprised of three freshmen, one junior, and one senior. Two students were second generation, and four had either a mother or a father born in the U.S. All students were born in Colorado, except for one who was born in Mexico. Although four students spoke English as their first language, two students

reported speaking both English and Spanish at home, and two students reported speaking primarily English at home.

All students reported living with their parents and siblings when and only when they were themselves, children. All students reported that the head of household was either their mother (60%) or father (40%). In regards to their parents' highest education, 40% of students reported high school as the highest education completed by their mother, compared to 80% of fathers. Only one parent, a mother, was reported to have attended college. Sixty percent of students reported that their parents owned a car, and 40% of students reported that their parents owned a home. Only one student reported not having dinner with the family regularly, 40% reported eating dinner once a week, and 40% reported eating dinner 3-4 times a week.

While attending college, 60% of students lived with friends, 20% lived with their families, and 20% lived in dorms. Furthermore, all students reported working while attending school. Three students reported working outside the university, one student worked at the university, and one student reported working in the field picking crops with family members. Lastly, all students reported working less than 20 hours a week, with 40% of students working between 6-10 hours a week.

High GPA Group. Out of this group, five students (four women, one man) participated in an interview that lasted an average of 40-60 minutes. The average GPA among this group was 3.63, ranging from 3.26-3.97. There were four senior students and one junior student. Forty percent of students were second generation in the U.S., while 20% were first generation in the U.S., 30% were third generation in the U.S., and 20% were fourth generation in the U.S. Eighty percent of students had a father born in the

U.S., and 20% of students had a mother born in the U.S. Eighty percent of students reported having two or more grandparents born in the U.S. Furthermore, all students were born in the U.S. The first language spoken at home by 80% of students in this group was English, and the home languages reported by 60% of students were both English and Spanish.

All students reported living with their parents and siblings when and only when they were themselves, children. The head of household for 60% of students was the father, and for 40% was the mother. The highest education completed by 40% of mothers was high school, 20% of mothers had attained the college level, and 20% reached middle school. One response in this category was missing. In regards to the highest education reached by fathers, 40% of students reported having their father complete elementary school, 20% of fathers completed college, another 20% completed high school, and 20% earned a graduate degree.

Socioeconomic status and family closeness were also measured. All students reported having their parents own a car while growing up. Sixty percent of students reported having dinner with their family four times or more a week, 20% reported having dinner with their families twice a week, and 20% reported family dinners twice a week.

While attending college, 60% of students decided to live with their family at home, and 40% lived with friends. Lastly, while attending college, only one student reported not working, with the remaining participants working from 11-40 hours a week.

Quantitative Research Questions

Margaret Spencer's Phenomenological Variant of Ecological Systems Theory (PVEST) (Spencer, 1995, 2006) was explored as the primary theoretical framework for

this research. The PVEST provided a developmental, process-oriented, and context-sensitive framework that emphasized an individual's own perception of his or her own environment. A Sequential Explanatory design allowed for quantitative and qualitative portions of the study to be integrated for a complete interpretation of the perspectives of predominantly Mexican American college students as they entered and progressed through institutions of higher education. Under the PVEST (Spencer, 1995, 2006) model and following the Sequential Explanatory design (Creswell, 2003; Tashakkori & Teddlie, 2003), the data from the following two research questions were assessed using a quantitative analysis:

1. How are parenting, education, meaning of success, and religion associated with the academic achievement of predominantly Mexican American college students with low and high GPAs?
2. How is ethnic identity associated with the academic achievement of predominantly Mexican American college students?

Research Question 1. In order to answer the first research question, "How are parenting, education, meaning of success, and religion associated with the academic achievement of predominantly Mexican American college students with low and high GPAs?" I examined the first measure of the survey: Academic Factor Questionnaire (Lara, 2007). This questionnaire was developed based on a preliminary analysis intended to measure how parenting, views of education, meaning of success, and religion played a role in the academic achievement of Mexican American college students (refer to Chapters II and III for more information).

Factor analysis. Initially, the factorability of the 31 AFQ items was examined. Due to the small number of participants in the low GPA group, both groups of students were combined to better understand the factors surrounding their academic achievement.

Before conducting the factorability of the AFQ, items 7, 24, and 27 were reverse scored. Several well-recognized criteria for the factorability of a correlation were used. First, after analyzing the responses of all students, the indicator variables with an individual measure of sample adequacy (MSA) below .5 were removed from the analysis. This procedure eliminated item 23 (*It is challenging to do well academically when I am home*), item 5 (*Getting a good job and supporting my family means success for me*), item 4 (*I am satisfied with how well I do in my college work*), item 3 (*My family sees success as getting a good education*), item 1 (*Doing well in school is important to me*), item 7 (*I don't think being successful means getting a college degree*), item 8 (*I work very hard to get high grades in college*), and item 2 (*Being successful means getting a good education*). Item 23 had an MSA value of .276, followed by item 5, which had an MSA value of .279. Item 4 had an MSA value of .385, while item 3 had a value of .325. Items 1, 7, 8, and 2 had an MSA value of .336, .396, .304, .413 respectively. Second, the Kaiser-Meyer-Olkin measure of sampling adequacy was .767, above the recommended value of .6 (Hutcheson & Sofroniou, 1999), and Bartlett's test of sphericity was significant ($\chi^2(108) = 978.125, p < .05$). The diagonals of the anti-image correlation matrix were all over .5, supporting the inclusion of each item in the factor analysis. Lastly, items 6 (*Success means being content with where you are*) and 10 (*I value the importance of education*) were dropped from the final analysis due to their low communality values of .257 and .354. The lowest communality was .416, supporting that each item shared some common variance with other items. Given these indicators, a factor analysis was conducted with 21 items.

Principal component analysis was used because it reduces the dimensionality of a data set, while retaining as much as possible of the variation present (Jolliffe, 2002). This method allowed for the investigation of the strongest factors associated with the academic achievement of predominantly Mexican American college students. The initial eigenvalues showed that the first component explained 29.09% of the variance, the second component explained 19.72% of the variance, and the third component explained 8.71% of the variance. The fourth, fifth, and sixth component explained 7.17%, 5.52%, and 4.48% of the variance, respectively. Components seven, eight, and nine explained 3.55%, 3.43%, and 3.02% of the variance, respectively. Components 10 through 17 had eigenvalues between .56 and .20 and explained a total variance of 12.74%. Lastly, components 18 through 21 had eigenvalues of less than .16 and each explained less than .8% of the variance. Four, five, and six-factor solutions were examined using a Varimax rotation with Kaiser Normalization (because factors were expected to be independent) of the factor-loading matrix. A four-factor solution, which explained 64.71% of the variance, was preferred because of its previous theoretical support, the “leveling off” of eigenvalues on the scree plot after four factors, and the insufficient number of primary loadings and difficulty of interpreting the fifth factor and subsequent factors. The factor loading matrix for this final solution is presented in Table 8.

After retaining a four-factor solution, the content of the questions under each factor was analyzed to identify any common themes. Nine questions loaded highly on the first factor related to *Family*. Six questions that loaded highly on the second factor focused on *Religion*. Four questions that loaded highly on the third factor related to

Support. Lastly, the fourth factor that surfaced had two questions and revolved around *Motivation.*

Table 8

Factor Loadings and Communalities based on a Principal Component Analysis with Varimax Rotation for 21 items of the AFQ with Low and High GPA Groups Combined (N = 108).

	Family	Religion	Support	Motivation	Communalities
My parents support my siblings in the same way they support me.	.819				.724
My siblings have contributed to my academic success.	.799				.768
When I have a difficult test or a very important project, I know I can get the support of my family.	.757				.664
I have an approachable family.	.748				.619
My parents have helped me succeed academically.	.738				.703
My parents are involved in the work that I do in school.	.669				.507
I have role models within my family.	.625				.515
My parents do not support my education.*	.529				.426
My parents constantly emphasize education at home.	.448				.426
Religion has helped me overcome obstacles in my education.		.917			.850

	Family	Religion	Support	Motivation	Communalities
Religion is an important part of my academic success.		.908			.839
When I have a difficult test or a very important project, I pray or attend church services.		.875			.794
I value religion.		.868			.803
I turn to religion to avoid dropping out of school.		.785			.670
Religion has not helped me academically.*		.758			.634
I have the support of my family to attend college.			.783		.625
My parents support my education.			.780		.696
My family is an important part of my academic success.			.674		.735
I know where to get help with my homework.			.557		.416
Being Latina/o pushes me to do better in school.				.696	.545
I want to get a college degree to help my family succeed.				.660	.630

* *Reverse scored items*

Internal consistency for each of the factors was examined using Cronbach's alpha. As shown in Table 9, the alphas were adequate for *Family*, good for *Religion*, acceptable for *Support*, and insufficient for *Motivation*. No substantial increases in alpha for any of the scales could have been achieved by eliminating more items.

Composite scores were created for each of the four factors, based on the mean of items that had their primary loadings on each factor. Higher scores indicated greater use of the support of the academic factor. *Support* was the academic factor students endorsed the most, with a negative skewed distribution, followed by *Family* and *Motivation*, both also with a negative skewed distribution. *Religion* was the least used factor reported by students, also with a positive skewed distribution. Descriptive statistics are presented in Table 9. The skewness and kurtosis were well within a tolerable range (except for *Support*) for assuming a normal distribution. Examination of the histograms suggested that the distributions looked approximately normal (See Appendix E).

Table 9
Descriptive Statistics for the Four Factors in the Academic Factor Questionnaire (N = 108) in Low and High GPA Group.

	No. of items	<i>M</i> (SD)	Skewness	Kurtosis	Alpha
Family	9	3.25 (5.23)	-.483	-.017	.856
Religion	6	2.85 (5.75)	.047	-.1.32	.933
Support	4	3.54 (2.01)	-1.279	1.44	.746
Motivation	2	3.06 (1.34)	-.265	-.643	.575

Note. Skewness acceptable (-.5 to +.5)
Kurtosis acceptable -1 to 1

Overall, these analyses indicated that four distinct factors were underlying the academic achievement of predominantly Mexican American college students with low and high GPA, and these factors were for the most part internally consistent. Although nine items were eliminated, the final structure fit the proposed themes. An approximately normal distribution was evident for the composite score data in the current study, thus the data were well suited for parametric statistical analysis.

T tests. To better understand how students with low and high GPA differ in the AFQ, an independent *t*-test was conducted to compare the mean scores on each of the four subscales (*Family, Religion, Support, Motivation*) of the AFQ (Table 10). Alphas were set at .05. In the first subscale, *Family*, there was not a significant difference in the mean scores of students in the low GPA group ($M=28.26$, $SD=5.76$) and students in the high GPA group ($M=29.02$, $SD=4.94$). A *t* test failed to reveal a statistically reliable difference between the mean score of students in two groups, $t(106) = .724$, $p = .471$. These results suggested that on average, survey respondents reported agreeing with most questions in this factor, but that any difference in responses could not be attributed to participants' GPAs.

In the second subscale, *Religion*, there was not a significant difference in the mean scores of students in the low GPA group ($M=15.18$, $SD=5.59$) and students in the high GPA group ($M=15.91$, $SD=5.85$). A *t* test failed to reveal a statistically reliable difference between the mean score of students in two groups, $t(106) = .628$, $p = .531$. These results suggested that on average, survey respondents reported disagreeing with most questions in this factor, but that any difference in responses could not be attributed to participants' GPAs.

In the third subscale, *Support*, there was not a significant difference in the mean scores of students in the low GPA group ($M=13.81$, $SD=2.06$) and students in the high GPA group ($M=14.27$, $SD=1.97$). A t test failed to reveal a statistically reliable difference between the mean score of students in the two groups, $t(106) = 1.126$, $p = .263$. These results suggested that on average, survey respondents reported high levels of agreeing with most questions in this factor, but that any difference in responses could not be attributed to participants' GPAs.

Lastly, for the fourth subscale, *Motivation*, there was not a significant difference in the mean scores of students in the low GPA group ($M=6.18$, $SD=1.22$) and students in the high GPA group ($M=6.10$, $SD=1.40$). A t test failed to reveal a statistically reliable difference between the mean score of students in the two groups, $t(106) = -.311$, $p = .757$. There results suggested that on average, students reported agreeing with most questions in this factor, but any difference in responses could not be attributed to participants' GPAs.

Table 10
Independent Samples T-test for Equality of Means of EIS Subscales (Family, Religion, Support, and Motivation)

Factors		t	df	Sig. (2-tailed)	Mean Difference
Family	Equal variances assumed	.724	106	.471	.765
Religion	Equal variances assumed	.628	106	.531	.730
Support	Equal variances assumed	1.126	106	.263	.455
Motivation	Equal variances assumed	-.311	106	.757	-.084

Results from each of the four subscales of the AFQ, *Family*, *Religion*, *Support*, and *Motivation*, revealed no statistically significant differences among students in the low GPA group and students in the high GPA group. Students in the high GPA group scored higher than students in the low GPA group in the *Family*, *Religion*, and *Support* subscales. Students in the low GPA group scored higher in the *Motivation* subscale. Results suggested that any differences in the mean of both groups is likely due to chance and not due to participants' GPAs.

Validity of the AFQ. To test the validity of the AFQ, a Pearson's correlation analysis was performed to test for associations between the sub-scores of the AFQ (*Family*, *Religion*, *Support*, *Motivation*) and the sub-scores of the EIS (*Exploration*, *Affirmation*, *Resolution*). It was hypothesized that the sub-scores of the AFQ would be positively correlated among each other and among the EIS, since a meta-analysis from the literature review found that ethnicity was a moderating factor on the interaction effect between student academic achievement and parenting practices (Rosenzweig, 2000) (Refer to Chapter II for details). The analysis was performed using one-tailed level of significance with Pearson and Spearman correlation coefficients.

The research hypothesis supported the correlations between *Family*, *Support*, and *Motivation* (See Table 11). *Family* correlated significantly with *Support*, $r(106) = .561, p \leq .05$, indicating that a high score in the *Family* subscale was associated with a high score in the *Support* subscale of the AFQ. *Religion* correlated significantly with *Motivation*, $r(106) = .205, p \leq .05$, indicating that a high score in the *Religion* subscale was associated with a high score in the *Motivation* subscale of the AFQ. Lastly, *Support* also correlated significantly with *Motivation*, $r(106) = .289, p \leq .05$, indicating that a high score in the

Support subscale was associated with a high score in the *Motivation* subscale. There were no AFQ subscales that correlated significantly with EIS subscales, suggesting that ethnicity is not associated with the academic achievement of students in this study.

Table 11
Pearson's Correlation Matrix

Sub-score	Family	Religion	Support	Motivation	Affirmation	Exploration	Resolution
Family	-						
Religion	.129	-					
Support	.561**	.112	-				
Motivation	.146	.205*	.289**	-			
Affirmation	.004	.038	.066	.106	-		
Exploration	.020	.169	.176	.182	.245*	-	
Resolution	.040	-.086	.057	.034	.047	.218*	-

* Correlation is significant at the 0.05 level (1-tailed).

** Correlation is significant at the 0.01 level (1-tailed).

Research Question 2.

In order to understand how ethnic identity is associated with the academic achievement of students with low and high GPAs, the EIS was administered to both students in the low GPA group and students in the high GPA group. An independent samples *t* test was performed to compare the mean scores of students in the low GPA group and students in the high GPA group on the three subscales (*Exploration*, *Affirmation*, *Resolution*) of the Ethnic Identity Survey (EIS) (Table 11). Continuous

variables were EIS questions, and served as a means to compare the differences between the two independent groups.

The comparison of the means on the *Exploration* subscale of the EIS showed no statistically significant difference between scores of students in the low GPA ($M=19.37$, $SD=5.44$) group and students in the high GPA group ($M=20.05$, $SD=5.40$), $t(105) = .617$, $p = .539$. These results suggested that the responses on the *Exploration* subscale of the EIS do not differ by students' GPAs. Although students in the low GPA group scored below the *Exploration* cutoff value and students in the high GPA group scored above the *Exploration* cutoff value, any difference in responses could not be attributed to participants' GPAs.

The comparison of the means on the *Affirmation* subscale of the EIS between two groups showed no statistically significant difference between students in the low GPA group ($M=24.91$, $SD=1.94$) and students in the high GPA group ($M=24.90$, $SD= 2.44$), $t(105) = -.041$, $p = .968$. These results suggest that on average, survey respondents reported high levels of *Affirmation*, but any difference in responses could not be attributed to participants' GPA.

Lastly, a comparison of the means of the *Resolution* subscale, between two groups, showed that there was a statistically significant difference between students in the low GPA group ($M= 9.29$, $SD= .877$) and students in the high GPA group ($M= 8.77$, $SD= 1.29$), $t(105) = -2.20$, $p = .029$. These results suggest that the responses on the *Resolution* subscale of the EIS differed by students' GPAs. On average, students in the low GPA and high GPA groups scored just below the *Resolution* cutoff value, reporting low levels of *Resolution*.

Results from each of the three subscales of the EIS, *Exploration*, *Affirmation*, and *Resolution*, revealed that students in the low GPA group can be classified as *diffuse positive* and students in the high GPA group can be classified as *moratorium positive*. Students in the low GPA group scored low levels of *Exploration* of their culture, felt positive about their culture (high levels of *Affirmation*), and had low levels of *Resolution* or commitment to their culture, falling into the *diffuse positive* category. Students in the high GPA group reported high levels of *Exploration* of their culture, strong positive feelings about their culture (high levels of *Affirmation*), and had low levels of commitment or *Resolution*, falling into the *moratorium positive* category.

Table 12
*Independent Samples T-test for Equality of Means of EIS Subscales
 (Affirmation, Exploration, Resolution)*

Factors		<i>t</i>	<i>df</i>	Sig. (2-tailed)	Mean Difference
Affirmation	Equal variances assumed	-.041	105	.968	-.018
Exploration	Equal variances assumed	.617	105	.539	.678
Resolution	Equal variances not assumed	-2.482	98.619	.015	-.525

Qualitative Research Questions

In order to better understand the factors that surround the academic achievement of predominantly Mexican American college students in greater depth, a qualitative data analysis was performed. The analysis of the qualitative data followed a phenomenological approach, focusing on the factors that affected the academic

achievement of these Latina/o college students. A Sequential Explanatory design (Creswell, 2003; Tashakkori & Teddlie, 2003) was used in the qualitative portion of this analysis and addressed the following research questions:

3. How do predominantly Mexican American college students describe aspects of family, religion, meaning of success, and motivation in terms of being protective factors and risk factors in their academic achievement?
4. Are there any additional protective or risk factors related to the academic achievement of predominantly Mexican American college students?

This study analyzed qualitative data by horizontalizing the data, clustering all common categories, and developing textural descriptions of the experience (Moustakas, 1994).

Horizontalization of the data is the process of examining data and treating each separate element as having equal weight (Creswell, 1998). This process allowed for an objective examination of the data giving equal importance to all aspects of the data. Following the horizontalization of the data, any common categories or themes were clustered to develop the textual descriptions of the experience of predominantly Mexican American college students (Moustakas, 1994). Important aspects to which students attributed their academic success were one of the reoccurring concepts throughout the analysis. There were two levels of codes in the data. The first level of coding gave light to main ‘umbrella’ categories, which are referred to as themes. These major themes were further explored during the second level of coding, to understand the underlying concepts under each theme. The second level of coding focused on finding commonalities or trends in the data that further defined the main themes with sub-categories. In this study codes and categories were analyzed until saturation, that is, until no new categories were found (Creswell, 1998).

Research Question 3.

After carefully analyzing the interviews of all 10 participants, five major themes emerged in relation to each participant's academic achievement: (1) parenting, (2) school/education, (3) success, (4) religion, and (5) community. Each theme was further defined by a number of sub-categories. To better understand the major themes and their sub-categories, results will be reported following the PVEST (Spencer, 1995) framework: *Net Vulnerability, Net Stressor Engagement, Reactive Coping Mechanisms, Emergent Identities, and Life-stage Specific Outcomes.*

Net Vulnerability

The first component in the PVEST framework relates to the perception and other characteristics of contexts that can potentially pose a challenge or serve as a protective resource for students. In this analysis, views and meaning of success surfaced as an important factor for students. Definitions of success established the direction of students' education. Views of education at home and the importance of attending college also were mentioned as being associated with students' academic achievement.

Definitions of success. As students described their definition of success, two commonalities that surfaced included: viewing success as the accomplishment of one's goals and viewing success as ultimately providing for one's family. One student in the high GPA group explained:

Umm... Success means being happy with what you have accomplished. I think it is a very personal thing. It doesn't mean having a big house, unless that is success to you, but that is not success for me. Success is being happy with what my goals are, so having a good job, and loving it. Loving what I do and being around my family and friends and that's it.

Another student in the low GPA group focused on the importance of family life as part of his view of success:

Success is just being able to support your family, having a good education, to be proud of what you've done with yourself. Be happy with where you are. Just be at the point where you can enjoy life and not have to worry about paying bills, or not making things on time, stuff like that.

The focus on providing for their family was relevant for students who saw education as a stepping-stone to obtain a job that could provide them with financial stability so that, ultimately, they could provide financial assistance to their family. In comparison, students who saw success as achieving their own goals had a more individualistic definition of success.

In addition to how students defined success, the meaning of success for students' parents was also a relevant concept in how academic achievement was conceived.

Students emphasized how their parents' definition of success rarely included education:

Success for my parents means to be highly involved in a church, to be able to provide for your family through work, and it is pretty much that simple. It could be able to just provide for my family and retain my faith. That's what I believe it is important to them.

One student in the high GPA explained how education related to her parents' view of success:

I think it means the same for them as it does for me. I think they value education, although they didn't get to follow through with that, but they value it still. When I was growing up it was always an expectation from them. They wanted us to be the ones that owned it, but it was always something they expected also. Obviously they knew they couldn't force us to like school, or to go to school, but they always told us it was very important to them because they didn't get a chance to go through it, the school system, and their family is very important to them. They like to stay close.

Students surrounded themselves with friends and family who had similar views of success to their own. Although it was not a topic of conversation, selected friends and

family members would display the same behaviors towards success as the students themselves.

Researcher: Do you have friends or siblings that see success in the same way?

Participant: I do, my siblings, I do. My brother leaves in Castle Rock right now, but he wants to move closer to us, to our family because that's success for him, and also he has a good job so I'm thinking that's what he wants to do.

Emphasis given to education at home. All students mentioned how important

education was for their parents. Family views on higher education were diverse. Some families saw high school as the highest degree necessary to obtain a good job, and some families saw college as a minimum requirement to get a good job and aid in supporting the family.

[About family being hard workers] Yes, because my dad, well my mom and dad had to work hard in physical jobs, physical labor and so I saw that with them and I knew that I was not going to be working a physical job for the next four years that I was going to school, so I knew that I had to work hard with my brain, with my knowledge.

However, one student remembered his parents not only talking about the importance of education, but also showing him how crucial it was to avoid physical labor jobs altogether. He described coming from Mexico, from a family of 10 children, 6 girls and 4 boys. He vividly described how his older brothers and his parents brought him to the U.S. from Mexico and gave him hope and encouragement to continue his studies. He was the only one attending college. He discussed how he realized that education was important for his parents when they all started to work together as a family in the fields of Colorado, including his younger sisters who were attending elementary school at that time. In the fields they would have conversations about how going to school was important to get a better job outside of the fields. "Specifically, what they said to me: 'Keep going, don't think that because you are Mexican you are not going to be successful'

and 'Everybody could be, [successful], no matter what race you are.'" Education then became even more important when his father got shot and eventually died, and his mother and older brothers were forced to support the entire family. Although he still struggled with the English language as an adult, he became a very motivated student ready to learn as much as he could about any subject.

Importance of college. Students talked about seeing college as a means to getting a job they enjoyed and eventually being able to provide for their family. "I think it's just one of the next steps as far as being able to do something that I'm passionate about." But for one student, the importance of attending college was not influenced by his home life. He explained how teachers at his university helped him figure out the importance of graduating from college.

Oh definitely, I've been looking at grad school, and they [professors] help me understand, basically who I was. 'Cause I had a sociology professor who helped me a lot, then I had a Mexican studies professor who also helped me a lot. They basically helped me understand who I was, where I was going, like how important it was to graduate. 'Cause I never really got that from my family. My family doesn't really understand the importance of like going through school. They understand the importance of graduating, not the whole process of learning and stuff, and they [professors] helped me understand why I was in college: to learn. 'Cause not much of my family knew much about college at all. You know I'll tell them I'm going to school for another year. For my 5th year and they are like 'you need to graduate, you need to get out and get job,' and its not that easy.

Although graduating from college was an important accomplishment for students, many of their families did not understand what it took to remain enrolled and eventually graduate. Nonetheless, their families supported them, and understood that graduating from college was a stepping-stone for them to obtain a better job.

Net Stressor Engagement

The second component in the PVEST framework, *Net Stressor Engagement*, is based on the supports and challenges that influence the academic achievement of predominantly Mexican American college students. One of the largest influences revealed by students was their own personal view of success and that of their parents. Both support and encouragement were subcategories of success, and they were among the most frequently articulated ideas. Support provided by parents was more explicit and more frequently described by students in the high GPA group than students from the low GPA group.

Among the supports that influenced participants' academic achievement were family and religion. However, support from family came from all members of the family, especially parents, and for a variety of reasons. One participant in the low GPA group said:

I don't know, it was just bad [working with my father]. And it showed me that school was much easier than getting all of those jobs. Basically it just showed me through them how life with no school could be. Those two things basically [going to school being easier than working, and how life without going to school looks like].

One participant in the high GPA also said:

Um, they see everything as a huge accomplishment. So when I take a test and get a good grade they congratulate me or they express that they are happy about it. Anytime I have any sort of event that I would like them to be at, they'll go. They are there, because they know it means a lot to me.

One student from the high GPA group added that having her parents pay attention to her accomplishments in school helped to steer her away from making any wrong choices and remain focused at school.

Ah you know it's just kind of like, it's not like a big thing, it's just being constant and consistent throughout entire life, you know. It's little things, if you get a good report card back, like even when we were very little, it was like 'Okay, let's go out to dinner. Let's celebrate.' You know, they were proud of our accomplishments, you know. Even like little tiny things, like you got recognized like at football practice, you know it's just little things. Just to make you a better person, a better student. Like every aspect of things, just a lot of praise, a lot of encouragement in the right direction, and maybe you know, steering you away from the wrong direction if you were headed that way.

Participants also reported how their parents supported them in other domains as well. Actions and material things, such as baby-sitting, money, or food, were also forms of non-verbal academic support from parents who weren't able to complete high school or never had the opportunity to attend college.

How? By like...like helping me like if I need some money, like if I need something, like if I'm having trouble, like if I'm having trouble such as for the money, you know, they would provide me.

Another student in the high GPA group mentioned:

Researcher: Were your parents aware of any big tests or presentations?

Participant: Oh no! Oh no! I can tell them I had 10 finals due tomorrow and it really was like speaking French to them. They were like 'Okay mijo. Do you need burritos in the morning?' or something [laughs].

One important aspect of the Latino culture that resonated throughout the interviews was how important it was for the student to later be in a position to provide for the entire family. Many participants' parents expected students to attend high school and then continue into getting a good job that would allow them to contribute to the support of the family. For many participants, the decision to continue their education was a difficult conversation with their families. One student in the high GPA group explained:

Um, I think their support...(laughs) it might sound awkward, but the first thing that comes to mind is by allowing me the liberty to do what I wanted to do and to go into a world that was unknown to them. Not interfering and not being a

distraction was really a strong support for me. So as opposed to “You just need to start working” it was really awkward for me as a Latino to go to school full time while my wife worked full time. I mean in the culture it was really, really it was not, even in my faith, it wasn't really a good thing. It was looked down upon even. I remember many times guys within the church would come talk to me and say, “Hey, you know in the bible it talks about as a husband you need to provide for your family and you need to be this and that,” and my parents were the first to say that too. The first time they asked, “Well are you working yet?” it wasn't until, and that was my biggest struggle. When I first began to go to college I didn't understand the world. So I was trying to mix both of my worlds and just try to make everyone happy and because of that I was working three jobs while going to school taking eighteen credits at school and I was killing myself. I was killing myself and it wasn't until there were programs within UNC like CHE (Center for Human Enrichment) and people like Janice who really understood the challenges that I faced and reminded me that my school is my fulltime job and although it's not understood by many that. She just reminded that it was my fulltime job and that it was ok to focus on this. So even up to the very end I always had a part-time job, and I always worked at least twenty hours a week while going to school. This last semester I took twenty-five credits, and six of those credits were for an internship that required me to do an additional twenty hours a week. So it was always thought for me.

Another major support in the academic achievement of participants was religion.

Participants reported attending church services regularly. In regards to praying, students ranged from praying before an important test and asking God for ‘help,’ whereas other students reported praying regularly regardless of how their academic life was going. One student in the high GPA group described how religion supported her through school:

I think it plays a very big role. It not only shapes me as a person, but it shapes me but as the type of teacher that I want to be. I want to be a compassionate teacher, somebody that really genuinely cares and just have goals and can motivate other people, and is an inspiration so that's the way my faith has inspired me. Those are the ways it has inspired me so that's what I try to emulate.

Another student in the low GPA group described how she used religion to help her academically:

Researcher: Does religion play a role in your academic success?

Participant: Yes and no. It doesn't play a direct role. It plays...I'm kind of those balanced people. Like the whole body, mind, spirit, all of that emotional. So if I'm kind of out of whack in the spiritual side, or the emotional side, it kind of

affects my intellect. To get those back in I kind of use religion and then that kind of helps everything you know. [...] I use religion as a means to center.

Both family and religion played an important part in the academic achievement of participants. Among other salient concepts important for students were motivation behind their success, definitions of success, and role models, all of which were discussed in the previous PVEST component.

Among some of the challenges reported by participants were mainly basic distractions such as spending time with friends, and spending time performing outdoor activities. One participant, who had been in the country for 10 years, mentioned struggling with the English language and the new way of thinking: “The words. It’s difficult like the words are challenging [laughs]. Sometimes I don’t know the meaning of the word, so that is something very hard for me.”

Another participant explained how important family life was for him, and described how difficult it was to balance family life and academic life.

I believe in life and distractions in life, I really have a desire to help people, in any opportunity that I can to try to be this well-balanced father and husband, and when I’m trying to focus I, I’m still trying to balance that out, so instead of studying for five hours I would study for two hours and play with my son or take my wife out to dinner, and those things can be, although they are very healthy, they can be my biggest distractions, too. And I believe that’s the reason why my GPA and my grades have been really mediocre at 3.2, it’s because I never strived to have an A, that’s because that lifestyle requires so much more, and I was at a different phase in my life where I was cool with balancing my life to get a B, you know?

Although the challenges participants reported had an effect on their academic achievement, the support that they received from mainly their family and religion seemed to ameliorate other negative factors. Sources of support, and specifically family, served as a support system and coping mechanism to the everyday problems these participants

encountered. For some students, seeing their parents struggle with jobs that provided little to no financial stability and jobs that required 12-hour days were a source of motivation to continue in school and eventually graduate. These and other sources of motivation were also an important aspect in the academic achievement of participants and will be discussed later in this chapter.

Reactive Coping Mechanism.

The third component in the PVEST framework focuses on the problem solving strategies that students use to cope with the previously discussed challenges. In this section, the research explored school preparedness, community activities, and role models. Students in the high GPA group provided more detailed strategies in this section.

School preparedness. When faced with a difficult test or important assignment, students responded with two different ways of approaches to coping. Some students did not describe any specific behaviors to prepare for difficult academic work. They rather focused on calming their nervousness by praying, getting encouragement from parents, and getting enough sleep.

I would probably start by praying, because I was always nervous about school, when I first started, and I would talk to my mom about it and get encouragement, then I would just sit in the library for hours to prepare the best that I could.

One student described procrastinating often because she did not feel too challenged by the university.

Usually, I study a little bit, like review notes a little bit. Umm most of the time, I kind of procrastinate. It's true. We had a paper for my English class this semester. I finished it about 10 minutes before it was due, and I ended getting a 90 on my paper. So part of the reason why I do this is 'cause I never like, like if I have an important test or something, like even with minimal studying I can still get a B usually on most of my tests. I've encountered like 2-3 like that I don't do well.

Other students described specific strategies to prepare for important assignments or tests. Most of the responses in this category took the form of a step-by-step process. Strategies included: learning the requirements, talking with teachers, going to the library, and preparing flash cards for certain subjects. A student spoke about how she prepared for big assignments:

Usually, I find out what I need to do for it first, like learn the requirements, read the rubric. Then if it's like a project that I decided where and what I want to do, I consult with my teacher. I let them know what I'm going to be doing. Ask for ideas of how to fulfill the objects in the rubric, and I always start early. I never wait until the last minute. Even if it's like a small thing, like a two to three page paper, I will always try to ask the professor or the teacher, or someone close to me what I can do or what sort of ideas I can use in order, in my paper, to make it better.

A student in the high GPA group explained that her reason for being so studious was because she understood the importance of her career as a teacher. She wanted to be as best prepared as possible, because she was going to be in charge of teaching tomorrow's leaders. She explained how she prepared for important academic assignments.

I think it just comes into focusing. I don't know. I maybe took it too far, I'm the studious type, but I was dedicated like hours to preparing for things. You know I took things very seriously, especially through assignments or really hard tests, I would study my brains out and I would memorize and just get it down, and understand the processes, and I just don't think, I just don't feel good going into things unprepared you know. It's... I guess it's just a way that I always thought I always approached school. You go in as best prepared as you can and it seems like a push to do anything else. It's just time more than anything.

Another student in the high GPA group took her preparation a step further by describing how she admired professors and enjoyed talking with them about research and other projects. She also viewed her assignments as a way to learn and excel in school as opposed to merely completing simple school homework.

I really find myself talking to professors a lot, because they have this wealth of knowledge that I didn't know they had just from listening to their lecture. Because when you talk to them outside of class, it's like they open up a lot more about their own opinions and research and knowledge, and so I really like to talk to my professors and other students that have the same motivation. They weren't just doing it to complete an assignment, they were doing it because they were really interested in doing it and wanted to do quality work, I guess.

Students in the high GPA group more often described step-by-step preparation techniques for tackling important assignments or big tests than did students in the low GPA group. Students in the high GPA group also viewed assignments as an opportunity to learn outside of the classroom and produce quality work.

Community activities. Half of the students interviewed shared being highly active in their community mainly to give back some of the help they have received. As a result of all the difficulties students encountered, students wanted to help out other families in need so other members of the community would not have to struggle as much as they have had to struggle. A student in the low GPA group described why he was so involved in his community:

Participant: Well, I'm pretty much involved in the community. I'm involved a lot in the community 'cause when I got here from Mexico they helped us a lot. We got here, and we didn't have anything. They gave us food, like all of our neighbors and everything. So for me, what I say, I have to pay it back by helping the community, helping others.

Researcher: So what do you do in your community?

Participant: I do a lot of stuff, like I help the shelter center, Habitat for Humanity, the Boys and Girls Club, and other programs that I'm involved in helping. Like that one was the migrant workers. It was like when it was the raids, we did a lot. We donated a lot of stuff for families.

Another student in the high GPA group saw helping the community as a necessary part of growing up "I always want to be a contributor. I believe you are either going to contribute to society or take away from society and I wanted to definitely

contribute.” One student reported not being involved in the community as much as she used to because she thought people relied too much upon her, and she just stopped.

[About underestimating her in the community] Well yeah, ‘cause once I show my intelligence, like everyone came to me, and I’m like why? Seriously, it’s time to do things by yourself. Like it’s really that hard.

The remaining students who reported not being involved in their community described lack of time due to school commitments as the reason for their absence in their community. One student said that:

I like to be part of my community, because I like to know what is going on. I like to also be the one that gives my time, because I think it’s a very rewarding experience, so I like to be involved in my community, but lately I haven’t been as much as I would like to because I have been busy with school, and it bugs me. It keeps nagging at me that I’m not doing volunteer work that I could be doing something that I’m not. So I’m just waiting to get some time off.

Role Models. Another way that students described as a way of coping with academic challenges was by having role models. All students reported having their family members, specifically parents and grandparents, as role models. One of the main reasons for this choice was because students witnessed how these family members overcame challenges and rose beyond expectations.

My dad ‘cause everyone said, well he has a disability, and everyone said that he would be on welfare, kind of always in need of help and not being able to support himself and it turns out that he does support himself and his family and everything and like he proves them wrong, so that’s kind of cool. And then my grandma, ‘cause well she was I don’t know, she just like I guess was the embodiment of all the characteristics that I admire. Like she was strong, and like, very intelligent, and she didn’t care about anyone and anything, like what they said.

Another student described characteristics in her parents that she admired and always strived to emulate.

Kind of go back to my parents. You know, they are the ones who like, my dad especially, he wants to be the provider, like very masculine, I want to give to my family and I want to provide for them in every way possible, and he's done that, and he really worked to do that. It's not something he does effortlessly, like every single day. So that's something that I've seen in him. My mom is probably more of the emotional supporter. She doesn't focus as much on maybe like monetary than he does but she doesn't have to 'cause he does. So she is always being verbally supportive and they both have I guess.

Students who described family members whom they admired and considered role models did not mention any academic-related characteristics but rather solely personal and family-related characteristics. Some students also described taking inspiration from teachers and even some peers for support and motivation. One student described having a few teachers as role models and as a source for motivation:

I had a lot of role models. I had a lot of teachers that were role models to me that served more like mentors. And then also I had a few friends. It's funny to say that you look at a peer as a role model, but I really do like some of my friends, I don't know. That's why I'm friends with them, because they are my role models
[laughs]

Another student in the high GPA group commented on admiring her professors inside and outside the classroom (as cited earlier as an example of school preparation):

I really find myself talking to professors a lot, because they have this wealth of knowledge that I didn't know they had. Just from listening to their lecture. Because when you talk to them outside of class, its like they open up a lot more about their own opinions and research, and knowledge, and so I really like to talk to my professors and other students that have the same motivation. That weren't just doing it to complete an assignment that they [other students] were doing it because they were really interested in doing it and wanted to do quality work I guess.

Lastly, a student in the low GPA group pointed out that besides having the support of his family, previous teachers still played a role in his academic development: "Also my teachers, from high school they are like, they were my teachers but they're still helping me. Yeah, they are still helping me."

One way of coping with academic challenges is by having role models, and students reported having as role models people they admired who had overcome challenges. Students in the low and high GPA group reported having numerous family members as role models, specifically parents and grandparents. However, students also described looking outside of their home environment for sources of support, and for many of these students it was their teachers.

Emergent Identities.

The fourth component in the PVEST framework has as a central point how students view themselves in their surrounding contexts, particularly at school and within their families.

School context. In school, one student in the low GPA group saw himself as a role model for his family, specifically his six younger sisters who attended elementary and middle school and who helped their mother work in the fields. His goal for attending college was to inspire his sisters and show them that going to college could be done:

Participant: Well I see myself in school like a role model for my family. For my sisters.

Researcher: Not for your brothers?

Participant: For my brothers too, but they are not in school now, so I see more for my sisters because I hope that they follow my steps.

A student in the high GPA group saw herself as a hard worker, and as a person who was grateful for having the opportunity to attend college.

I think I just consider myself responsible, you know. I don't get grades; I earn grades. I mean you just don't...you know what I mean? Teachers don't just hand things out. You get what you deserve. I mean, once in a while you get screwed over by a teacher or something, but for the most part, you work for what you get. So it's a, everything it's being responsible for school, like you have to, I mean not everyone gets to go to college, they don't have the monetary means, or the financial support, or scholarships, or whatever. So that was kind of the point of view I took from the very beginning. I'm lucky; I'm blessed to be there. So

why...I need to take advantage of that, I need to like invest one-hundred percent in it unless I'm wasting my time. I'm wasting other people's time.

Lastly, one student described how her identity had developed after confronting challenges at the university.

Participant: Well I'm ...I know it's cocky, and whatever, but I'm smarter than the good chunk of the students in my class, but because I don't put any effort into it, no one ever sees it.

Researcher: What makes you think nobody sees it?

Participant: I don't know. 'Cause usually the teachers or professors will like underestimate me, so like when...

Researcher: Like how?

Participant: Like okay, I took "Intro to Film" this semester for my liberal arts, and the professor like of like, he kind of ignored me 'cause when he would ask me questions I would like, he would rarely ask me questions, and the questions he did ask, like I told him what I thought and maybe he disagreed with it, so he stopped asking me questions. But then I had to go talk to him about an essay that we were writing, and like when I went and talked to him like, his face, like his facial expression when I left was kind of like wow, like she kind of knows her stuff, she just doesn't do anything.

Researcher: So you consider yourself a smart person that nobody thinks is smart?

Participant: Yeah, 'cause ever since I was really little, I guess, everyone it's been like: "Hey she is only smart 'cause her mom gives her all the answers," or "She is not that smart, they just need a brown person in the class" or "She cheats" or things like that. And I'm like okay.

Students' emergent identities were shaped by their families (a strong source of motivation to attend school), school grades (their perception that these should be earned, not wantonly granted), and a perception that they were sometimes underestimated by their teachers.

Family context. Within the family context, students said that they viewed themselves as a change agent within their families. One student in the high GPA group described how he saw himself as a source of motivation for his brothers to end a vicious cycle of drugs and as a means to change the reputation associated with his last name:

I see myself hopefully changing the generational curse, really. I believe I'm changing even the [my last] name, and um I'm the first [with my last name] to

ever graduate college and I see myself changing that path and making it a reality for others. Yeah, absolutely. Unfortunately, I too often experience in my family alcoholism and just being caught up in the system. I have nephews and nieces caught up in the system. At an early age dropping out, getting involved, too many brothers and sisters and then brother-in-laws are caught up in alcoholism and addiction to marijuana and just stuck in that lifestyle, on that cycle really. Never getting out of that. And I see that being passed down to generation to generation. I mean at first it was just drinking on the weekends, and then it was drinking from Wednesday to the weekend and now you know their kids turn 16 and it's finally okay to be drinking, now they are 18 and are drinking with them, the parents, you know. And now they are 21 and they are smoking and drinking with the parents. I've seen that as man that horrible. It didn't do anything beneficial for them and yet they fell into that cycle, into that rot in the sense that they go to jail. They have this record on them because of that and yet still they can't get out of that, so I see myself as a.. I read this awesome book called 'The Outliers' and it's one that sets themselves apart you know, and I really do see myself, not to bolster or anything but I see myself as that and I hope that it changes and if nothing else I know I'm going to influence the genealogy that I leave behind. My child and his children, absolutely.

Another student in the low GPA group also saw himself as a source of motivation for his family, specifically his sisters:

Well I see myself like a role model for my sisters. 'Cause they know that I'm going to college and they are like thinking about it too and want to go too. Yeah they want to follow my steps.

All students interviewed described seeing themselves as part of very close families that supported each other regardless of the situation. One student shared with me that her family was so close, she decided to move back home as soon as she completed her studies, even though she was contemplating starting graduate school.

Participant: Mmm, I see us very close, very, very close. And it's actually much more than I would ever imagine and much more than anybody else would imagine with their own family. Because with my friends, I see a certain distance between them and their families.

Researcher: Like what do you mean, 'close'?

Participant: Mmm, I see them everyday, and so much, we are so close that I decided to move back home because I missed them and because I felt like I needed to be there to support them through the things that they are going through

right now, and so in that sense we are close. We like to live by each other, or you know at least with a close enough distance that we can see each other often.

In both the academic and family contexts, students saw themselves as change agents and as an important source of motivation for the rest of their families. Although previously described, some students saw balancing both the academic and the family life as a challenge in their lives. Both academic life and family life were discussed as important sources of identity development for students.

Life-stage Specific Coping Outcomes.

This last component of the PVEST framework calls attention to the behaviors that lead to specific coping responses during participants' various stages of life. In this section, I focused on the sources of motivation for students that kept students going academically and possible productive outcomes based on this model.

Motivation. Sources of motivation for students included monetary incentives, being happy and well prepared, and family. A student in the high GPA group described how she understood the importance of being a teacher, and as such treated her career very seriously:

Well especially if you are teaching, all I can be about, you know, I'm going to be in charge of little lives, and I can't imagine being ill prepared for that. [Laughs] You are setting them up on a terrible start if you are not successful in what you are. So just kind of being something that I wanted to be extremely prepared for my entire life, especially going through classes and seeing some of my peers who aren't as motivated and it kind of you know, makes you wonder if that is something they really want to do, so maybe it goes back to finding what makes you happy and pursuing that. You know 'cause if it's going to make you happy you are going to want to do your best.

Other students focused on their family to never give up academically. Those students saw being part of their family, or aiding family members, as a source of motivation to remain in school.

My motivation was actually, I might be contradicting myself, but actually it was my family for the fact that I wanted more than they had, and I wanted more, and I see what society, well I see what society has made them and I wanted so much more than, that. For me and for my family.

Another student added:

I think a lot of it is, especially in my field, I see a lot of, like one of the biggest things is that my grandparents, and my aunts and uncles, they all have diabetes. So I wanted to understand why, not so much why they had diabetes, but how do they manage that type of care and I learned the more I found that there is a large cultural gap between like 'here take this diet' and translate that into things that you are used to having. To saying 'Oh well, you know, there are a lot of healthy things in the Mexican diet. There is really a lot of good things going on. Let's not discredit that and bring it into the type of context where it would help you be healthy, where you don't have to totally give up your culture to be healthy' and so that was something that made me passionate about nutrition, and the science part was just really exciting to me in order to really understand those pieces.

A strong source of motivation for students was their happiness and their family.

Although one student mentioned monetary motivation, it was to mainly support her family. None of the students mentioned leaving or dropping out of school. Only one student mentioned changing schools to be closer to his family and be able to support his brother and sister while their mother worked.

Possible productive outcomes. Influences on future coping behaviors, from positive or negative academic outcomes, are discussed in this section. During interviews, students shared the academic challenges and supports they experienced while in college. Three salient productive outcomes discovered in the analysis are discussed, how education was viewed, school engagement, and other possible academic situations that might have academic repercussions in future years. Names of participants were included in this section of the analysis to add character to their responses as well as to solidify each of their productive outcomes. These participants were selected because their stories represented a great number of participants in their group.

Lack of positive academic support from teachers and other students can lead to strikingly negative academic consequences for students. Lucia shared the feeling of being constantly underestimated by some of her peers and teachers. Although she enjoyed school, she did not feel like she needed to work hard because when she procrastinated and ‘finished papers 10 minutes prior to class,’ she would get a B in the assignment. She felt smarter than most students in her class but realized that no one ever noticed it. One possible outcome developed due to her academic underestimation was her decreased school engagement, leading her to a negative academic achievement. Lucia was currently in the low GPA group and although she was looking forward to graduation, her experiences might decrease her academic resilience in subsequent years.

Another student, Juan, described getting support from his professors when he moved to the U.S., and was in the process of learning the English language. He also shared a very strong bond with his family and although they all supported him in school, he was the first person to attend college. His main motivation was showing his little sisters that someone like them can attend and graduate from a university. After working in the fields with his entire family, he struggled in the classroom, trying to adapt to a new language. However, he was very aware of tutoring and other supportive services for students at the university. One possible productive outcome which developed due to his family support in academics was his decision to remain in school regardless of his struggles with the English language. Although this student was currently in the low GPA group, his academic persistence might lead him to defy expectations and become a self-assertive person in subsequent years.

Academic support from early years and appreciation for learning can have strong academic consequences for a student. While growing up, Maggie's parents would take her to the library, read to her very often, and talk about the importance of higher education. Maggie grew up wanting to become a teacher from an early age, and she enjoyed learning. While in college, Maggie succeeded in all subjects and saw each project as a challenge and a chance to learn more. Her view of school grades was: "I don't get grades, I earn grades." For Maggie, teaching was an important profession that required as much preparation as possible: "I'm going to be in charge of little lives, and I can't imagine being ill prepared for that." Maggie's parents supported her decision to become a teacher and supported her every step of the way, as long as she would consider completing a Master's program. One possible productive outcome that emerged with the support and guidance from home was increased school engagement. Maggie had the highest GPA out of all students interviewed, and at the time this investigation was concluding had received a B.A. in elementary school teaching and was enrolled in a Master's degree program.

Support from parents and educational settings can shape views of education, school engagement, and school persistence in students. For Lucia, having support from home but lack of support from school and peers led to a possible outcome of decreased academic resiliency. For Juan, having support from home and from his teachers and tutors helped him remain in school despite his struggles with the English language. Lastly, for Maggie, the support received from both home and school fostered the possible productive pattern of enjoyment and appreciation of education.

Research Question 4.

Additional protective or risk factors related to the academic achievement of predominantly Mexican American college students that did not fit the PVEST framework were parental support in comparison to peers and parents' awareness of school work. The PVEST framework focused on individuals' experiences and views of their surrounding context. Any other influence on the academic achievement of students that was not participants' experiences is described in this section; specifically, parental behaviors that affected the academic achievement of students and parenting that was different than those experienced by participants' friends.

The importance of sharing family holidays and living close to parents was one source of protective factors for students. One student described being able to share holidays with her family and not being alone at the dorms on important dates:

Participant: Like for instance my parents would always take me out to go, like for Easter, they would always make sure that I wasn't like in the dorm for Easter or anything like that. And they would bring, my friends like they wouldn't, like it wouldn't be a big deal to them, or [her parents] would feel kind of bad that they would be by themselves, but like their family wasn't around as much. It kind of felt like I was really close to my family and I always gave, and gave, and gave to my family and they always gave and gave to me, but like a lot of my friends like it was different...

Researcher: Family was not as important?

Participant: Yeah, and they could be across the country and it wasn't that big of a deal, whereas for me like I'm thinking about how would it be to be across the country...I don't know. It would be really difficult to me to do that. And that's that kind of limits me, as far of where I should go for like different grad schools and things like that. 'Cause I'm like 'oh how am I going to make it work?' Whereas some of my other friends like they don't really think about a second thought about that. It seems. It may not, but it seems a little bit less connected.

Another student described growing up very differently in comparison to her peers. She also added the importance of having parents going to college and not having everything handed to her:

Participant: Well with all of my friends' parents they are...all of their parents went to college, everyone of their family had gone to college. It was just like something they all did. And it was something they all have been doing for generations. And for my family, it was like my sister and I are the first ones and it's like if they didn't go to school it would be a big deal, but I think that for me and my sister to even try, it's even a bigger deal. And they don't have to worry as much for financial aid, and all that stuff, and keeping their grades up so they qualify for aid. And they've seen everyone in their family like do it before so I really...

Researcher: So they know what to do?

Participant: Yes, they know what to do and they know exactly what they are expecting. So it's just different 'cause like my family, it's just different from all their families.

Researcher: How so?

Participant: Well I live in this town where everyone is like, the school where I went to is like 90% White, and I was in the district since I was in kindergarten so I didn't really like [get] noticed that I was dark and I was different from them. Like when I got older I was like 'Wow,' my family is not as educated as their families, and like as wealthy as their families, we don't go out to as many vacations as their families, I didn't get a brand new car on my birthday, like they did.

Researcher: Everyone else?

Participant: Yeah, I was like okay with that, like not having everything handed to me. And I think it just made me different from them and just little ways like that.

Parental involvement also differed between students and their friends, and for some it was just one more protective factor and a source of trust with their parents:

They were a lot less involved in my life, not in my life, but in the whole logistics of college. The details, because they didn't know any of it, so I think they put so much trust into me that I could do it on my own but with their support, that I think I took the reigns pretty well. So, you know, some of my friends' parents ended up signing loans for them, or paid for their entire tuition, or just went to campus and visited with them. My parents didn't do any of that 'cause they didn't know what was going on [laughs]. [...] So, but they still supported me, and I think that's the number one reason why I experienced success, was because they let me go. They trusted me to be able to complete it on my own, but they still supported me, with what they could.

Another student added:

Like in general resources. If we didn't, I mean we typically we didn't have a computer when I was younger, we got one by the time I was in high school, but even when we were younger, it was like 'Okay we'll go to the library and you can research there' so it was just parents who knew how to access the resources. And even if we didn't have them, they would find them, or take us to them if that

makes sense. And that goes back to when we were little, like flashcards and little things. You know what I mean, like little things that kids need. I think having parents that were on the same page, it was very supportive. Like it was never, like I've seen a lot of families where mom says one thing, dad says another thing, you know. So it's just when they tackle parenting as a team, instead of as individuals, as parents, not as mother and father, if that makes sense. So just growing up it was very consistent. You know. I think mainly just having parents who are dedicated. You know, we were read to when we were little. We were helped with homework throughout middle school, and high school, whatever we needed. Even in college if we needed. Think my brother would just ask 'Mom, can you edit this?' or something, you know. So you know, so it'd just [be] tiny things, but they've always given us their time.

Parental awareness of students' education was another protective factor for Latino students in college. Students described not sharing much information about specific projects or tests at home with their parents. Some students understood that their parents had no knowledge of the details of college, and out of respect, they did not want to 'insult' them. Another student shared that his parents didn't even know much about what graduation meant. He described letting his parents know about the ceremony:

And they weren't really aware of my lifestyles and what they were facing. One of the, a good example of that was when I called them and said 'Hey I'm going to be graduating in May 9th' they were like 'Well whose all graduating? Is it Laura [wife] and you?' So it was like they just really weren't aware. And that made it click in me that okay, they just don't understand. [...] So that was, my parents didn't make it [to graduation], and I got a \$20 card from them and you know, and saying, and that was a little bitter and hard for me to take, but I just had to remind myself that they didn't understand.

Another student, whose parents were more acquainted with the educational system in the U.S., commented on how her parents were aware of major projects or tests:

Mmm... they knew quite a bit. Like they would always ask 'How are classes going?' and it was always very open. If I was struggling with a class, it wasn't like something I had to hide or something. Or if I got a 67 on a Biology test, I could tell them I got a 67 on a Biology test, so the communication is very open. But I've always been very driven, so it's never like I don't need them to hold my hand through school and be like 'Wow, did you start your paper?' or you know, I never needed the push from that. That was kind of an internal self-motivated sort of thing. [...] It wasn't like they needed to know every single detail. Like they

weren't the parents who were like, 'Give me your URSA account so I can look at your grades,' you know. So there is a level of privacy, but I think that was the result of trust. But they would always ask, so if I did have a test that I was struggling with they would know about it. We talked all the time so they probably know more than the average parents, but.... like they knew about the teachers that impacted me the most. You know, they know the little things that maybe don't come up as often as they should.

Specific parental behaviors as well as parental involvement in school were two important themes that served as protective factors of the academic achievement of predominantly Mexican American college students. The importance of feeling included during family holidays, having parents who understood the U.S. educational system, and trusting participants' parents, were the most salient topics students described as being different in comparison to their peers. Furthermore, parental involvement in the education of students was also a protective factor for students. Students would share details about their academic work at school, depending on how aware their parents were of the educational system in the U.S., even if their parents could not provide them with any assistance. It was just a matter of letting them know.

Verification

To verify the transcribing and analysis of the data, a triangulation technique was sought. Triangulation refers to a qualitative validity technique that makes use of multiple and different sources, methods, investigators, and theories to provide corroborating evidence to shed light on a theme or perspective (Creswell, 2007; Merriam, 1988; Patton, 1990). In this study, triangulation was employed to verify the transcribing of the data and the themes that surfaced.

After transcribing all interviews, another advanced graduate student and I conducted a content analysis (Campbell & Fiske, 1959; Creswell, 1998). The content

analysis included both data coding and a theme analysis. Coding of the data consisted of looking at the responses elicited by participants and, using a color scheme, arranging codes in terms of their frequency. A thematic analysis was conducted to analyze all codes that surfaced from participants' interviews to form a comprehensive picture of students' collective experiences. As a continuation of the content analysis, the advanced graduate student and I separately conducted a theme exploration to ensure uniformity and the validity of the results. A theme exploration refers to the process of listing patterns of experiences collected from the interviews, then identifying all data that relates to the already classified patterns, and lastly combining related patterns into sub-themes (Aronson, 1994). Once patterns were established, both the graduate student and I compared results and developed all patterns into themes.

After coding, the advanced graduate student was given three random interviews on which to perform a thematic analysis. The advanced graduate student focused on major themes and no subcategories. After comparing results, between the advanced graduate student and I, 90% of the themes matched, and the rest were subcategories of main themes. Once themes were matched, the graduate student and I developed an analysis of the qualitative data.

Interpretation of Final Analysis

Overall, the quantitative analysis shed light on some of the most important influences surrounding the academic achievement of predominantly Mexican American students: *Family, Support, Motivation, and Religion*. The EIS further explored the influences of ethnic identity over the academic achievement of predominantly Mexican American students. However, the research revealed that ethnic identity did not have a

significant effect on students' achievement. Students in the low GPA group were classified as *diffuse positive*, while students in the high GPA group were classified as *moratorium positive*. Additionally, the qualitative analysis expanded the previously found factors and allowed students to describe how these factors affected them academically.

After carefully analyzing the quantitative data and further exploring those results with the qualitative interviews and analysis, students in the low and high GPA groups showed distinct views of success, family, religion, and motivation. Three of the strongest differences were view of education, view of religion, and academic preparation. Students in the high GPA group viewed education as a privilege, and as something that had to be earned. One student in the high GPA group mentioned, "I don't get grades, I earn grades. I mean you just don't...you know what I mean? Teachers don't just hand things out. You get what you deserve." Students in the high GPA group also saw college as the next step in their lives: "I think it's just one of the next steps as far as being able to do something that I'm passionate about." One student in the low GPA group indicated: "Well I'm ...I know its cocky, and whatever, but I'm smarter than the good chunk of the students in my class, but because I don't put any effort into it, no one ever sees it." Students in the high GPA group viewed grades as a result of personal effort, while students in the low GPA group described seeing themselves as being already smart and not needing to work hard to prove it.

Another important difference was students' view of religion. Students in the low GPA group mentioned viewing religion as an academic support, while students in the high GPA group saw religion as a personal support system. One student in the low GPA group mentioned:

Well, with my faith like, if I think I'm not...when I have a test or something I just... when I think it is hard or anything, well I have faith in God. You know, I might do good on it, so sometimes I pray and see if I pray to do good on the exams, yeah.

In comparison, a student in the high GPA group described her faith as a personal support, not an academic one:

Like to me, you know it goes back to earning your grades, yes it's definitely good, and I know that I have prayed about a test, but not consistently; it wasn't like 'Let me do good on this test.' It was like I worked super hard, so I want to see a good result. I'm not going to leave it to, 'Hey God I didn't study, but I'd really like an A on this test!'

This view was consistent with other students in the high GPA group, and it was one of the contrasting views between both groups of students.

One last distinct view among students in the low and high GPA groups was their academic preparation. When students had an important assignment or a midterm, students in the high GPA group reported relaxing, and then tackling the assignment one piece at a time. In comparison, students in the low GPA group seemed to stress a lot more about assignments and although they also divided the assignments into smaller parts, they relied on their religion and their family for support to complete it.

The differences among students in the low and high GPA groups were related to their intrinsic or extrinsic motivation. For example, all students saw religion as an important aspect in their lives. However, students who had an extrinsic motivation towards education relied on religion as an academic support, whereas students who had an intrinsic motivation towards school and were able to separate school and personal life relied on religion as a personal support only, not academically.

Summary

In this chapter, the academic achievement of Latino college students was examined using both quantitative and qualitative analysis methods. In the quantitative phase, results of the Academic Factors Questionnaire were analyzed for all students combined (low GPA and high GPA). Four factors emerged: *Family*, *Religion*, *Support*, and *Motivation*. T-tests indicated that there were no significant differences in the scores of students in both groups. On average, students responded positively to questions under the *Family*, *Support*, and *Motivation* subscale. *Religion* was the only subscale where students on average responded negatively. Students in the low GPA group reported lower scores in the *Family*, *Religion*, and *Support* subscales than students in the high GPA group. Only in the *Motivation* subscale did students in the low GPA group score higher than students in the high GPA group. *Support*, *Family*, and *Motivation* were the factors most employed in the academic achievement by all students. *Religion* was the least used factor. In regards to the Ethnic Identity Survey, scores from students in the low GPA and high GPA group did not differ significantly on the *Exploration* and *Affirmation* scales. However, there was significant difference on the scores of the *Resolution* subscales, and all students scored just below the cutoff value. This placed students in the low GPA group with a *diffuse positive* identity status, meaning that students had not explored or committed to any identity yet. Students in the high GPA group placed in the *moratorium positive* identity status, meaning that students had explored, but not committed to any identity yet.

The qualitative analysis supported the results found in the quantitative analysis and expanded on the factors that affected the academic achievement of predominantly

Mexican American college students. Specifically, it detailed how students in the low and high GPA groups viewed success and college, it expanded on how students best prepared academically, it identified the challenges and supports that students face while attending college, accentuated the sources of motivation that kept students enrolled in college, and highlighted the importance of academic support from both parents and universities.

Both analyses were built upon the PVEST framework to better understand the different experiences wherein predominantly Mexican American students might find support or challenges depending on their environment. Chapter V discusses the findings as well as the limitations of the study. Implications for future researchers and the discipline of education are also discussed.

CHAPTER V

DISCUSSION

This chapter includes a discussion of the results as they pertain to the research questions, an analysis of the limitations of the study, implications for future research on the topic of the academic achievement of predominantly Mexican American college students, and lastly a section on the implications for education.

Summary of the Study

The purpose of this study was to understand the factors related to the academic achievement of Latina/o college students. In particular, this study focused on the upbringing of predominantly Mexican American college students, their identification with the Latina/o culture, and the factors related to academic achievement. In order to better understand these factors, predominantly Mexican American college students with a low (2.50 or lower) and students with a high (3.20 or higher) GPA were contacted to be part of a two-phase sequential mixed method study.

The first phase of the study concentrated on a quantitative approach and included two questionnaires. The first questionnaire, Academic Factors Questionnaire (AFQ), focused on parenting, views of education, meaning of success, and religion as factors that potentially influenced the academic achievement of predominantly Mexican American college students. The second questionnaire, Ethnic Identity Survey (EIS), focused on the

development of ethnic identity on predominantly Mexican American adolescents and young adults. Both questionnaires aimed at answering the first two research questions:

- Q1 How are parenting, education, meaning of success, and religion associated with the academic achievement of predominantly Mexican American college students with low and high GPAs?
- Q2 How is ethnic identity associated with the academic achievement of predominantly Mexican American college students?

The second phase of the study followed a qualitative approach and included an in-depth interview of 10 students (5 students in the low GPA group and 5 students in the high GPA group). The interview questions revolved around the themes found in the previous quantitative phase: *Family, Religion, Support, and Motivation*. The qualitative phase aimed at answering the last two research questions:

- Q3 How do predominantly Mexican American college students describe aspects of family, religion, meaning of success, and motivation in terms of being protective factors and risk factors in their academic achievement?
- Q4 Are there any additional protective or risk factors related to the academic achievement of predominantly Mexican American college students?

Participants in this study consisted of 108 predominantly Mexican American college students, 38 students in the low GPA group, and 70 students in the high GPA group. Students in the low GPA group had an average GPA of 2.7, whereas students in the high GPA group had an average GPA of 3.5. Also, students in the low GPA group were mostly second generation Mexican American (23%), spoke English as their first language (76%), and had a mother (50%) and a father (45%) who completed high school as their highest education. In comparison, students in the high GPA group were mostly fourth generation Mexican American (32%), spoke English as their first language (74%), and had a mother (40%) and father (43%) who completed high school as their highest

education. Students in the high GPA group reported having more mothers who had completed college (28% vs. 16%) and graduate school (7 mothers versus 4 mothers in the low GPA group) than did students in the low GPA group.

Research question 1. Quantitative results suggest that there are four different factors related to the academic achievement of predominantly Mexican American college students with high and low GPA: *Family, Religion, Support, and Motivation*. Although a *t* test showed no significant differences in the scores of students in the low and high GPA group, students in the low GPA group reported lower scores in the *Family, Religion, and Support* subscales compared to students in the high GPA group. Only through responses to the *Motivation* subscale did students in the low GPA group score higher than students in the high GPA group. Also, *Support, Family, and Motivation* were the factors most employed in the academic achievement by all students, and the ones to which all students responded favorably. *Religion* was the least employed factor, and the factor to which students responded to negatively on average. The AFQ focused on the factors that surfaced in the preliminary study and followed the factors found on the literature review. The results of this study further defined those factors by looking directly at what affected students with low and high GPA.

Congruent with the literature review, the family members, particularly parents and siblings, were important in the education of students in the low and high GPA groups. Members of predominantly Mexican American families view their families as a crucial unit of organization, which comes before any personal need (Miller, 1979). The importance of “familismo” --a cultural value emphasizing family loyalty and closeness (Miller, 1979; Sanchez, 2005; Vega, 1990)-- was reinforced in this study. Students

reported family loyalty and closeness as important aspects in their academic success, particularly when they juggled family life and homework, when they spent all holidays together, and when students counted on their parents to drive them everywhere they needed to go (school related). In addition, school-oriented parenting, such as parental knowledge of academic procedures (Joshi, 2003) and parental encouragement (Ong, Phinney, & Dennis, 2006; Steinberg, Lamborn, Dornbusch, & Darling, 1992), were also reinforced in this study. Students whose parents were familiar with the educational system felt more comfortable talking to their parents about classes, assignments, and professors, more so than did students whose parents were not familiar with the American educational system. The literature reports that parents' education influenced students' achievement indirectly by having a stimulating home environment and by holding particular beliefs about their children's academic achievement (Davis-Kean, 2005). Some students reported that although sometimes their parents could not relate to some of their educational experiences such as midterms, finals, and other requirements, their parents saw the importance of graduation and this validation served as an important source of motivation for students, reinforcing students' desire to graduate.

Supporting the literature on student-related influences, results indicated that established support systems and motivation were also great contributors to the academic success of predominantly Mexican American college students. Support from family and teachers were among the influences found in the literature that were associated with the high academic achievement of predominantly Mexican American college students; specifically, provisions of emotional support (Rosenzweig, 2000), positive reinforcement (Rosenzweig, 2000), resources and learning experiences (Rosenzweig, 2000), as well as

the presence of supportive faculty and role models (Ceballo, 2004; Kuh et al., 2007). As for motivation, being excited about learning (Kuh, et al., 2007), believing in one's capacity to perform in college as a learner (Kuh, et al., 2007; Quevedo-Garcia, 1987), and students' educational aspirations (Kuh, et al., 2007) were associated with predominantly Mexican American students' academic achievement. Support systems and sources of motivation surfaced as factors related to students' education and varied depending on students' GPAs. Students in the low GPA group saw family and religion as academic supports, compared to students in the high GPA group who saw family and religion as sources of personal support.

Research question 2. After conducting independent *t* tests to compare the means on all subscales of the EIS (*Exploration, Affirmation, Resolution*), I did not find any significant difference in the scores of the *Exploration* and *Affirmation* subscales. However, results in the *Resolution* subscale showed a significant difference between students in the low and high GPA groups. According to the authors' cutoff values for each of the subscales, students in the low GPA group ($M=19.37$) scored slightly lower than students in the high GPA group ($M=20.05$) in the *Exploration* scale. Although these scores were not significant, students in the low GPA group scored lower than the cutoff value (19.5) and students in the high GPA group scored just above the cutoff value. In regards to *Affirmation*, both groups of students scored much higher (low GPA $M=24.91$, high GPA $M=24.90$) than the cutoff value set by the authors (20.5). Lastly, for *Resolution*, results showed that there was a statistically significant difference between both groups of students (low GPA $M=9.29$, high GPA $M=8.77$), but both groups of students scored below the cutoff value set by the authors (9.5). A speculation as to why

both groups of students scored below the cutoff value is that it may take additional years after adolescence to resolve main personal conflicts in regards to one's ethnicity. In response to the second research question, "How is ethnic identity associated with the academic achievement of predominantly Mexican American college students?," the levels of ethnic identity differed significantly in students with low and high GPA. Based on *t* test scores, students in the low GPA group were classified as *diffuse positive*, meaning that both levels of cultural exploration and cultural commitment were low. Students in the high GPA group were classified as *moratorium positive*, meaning that they scored high levels of cultural exploration and low levels of cultural commitment. Both groups scored high levels of *Affirmation*, meaning that students felt positively about their culture, achieving a *positive* category. Supporting the literature on the impact of ethnic identity on academic achievement (Rosenzweig, 2000; Kuh, et al., 2007), ethnic identity was significantly related to the academic achievement of predominantly Mexican American students in this study based on students' GPAs. These results also supported Ong (2006), who suggested that students who reported higher levels of ethnic identity, reported higher levels of academic achievement. The literature also suggests that ethnic identity, as an analytical construct, can further explain that adolescents' ethnic identity label accurately measures their predisposition toward schooling and serves as an influential factor in school achievement (Vigil, 1997; Zarate, Bhimji, & Reese, 2005). More research with students of different generational status and of different ages is recommended to better understand the effect of these identity statuses on academic achievement.

Research question 3. A mixed-method approach, specifically a sequential explanatory design (Creswell, 2003), allowed for the establishment and the exploration of the protective factors associated with the academic achievement of predominantly Mexican American college students, a less explored area in the research about the academic achievement of predominantly Mexican American college students. Qualitative results clarified and sharpened previous factors found in the quantitative phase for both students in the low and high GPA groups. The qualitative component, in particular, further explored how these factors tie into the academic achievement of predominantly Mexican American college students with high and low GPAs. This research design captured and identified the key components related to academic achievement within the Mexican American culture and its subcultures. After the interview analysis, five major themes emerged that were applicable to both students in the low and high GPA groups: (1) *Family*, (2) *Religion*, (3) *Success*, and (4) *Motivation*. Results were organized following Spencer's PVEST (1995) framework: *Net Vulnerability*, *Net Stressor Engagement*, *Reactive Coping Mechanisms*, *Emergent Identities*, and *Life-stage Specific Outcomes*. In response to the research question, "How do predominantly Mexican American college students describe aspects of family, religion, meaning of success, and motivation in terms of being protective factors and risk factors in their academic achievement?" students reported different factors related to their academic achievement depending on their respective GPA. Students in the low GPA group reported combining family and religion to promote their academic success, whereas students in the high GPA group, who reported viewing family, religion, and academics as completely independent of each other and as sources of personal support. Although the importance of "support,"

as it surfaced in the quantitative analysis, was evident for all students, their view and definition of success became pivotal during the analysis of the interviews.

By including a qualitative perspective on the factors that affected predominantly Mexican American college students' academic achievement, details surfaced on how the previously found factors affected students depending on their GPA. Three important distinctions between students in the low and high GPA groups were their view of success, religion, and academic preparation. Students in the high GPA group viewed education as a privilege and as something that was earned. One student in the high GPA group mentioned, "I don't get grades, I earn grades. I mean you just don't...you know what I mean? Teachers don't just hand things out. You get what you deserve." Students in the high GPA group also saw college as the next step in their lives: "I think it's just one of the next steps as far as being able to do something that I'm passionate about." A student in the low GPA group indicated, "Well I'm ...I know it's cocky, and whatever, but I'm smarter than the good chunk of the students in my class, but because I don't put any effort into it, no one ever sees it." Students in the high GPA group viewed grades as a means to remain in school, while one student in the low GPA group described seeing herself as being already smart and not needing to work hard to prove it.

Also, another important distinction was students' view of religion. Students in the low GPA group mentioned viewing religion as an academic support, while students in the high GPA group saw religion as a personal support system, not an academic one. One student in the low GPA group mentioned:

Well, with my faith, like, if I think I'm not...when I have a test or something I just... when I think it's hard or anything, well, I have faith in God. You know, I might do good on it, so sometimes I pray and see if I pray to do good on the exams, yeah.

In comparison, a student in the high GPA group described her faith as a personal support:

Like, to me, you know, it goes back to earning your grades; yes it's definitely good, and I know that I have prayed about tests, but not consistently, it wasn't like doing so let me do good on this test. It was like I worked super hard, so I want to see a good result. I'm not going to leave it to 'Hey God I didn't study, but I really like an A on this test!'

This view was consistent with other students in the high GPA group, and it was one of the striking differences between both groups of students.

Lastly, another important distinction between both groups of students was their academic preparation. When students had an important assignment or a midterm, students in the high GPA group seemed to relax, and then tackle the assignment/exam one piece at a time. Students in the low GPA group seemed to stress a lot more about assignments and although they also divided the assignment/test in smaller parts, they relied on their religion and their family for support to complete it. This finding supports the literature that believing in one's capacity to perform in college as a learner is positively related to their academic achievement (Kuh, et al., 2007; Quevedo-Garcia, 1987). Students who rely on themselves to complete an academic task (students in the high GPA group), rather than on their family or religion had higher levels of academic achievement in this study.

Students in the low and high GPA group viewed education, religion, and academic preparation differently depending on their GPA. Students in the low GPA group used family and religion to prepare academically and as sources of support to complete demanding assignments or difficult tests, whereas students in the high GPA group viewed family and religion as sources of personal strength and separately from academia. Although the literature and a preliminary analysis had pointed out both family and religion as important aspects in the academic achievement of predominantly Mexican

American students, it had not specified how these two aspects affected distinctively students with low and high academic achievement.

Research question 4. In regards to any additional protective or risk factors related to the academic achievement of students in the low and high GPA groups outside of the PVEST framework, parental support in comparison to peers' parents and parental awareness of schoolwork surfaced. Specific parental behaviors that impacted students' academic achievement and were different than those experienced by their friends, served as a motivation source for some students in the high GPA group. An example of this was spending family holidays with family members and having parents who attended college. These factors did not fit the PVEST framework, but affected students' achievement by making them feel supported at home. Also, parental knowledge of students' schoolwork was another factor that served as protection for students from dropping out. Lastly, students described sharing details about their academic work at home, even if their parents didn't understand or could not provide them with any assistance. For these students, it was only a matter of keeping their parents informed about what they were doing academically and how hard they were working. In the literature, homework surveillance surfaced as an inconsistent influence on academic achievement (Rosenzweig, 2000), however, in this study, students reported sharing with their parents important assignment and academic activities.

The quantitative and the qualitative analysis in this research contributed to finding what and how factors affected the academic achievement of Latina/o college students from the perspective of students in the low and high GPA groups. The quantitative phase of this study helped to establish the factors related to the academic achievement of

Latina/o college students and how ethnic identity played a role; while the qualitative phase expanded these factors and specifically showed different perspectives on academic achievement by students in the low and high GPA. By selecting a mixed-method approach to the study of the academic achievement of Latina/o college students, different views on academic achievement, as well as the important factors that contributed to academic success by students in the low and high GPA group, were better understood.

Limitations and Implications for Future Research

This study contributes significantly to the literature on the academic success of Latina/o college students, specifically of predominantly Mexican American background, by providing a mixed-method evaluation of the factors that affect their academic achievement by focusing on a strength-based approach. Nevertheless, there are a number of limitations to acknowledge, which will be important to address in the future research of the academic achievement of predominantly Mexican American college students. First, although the sample size of students in the high GPA group was sufficient to conduct an exploratory factor analysis, the number of students in the low GPA group was low and it impeded the use of factor analysis without any adjustments. Therefore, it was decided to include all students in the factor analysis to answer the first research question. A disadvantage of this analysis was that the factor structures that emerged gave more weight to the high GPA group because of its larger size. A larger sample size, particularly of students in the low GPA group is recommended for future studies, especially given the current findings that emphasize the importance of examining models separately by GPA group.

Related to the issue of limited sample size, a significant limitation of the current work was the inability to test whether ethnic identity varied depending on students' place of birth, generational status, and GPA, since the majority of the participants were born in the U.S. and the sample size was low to conduct this analysis. Salience of ethnicity may vary depending on students' nativity, and students who were born outside of the U.S. might show greater ethnic identity than students who were born in the U.S. or vice versa. Furthermore, students' ethnic identity might serve as a protective or risk factor (following the PVEST model) depending on students' GPAs. Future studies should not only include a larger sample size, but also an equivalent number of students in both the low and high GPA groups, with a significant number of students born outside of the U.S., and with variation on generational status.

Another limitation was the number of factors found in the AFQ, which were limited in respect to the number of questions that defined them. Future research should focus on modifying the AFQ to make it a stronger measure of the factors related to the academic achievement of predominantly Mexican American college students. Specifically, it would be desirable to include more questions in the AFQ to further define each of the factors found in both the low and high GPA groups. In addition, a focus on the influence of peers on the academic performance of predominantly Mexican American students should be included, since literature suggests peers as a possible effect on the academic performance of students of color (Steinberg, Lamborn, Dornbusch, & Darling, 1992).

An additional limitation was in the qualitative interview questionnaire. Research questions were developed before the study was conducted, and were later enhanced

during the quantitative data collection. As the study continued and quantitative data were completely analyzed, new clear factors surfaced (such as how students viewed success, prepared academically, identified academic successes and challenges, accentuated sources of motivation, and highlighted the importance of academic support from parents and universities) that affected students differently depending on their GPAs, and the distinctions were not fully explored in the interview phase. For a subsequent study, I recommend the continuation of the exploration of the themes emerging from the AFQ with a larger group of students with low and high GPAs. Exploring these themes can help sharpen our understanding of how these factors differ among both groups of students, and how particular factors differ among predominantly Mexican American college students based on their generational status.

Implications for Education

Young adults from predominantly Mexican American backgrounds draw from cultural assets and wrestle with distinctive challenges as they enter into, study, and graduate from institutions of higher education. Previous research has indicated that out of 100 Latina/o students who entered elementary school, only close to 10% of them had a chance of graduating from college (Huber et al., 2006). Understanding what influences these students' academic achievement can further our understanding of what enables students to reach their academic potential and what we can do as educators to support them. Specifically, understanding the foundational processes, such as everyday life experiences, ethnic identity, and the interaction of culture as lived and experienced at multiple layers of each student's environment, can aid in developing practices supportive to the academic achievement of predominantly Mexican American college students.

Literature on the academic achievement of Latina/o college students provided insight into factors that relate to the academic achievement of this population. However, various definitions of academic achievement were provided and no study examined in detail the factors that promoted the academic achievement of predominantly Mexican American college students. This investigation added to the literature regarding how Latina/o college students, particularly those with high and low GPAs, conceptualize the importance of education and success, and how education is viewed and emphasized by their families and their communities.

As educators, our view of success usually encompasses academic achievements such as graduation, degree attainments, good grades, and even school enrollment. Students from Mexican American backgrounds may relate a low educational attainment to a different view and meaning of success. In this study, participants put views and meaning of success to the test. Most participants defined success as just being content and happy with where they were and with what they had achieved, supporting results from the preliminary analysis. Yet, one participant described success with more detail. While attending university in a new country, with limited versatility in the English language, Juan described that his motivation to continue studying were his sisters. Coming from a family of nine children, Juan wanted to become a role model for his little sisters, who were still in elementary school and working in the fields. He wanted to ‘show’ them that someone like them could go to school in the U.S. and that if he could do it, they could too. That was his only reason to attend his university.

Juan’s view of success was defines not only by remaining in school and graduating, but also to motivate his family to do so as well. Juan would constantly remind

himself: “‘Keep going, don’t think that because you are Mexican you are not going to be successful’ and ‘Everybody could be, no matter what race you are.’” Although Juan’s GPA placed him in the low GPA group, meaning that he was non-academically successful, he was nevertheless a successful student because his chances of dropping out of school were lower than other students with low GPA. His view of success also included an important cultural and overlooked factor: family. Juan’s ‘low academic achievement’ as defined by his GPA, showed GPA as a not so comprehensive indicator of academic achievement. Understanding cultural context, and what it means for students with low and high GPAs to succeed, will help us understand where students stand and eventually support students who struggle academically. Furthermore, views of success might depend on the acculturation and assimilation levels of students and the priority of family in their culture.

As additional research is conducted in the area of academic achievement, theoretical frameworks and measures that have been applied and are valid with students of color should be carefully reviewed and employed if applicable, since factors in the research of ethnic identity impede the generalization of numerous studies regarding the academic achievement of youth of color. These factors include: (a) the overlooked structural, physical, historical, and social contexts in which diverse youth of color develop, (b) the use of a deficit perspective in research, and (c) the use of experiences of European Americans as a norm in descriptions for development (Spencer, 2006; Swanson et al., 2003). By examining Latina/o college students, specifically students with predominantly Mexican American backgrounds, with varying levels of achievement through the PVEST framework, theorists do not ignore the difficulties encountered while

these college students become academically successful and the coping mechanisms that they employ, thereby broadening the understanding of how predominantly Mexican American college students experience academic challenges and accomplishments. The addition of the EIS (2004) allowed for a possible examination of the interactions between context, ethnic identity status, and outcomes for ethnically diverse populations.

In this study, the PVEST framework (Spencer, 2006) and the EIS (Umaña-Taylor, Yazedjian, and Bámaca-Gómez, 2004) was carefully examined and employed for their previous use with ethnically diverse youth, and their validity specifically with Latina/o populations. This inclusion of a strength-based approach can allow researchers and educators to focus on aspects that are positively correlated to the increase in attainment of post-secondary education by predominantly Mexican American students and potentially by students from other minority backgrounds as well that share similar characteristics to Mexican American. This framework and measures that allow for the developmental perspective and the contextual forces surrounding students of color as part of the research should be strongly preferred and considered. Lastly, by including students with low and high GPAs, we as educators can begin to understand how these students differ and what their needs are so we can positively affect Mexican American and other Latina/o college students so they can succeed academically.

The exploration of the factors that are associated with the academic achievement of predominantly Mexican American college students through a mixed-method approach has brought forth the essential structure of the phenomenon of academic achievement among students of color. Specifically, a quantitative approach allowed for the exploration of the factors associated with the academic achievement of predominantly Mexican

American college students, while a qualitative approach further examined these factors by focusing on how they impacted students with low and high GPAs. Furthermore, by exploring how these factors affect students with high and low GPAs, we can further our understanding of what enables students with high and low GPAs to reach their academic potential. Researching academic achievement in other contexts and with other students of color (not necessarily Mexican American) will allow researchers to build upon the contributions of this study. In turn, educators may learn how the factors that affect the academic achievement of Mexican American college students can be integrated in the classroom and ultimately larger university settings. Understanding how students of color view academic success will only serve to strengthen classroom practices, academic programs, and ultimately universities that support students of color in higher education.

Quevedo-Garcia (1987) pointed out that, in order for Latina/o students to develop their full potential as individuals, educators must “fully understand and appreciate the various cultural, economic, social, and political backgrounds that these students bring with them to our campuses” (p. 50). One significant contribution of this study was not only to reveal the important factors within the university that facilitate the academic achievement of predominantly Mexican American college students, but to identify factors generally that may support the academic achievement of predominantly Mexican American college students with a variety of GPAs. The low numbers in college attainment among Latinas/os is not a reason to believe that Latinas/os cannot achieve academically, but a reason to question how we as educators are supporting their academic achievement.

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APPENDICES

APPENDIX A
DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC QUESTIONNAIRE

The following questions ask about your background. Please respond to each item by answering the question or circling the correct answer.

1. Gender _____
2. Age (in years and months) _____
3. Ethnic group membership

Mexican	Puerto Rican	Other (if other please specify)
Salvadorian	Cuban	_____
4. Circle the generation that best applies to you. Circle only one:
 - a. 1st generation= You were born in Mexico or any other Latin American country.
 - b. 2nd generation= You were born in USA; either parent born in Mexico or any other Latin American country.
 - c. 3rd Generation= You were born in USA, both parents born in USA and all grandparents born in Mexico or other Latin American country.
 - d. 4th generation= You and your parents were born in USA and at least one grandparent was born in Mexico or any other Latin American country.
 - e. other (Please explain) _____
5. Cumulative GPA _____
6. Year in college (circle one)

Freshman	Junior
Sophomore	Senior
7. Where were you born (city and state) _____
 - a. If you were born in another country, please specify how long you have been in the U.S. _____
8. What was your first language or languages? _____
9. What language(s) do you speak at home? _____
10. When you were growing up, who lived in your house and what was their relationship to you?

11. Who was the head/s of household? _____
12. What is the highest education of your mother? _____
 - a. In what country was her education completed? _____

13. What is the highest education of your father? _____
 a. In what country was his education completed? _____

14. If the head of household was not your father or your mother, what is the highest education completed by the head of household?

a. In what country was the education completed? _____

15. Think of all the income from persons who lived in the same house with you when you were growing up. Which category is closest to your household income when you were growing up? Circle one.

Less than \$14,999	\$45,000- 59,999
\$15,000 –29,999	\$60,000 – 74,999
\$30,000 – 44,999	\$75,000 or more

16. My family gets together for dinner _____ per week
 zero times Two Three to four Other _____

17. What is your position at work? _____
 a. How many hours do you work per week? _____

Cuestionario Demográfico

Las siguientes preguntas son acerca de ti. Por favor contesta las preguntas al mejor de tu conocimiento. Responde a cada pregunta escribiendo o subrayando tu respuesta.

1. Sexo_____
2. Edad (en años y meses) _____
3. Etnicidad

Mexicana	Puerto Riqueña	Otra (Por favor especifique)
Salvador	Cubana	_____
4. Indique con un circulo el numero de la generación que considere adecuada para usted.
De solamente una respuesta:
 - a. 1ª generación= Usted nació en México u otro país Latino-Americano.
 - b. 2ª generación= Usted nació en los Estado Unidos Americanos (USA), sus padres nacieron en México u otro país Latino-Americano.
 - c. 3ª generación= Usted y sus padres nacieron en los Estados Unidos (USA) y sus abuelos nacieron en otro México u otro país Latino-Americano.
 - d. 4ª generación= Usted y sus padres nacieron en los Estados Unidos (USA) y al menos un abuelo nació en México u otro país Latino-Americano.
 - e. Otra (Porfavor especifique)_____
5. GPA acumulado (promedio)_____
6. Años en la universidad:

Freshman	Junior
Sophomore	Senior
7. Lugar donde naciste (estado y país) _____
 - a. Si naciste en otro país, cuando llegaste a los Estados Unidos? _____
8. Cual fue tu primer idioma o idiomas? _____
9. Que idioma hablas en casa? _____
10. Cuando estabas creciendo, quien mas vivía en tu casa y que relación tenían contigo?

11. Quien era el jefe/a de familia? _____
12. Cual es el nivel mas alto de educación de tu mamá? _____
 - a. En que país fue completado? _____
13. Cual es el nivel mas alto de educación de tu papá? _____
 - a. En que país fue completado? _____

14. Si es era otra persona el jefe/a de familia, cual es el nivel mas alto de educación del jefe de familia?

a. En que país fue completado? _____

15. Piensa en el ingreso económico de tu familia cuando crecías. En que categoría cae?

Menos de \$14,999

\$45,000 --59,999

\$15,000—29,999

\$60,000 – 74,999

\$30,000 --44,999

\$75,000 o más

16. Subraya cuantas veces se reúne tu familia para comer/ cenar por semana

Ninguna

dos

tres o cuatro

Otro _____

17. En tu trabajo, cual es tu posición? _____

a. Cuantas horas trabajas por semana? _____

APPENDIX B

ACADEMIC FACTORS QUESTIONNAIRE

ACADEMIC FACTORS QUESTIONNAIRE

Please take a few minutes to answer the following questionnaire. Circle the statement that best represents you.

	SA: Strongly Agree	A: Agree	D: Disagree	SD: Strongly disagree
1. Doing well in school is important to me.	SA	A	D	SD
2. Being successful means getting a college degree.	SA	A	D	SD
3. My family sees success as getting a good education.	SA	A	D	SD
4. I am satisfied with how well I do in my college work.	SA	A	D	SD
5. Getting a good job and supporting my family means success for me.	SA	A	D	SD
6. Success means being content with where you are.	SA	A	D	SD
7. I don't think being successful means getting a college degree.	SA	A	D	SD
8. I work very hard to get high grades in college.	SA	A	D	SD
9. Being Latina/o pushes me to do better in school.	SA	A	D	SD
10. I value the importance of education.	SA	A	D	SD
11. I know where to get help with my homework.	SA	A	D	SD
12. I want to get a college degree to help my family succeed.	SA	A	D	SD
13. I have the support of my family to attend college.	SA	A	D	SD
14. My parents support my education.	SA	A	D	SD
15. My family is an important part of my academic success.	SA	A	D	SD
16. I have role models within my family.	SA	A	D	SD
17. My parents have helped me succeed academically.	SA	A	D	SD

18. My siblings have contributed to my academic success.	SA	A	D	SD
19. I have an approachable family.	SA	A	D	SD
20. My parents support my siblings in the same way they support me.	SA	A	D	SD
21. My parents are involved in the work that I do in school.	SA	A	D	SD
22. My parents constantly emphasize education at home.	SA	A	D	SD
23. It is challenging to do well academically when I am home.	SA	A	D	SD
24. My parents do not support my education.	SA	A	D	SD
25. When I have a difficult test or a very important project, I know I can get the support of my family.	SA	A	D	SD
26. Religion is an important part of my academic success.	SA	A	D	SD
27. Religion has not helped me academically.	SA	A	D	SD
28. I value religion.	SA	A	D	SD
29. When I have a difficult test or a very important project, I pray or attend church services.	SA	A	D	SD
30. I turn to religion when I am not doing good academically.	SA	A	D	SD
31. I turn to religion to avoid dropping out of school.	SA	A	D	SD

APPENDIX C
ETHNIC IDENTITY SURVEY (EIS)

ETHNIC IDENTITY SURVEY

The U.S. is made up of people of various ethnicities. Ethnicity refers to cultural traditions, beliefs, and behaviors that are passed down through generations. Some samples of the ethnicities that people may identify with are Mexican, Cuban, Nicaraguan, Chinese, Taiwanese, Filipino, Jamaican, African American, Haitian, Italian, Irish, and German. In addition, some people may identify with more than one ethnicity. When you are answering the following questions, we'd like you to think about what YOU consider your ethnicity to be. Please write what you consider to be your ethnicity here _____ and refer to this ethnicity as you answer the questions below.

1. My feelings about my ethnicity are mostly negative.

Does not describe me at all	Describes me a little	Describes me well	Describes me very well
--------------------------------	--------------------------	----------------------	---------------------------

2. I have not participated in any activities that would teach me about my ethnicity.

Does not describe me at all	Describes me a little	Describes me well	Describes me very well
--------------------------------	--------------------------	----------------------	---------------------------

3. I am clear about what my ethnicity means to me.

Does not describe me at all	Describes me a little	Describes me well	Describes me very well
--------------------------------	--------------------------	----------------------	---------------------------

4. I have experienced things that reflect my ethnicity, such as eating food, listening to music, and watching movies.

Does not describe me at all	Describes me a little	Describes me well	Describes me very well
--------------------------------	--------------------------	----------------------	---------------------------

5. I have attended events that helped me learn more about my ethnicity.

Does not describe me at all	Describes me a little	Describes me well	Describes me very well
--------------------------------	--------------------------	----------------------	---------------------------

6. I have read books/magazines/newspapers or other materials that have taught me about my ethnicity.

Does not describe me at all	Describes me a little	Describes me well	Describes me very well
--------------------------------	--------------------------	----------------------	---------------------------

7. I feel negatively about my ethnicity.

Does not describe
me at all

Describes me
a little

Describes me
well

Describes me
very well

8. I have participated in activities that have exposed me to my ethnicity.

Does not describe
me at all

Describes me
a little

Describes me
well

Describes me
very well

9. I wish I were of a different ethnicity.

Does not describe
me at all

Describes me
a little

Describes me
well

Describes me
very well

10. I am not happy about my ethnicity.

Does not describe
me at all

Describes me
a little

Describes me
well

Describes me
very well

11. I have learned about my ethnicity by doing things such as reading (books, magazines, newspapers), searching the internet, or keeping up with current views.

Does not describe
me at all

Describes me
a little

Describes me
well

Describes me
very well

12. I understand how I feel about my ethnicity.

Does not describe
me at all

Describes me
a little

Describes me
well

Describes me
very well

13. If I could choose, I would prefer to be of a different race.

Does not describe
me at all

Describes me
a little

Describes me
well

Describes me
very well

14. I know what my ethnicity means to me.

Does not describe
me at all

Describes me
a little

Describes me
well

Describes me
very well

15. I have participated in activities that have thought me about my ethnicity.

Does not describe
me at all

Describes me
a little

Describes me
well

Describes me
very well

16. I dislike my ethnicity.

Does not describe
me at all

Describes me
a little

Describes me
well

Describes me
very well

17. I have a clear sense of what my ethnicity means to me.

Does not describe
me at all

Describes me
a little

Describes me
well

Describes me
very well

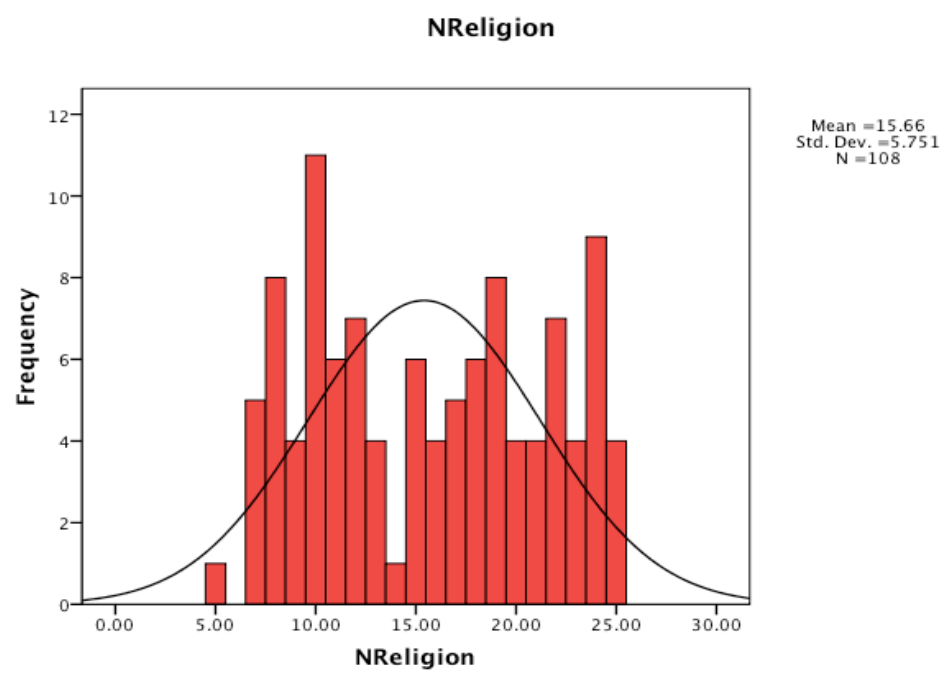
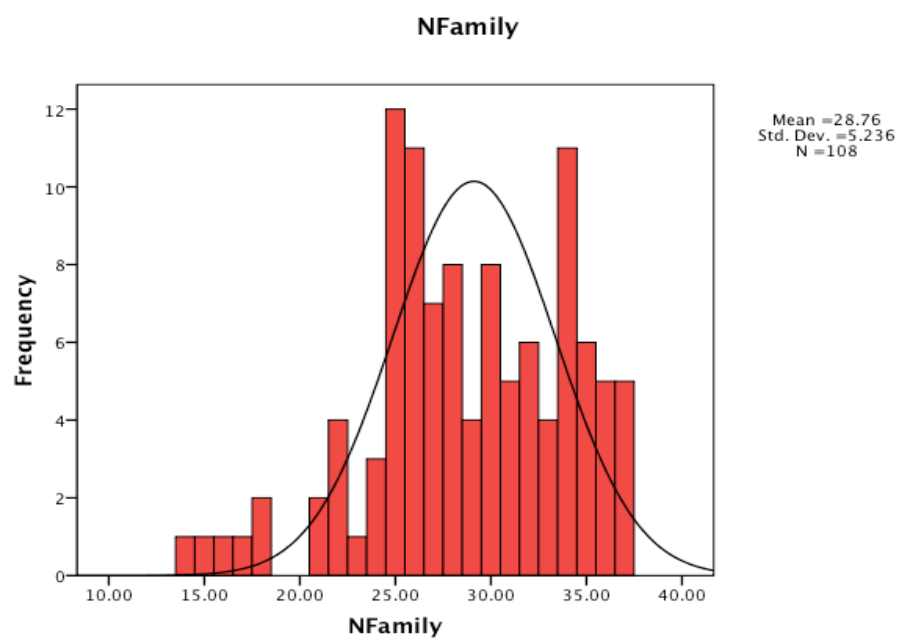
Adaped from Umaña-Taylor, A. J., Yazedjian, A., & Bámaca-Gómez, M. (2004).
Developing the Ethnic Identity Scale Using Eriksonian and Social Identity Perspectives.
International Journal of Theory and Research, 4(1), 9-38.

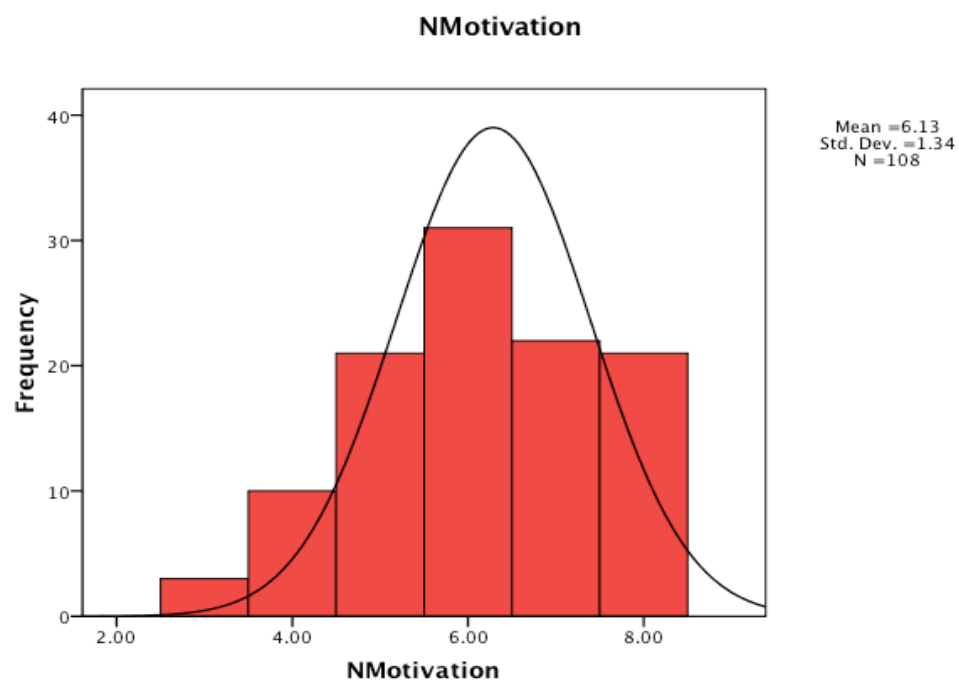
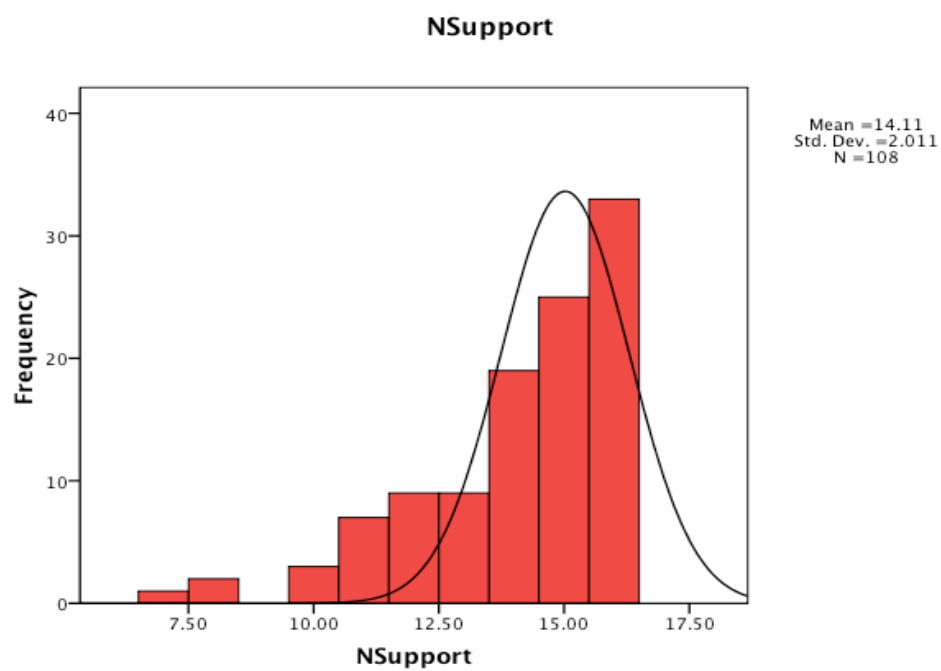
APPENDIX D
INTERVIEW PROTOCOL

- Tell me a story about a time when you were **successful**
 - What is success for you?
 - Do you think you are successful in what you do?
 - Do you have friends/siblings that see success in a similar manner?
 - Who helped you become successful?
 - What role did your parents play in your success? How about your siblings?
 - Who were your role models in becoming successful?
 - How does obtaining a college degree fit with becoming successful?
 - What do you get out of a college education?
 - What is your motivation to become successful?
- Tell me about a time you were doing very well in **school**
 - Has it changed?
 - How do you prepare for a difficult assignment or an important test? What becomes a challenge?
 - Does your family/religion help you do well in school?
 - Please answer the following question: when I have a really important project/presentation or a difficult test I _____
 - Do you participate in school activities? How about any after school activities?
- Tell me about a time your **family** has been really supportive
 - How does getting a college education impact your family?
 - How does your family emphasize education at home?
 - What do think success means for your parents?
 - How did they express support towards your success?
 - Did they support your siblings in the same way?
 - Is there anything your parents did differently to help you be successful in comparison to your peers?
 - What do you think are the 3 most important things in your home environment that helped you succeed academically
 - Tell me a story about your parents involvement in your education.
 - How do you see yourself in your family?
 - How do you see yourself in your community?
 - How involved are you in family activities?
 - Are you involved in your community? How?
- Tell me about a time you found support in **religion**
 - Do you attend church services or pray regularly? Do you do it most when you have a difficult test or an important project?
 - How does your religion provide you with support?

APPENDIX E

HISTOGRAMS OF THE DISTRIBUTION OF THE AFQ FACTOR COMPOSITES





APPENDIX F

IRB FORMS

UNIVERSITY of
NORTHERN COLORADO
 Institutional Review Board (IRB)



September 19, 2008

TO: Mark Riddle
 Gerontology

FROM: Gary Heise, Co-Chair *GDH*
 UNC Institutional Review Board

RE: Expedited Review of Proposal, *A Mixed Method Study of the Factors that are Associated with the Academic Achievement of Latino College Students: A Strengths Based Approach*, submitted by Laura G. Lara (Research Advisor: Teresa McDevitt)

First Consultant: The above proposal is being submitted to you for an expedited review. Please review the proposal in light of the Committee's charge and direct requests for changes directly to the researcher or researcher's advisor. If you have any unresolved concerns, please contact Gary Heise, School of Sport and Exercise Science (x1738). When you are ready to recommend approval, sign this form and return to me.

I recommend approval as is.

Mark Riddle

10-22-08

Signature of First Consultant

Date

The above referenced prospectus has been reviewed for compliance with HHS guidelines for ethical principles in human subjects research. The decision of the Institutional Review Board is that the project is approved as proposed for a period of one year: *11/6/2008* to *11/6/2009*.

Gary D. Heise *6 Nov 08*
 Gary Heise, Co-Chair Date

Comments:



Informed Consent for Participation in Research

University of Northern Colorado

Project Title: A Mixed Method Study of the Factors that are Associated with
the Academic Achievement of Latino College Students:
A Strengths Based Approach

Researcher: Laura G. Lara Ph.D. candidate. School of Psychological Sciences

Phone Number: (415) 867-6802

Researcher Advisors: Teresa McDevitt, Ph.D.

Phone Numbers: (970) 351-2482

I am researching the academic successes and the challenges encountered by Latina/o college students, by investigating the potential roles of parents, emphasis of education at home, meaning and importance of success, and the importance of religion. If you grant permission, you will be taking a demographic questionnaire, Academic Factors Questionnaire, and the Ethnic Identity Survey through this online web survey. All three questionnaires should take approximately 30-40 minutes to complete. The initial questions will deal with some demographic information, while the remaining questions will deal with how you view your ethnicity, education, success, and religion, and what parental practices led you to become academically successful today. I will strive to keep responses confidential by not asking for your name or other personal identifying information on the questionnaires. However, if you are interested in sharing what has affected your academic achievement, I will ask you to enter only your e-mail address at the end of the questionnaire for a follow up interview. Responses gathered from the questionnaires will be kept separate from the e-mail addresses provided for a follow up interview. If any survey responses need to be printed out, they will be assigned a 4-digit code based on the date in which the questionnaire was completed (e.g. 04/11). If you need assistance filling out the questionnaire, you can contact me at 415.867.6802 or you can e-mail me at lara6776@bears.unco.edu.

There will be no monetary compensations for your participation in the questionnaires and I foresee no risks in participating in this study. Although you may feel self-conscious about your response and a sense of discomfort answering questions about your life, please be advised that I am not judging you and expect to hear a range of responses. If at any time you want to discontinue the questionnaire, you can stop answering questions and exit the questionnaire and you will not be penalized. To

further help maintain confidentiality, names, bear numbers, or any other identification that may be traced back to you will not be collected. If you are interested in sharing more information about what has affected your academic achievement, you can provide me with your e-mail address at the end of the questionnaires.

IF YOU GIVE CONSENT TO PARTICIPATE IN THIS RESEARCH STUDY,
PLEASE CLICK BELOW TO START TAKING THE QUESTIONNAIRES.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Sponsored Programs and Academic Research Center, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1907

Please feel free to e-mail me or phone me if you have any questions or concerns about this research and please retain one copy of this letter for your records.

Thank you for assisting me with my research.

Sincerely,

Laura G. Lara
Ph.D. Candidate
Lara6776@unco.edu

Do you agree to the consent information listed on this form?

- ☐ Yes, I agree to the above consent form and want to start the questionnaire in English
- ☐ No, I don't agree to the above consent form



Informed Consent for Participation in Research

University of Northern Colorado

Project Title: A Mixed Method Study of the Factors that are Associated with
the Academic Achievement of Latino College Students:
A Strengths Based Approach

Researcher: Laura G. Lara Ph.D. candidate. School of Psychological Sciences

Phone Number: (415) 867-6802

Researcher Advisor: Teresa McDevitt, Ph.D.

Phone Number: (970) 351-2482

I am researching the academic successes and the challenges encountered by academically successful Latina/o college students and non-academically successful Latina/o college students, in a two-part research study. The first part consisted of completing three online questionnaires, while the second part consists of an interview. If you grant permission, I will interview you in a location of your choice for approximately 60 minutes. The interview will consist of approximately 21 questions regarding family life, views of success, motivation, religion, and support given at home that affected how you do in school.

I am interested in the factors that influence your academic achievement, and how you deal with them. There will be no monetary compensation for your participation and I foresee no risks in participating in this study. Although you may feel self-conscious about your response, please be advised that I am not judging you and expect to hear a range of responses.

I will be recording the interview via an external microphone and an ipod. There won't be any other recording devices. Be assured that I intend to keep the contents of these tapes private, unless you give permission below for their use as an instructional aid in conferences or presentations, in which case I will include your pseudonym unless you allow me to use your real name. To further help maintain confidentiality, computer files of the interview will be created under your pseudonym. The names of participants

will not appear in any professional report of this research. Audio recording will be transcribed and kept in a secure location in my office in California for a 3-year period after which time they will be destroyed.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Sponsored Programs and Academic Research Center, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1907

Please feel free to e-mail me or phone me if you have any questions or concerns about this research and please retain one copy of this letter for your records.

Thank you for assisting me with my research.
Sincerely,

Laura G. Lara
Ph.D. Candidate
Lara6776@unco.edu

Participant's Full Name (please print)
(month/day/year)

Participant's Birth Date

Participant's Signature

Date

Researcher's Signature

Date

If you give permission for the use of the transcripts of the interview for instructional purposes in presentations of conferences please initial here: _____